

DEVELOPMENT OF THE MATERNAL–FETAL RELATIONSHIP IN WOMEN WHO  
USE SUBSTANCES: UNDERSTANDING THE INFLUENCE OF INTERSECTING  
VARIABLES ON MATERNAL– FETAL ATTACHMENT AND HEALTH BEHAVIOURS

MICHELLE FOULKES, NP-PHC BA, MScN

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School of Nursing  
Faculty of Health Sciences  
University of Ottawa  
Ottawa, Ontario

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## Abstract

Healthy maternal–infant attachment is the foundation on which a child’s physical, cognitive, psychological, and emotional development rests. This relationship between the dyad does not begin at birth but rather prior to conception or any time throughout pregnancy. Our understanding of how this relationship develops between a mother and her fetus remains largely intangible for researchers and clinicians alike as it is a highly complex process with many variables influencing the evolving bond. Situated within a poststructural critical feminist framework, the purpose of this qualitative study using a grounded theory approach was to gain a better understanding of how women who use substances during pregnancy experience the process of a developing relationship with their fetuses, and to identify intersecting variables that may influence their health behaviours. Five main categories emerged including *choosing the mothering path*, *balancing the risks*, *needing safe passage*, *breaking the cycle*, and *mothering against all odds*. All of the women in the study described feeling an increase in maternal–fetal attachment as the pregnancy progressed and demonstrated efforts to reduce substance use, engage with the health care system, and improve dietary choices to limit negative consequences for their developing fetuses. Barriers to changing health behaviours were identified by the participants as well as by health care providers working with this population. In gaining a deeper understanding of the variables that influence maternal–fetal attachment in women who use substances and development of a substantive theory, nursing practice may be informed by providing direction around how best to support harm reduction approaches in this population.

*Keywords:* maternal–fetal attachment, substance use, grounded theory, addictions.

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## Glossary of Terms

**Attachment theory** – Theory developed by John Bowlby and Mary Ainsworth (1991). The fundamental tenet of attachment theory is that in order for infants and young children to reach emotional, social, and cognitive milestones, a secure relationship with at least one primary care provider is necessary to provide a secure base on which all future development rests (Cassidy, Jones, & Shaver, 2013).

**Secure attachment** – Infant or young child demonstrates a secure attachment if they use their caregiver as a secure base to allow for safe exploration in the world. They protest when the caregiver departs and are comforted when they return. They may be comforted by others, but have a strong preference for their primary caregiver. The caregiver responds appropriately, promptly, and consistently to needs (Benoit, 2004).

**Insecure attachment** – Three types of insecure attachment patterns have been identified through the use of the strange situation protocol developed by Mary Ainsworth (Cassidy & Shaver, 2008). Insecure attachment behaviours occur when a safe and secure base is not available during early infant development. The three types of insecure attachment patterns include: anxious-avoidant, ambivalent, and disorganized attachment. Infants with anxious-avoidant attachment styles show little emotion or distress on separation from their caregiver. It is thought to be a protective mechanism from a caregiver who is consistently unresponsive to their needs to avoid maternal rejection. Infants who exhibit an ambivalent attachment style often present as extremely distressed on separation from their caregiver but appear ambivalent when their caregiver returns due to unpredictable responsiveness from their primary attachment figure. Infants who are identified as having a disorganized attachment style display sequences of contradictory behaviours including both ambivalent and avoidant behaviours. These infants often demonstrate behaviours such as freezing or rocking, and may be overly distressed or completely unmoved by a parent's departure. The caregiver of infants and young children with disorganized attachment often present

with frightened or frightening behaviour, intrusiveness, inconsistent behaviours, withdrawal, negativity, and does not pick up on cues from the child to meet their needs (Main & Hess, 1990).

**Maternal–fetal attachment (MFA)** – Term used to describe the relationship between a pregnant woman and her developing fetus. MFA is commonly manifested by women through their commitment to providing a safe environment for fetal development (eating well, abstaining from harmful substances), dreaming of their future baby and role as a mother, and physical preparation for the birth of the baby (purchasing items to meet the baby’s needs after birth) (Alhusen, Gross, Hayat, Rose, & Sharps, 2012).

**Reflective functioning (RF)** – Refers to one’s capacity to understand one’s self and others in terms of mental states (feelings, beliefs, intentions, and desires). Also refers to the capacity to appropriately organize one’s internal experience and the experience of others (Fonagy, Steele, & Steele, 1991).

**Trauma** – Experiences that overwhelm both psychological and biological coping mechanisms that result in biological changes, alterations in cognitive processes, and potentially psychopathology (Seng, D'Andrea, & Ford, 2014).

## Chapter 1 - Introduction

We must recognize that the suffering of one person or one nation is the suffering of humanity.

—Dalai Lama XIV

Healthy maternal–infant attachment is the foundation on which a child’s physical, cognitive, psychological, and emotional development rests (Alhusen, Gross, Hayat, Woods, & Sharps, 2012; Finnegan, 2013; Health Canada, 2006; Passey, Sanson-Fisher, & D’Este, 2013; Schwerdtfeger & Goff, 2007). This relationship between the dyad does not begin at birth but rather is thought to begin prior to conception for some women or any time during pregnancy for others, as a woman envisions herself as a mother with her imagined baby (Cassidy & Shaver, 2008; Fonagy, Steele, Moran, Steele, & Higgitt, 1993). Attachment during the prenatal period is referred to in the literature as *maternal–fetal attachment* (MFA). Our understanding of how MFA develops between a mother and her fetus remains largely intangible however, as it is a highly complex process with many variables influencing the evolving bond. MFA has shown to influence both health behaviours of mothers during pregnancy and serve as a strong predictor of future maternal-infant attachment (Alhusen, Hayat, & Gross, 2013). Given the profound impact that both MFA and maternal-infant attachment can have on the global development of infants and children, the need to better understand how MFA develops has significant implications for nursing care of women, infants and their children throughout the perinatal period.

This thesis is organized into six discreet chapters. The first two chapters represent a largely positivist overview of maternal-fetal attachment given that maternal-fetal health has

been most often studied within this paradigm. The remaining chapters are situated within a post-structural critical feminist perspective to reflect my personal epistemological beliefs.

Accordingly, the first chapter will provide a brief introduction to our theoretical understanding of the MFA process that typically occurs between a mother and her fetus during pregnancy. Women at higher risk for disruption of the MFA process will be discussed. From here, the research questions and objectives will be presented. This will be followed by a discussion around the significance of the research problem with the deleterious consequences of substance use on MFA and overall health for women and babies presented.

Chapter 2 will include a literature review to provide an overview of our current understanding of MFA as well as the variables that may influence this process including substance use, trauma, and mental illness. Chapter 3 will include a presentation of the epistemological stance and the theoretical framework in which the research is situated which includes multiple, intersecting perspectives. Chapter 4 will outline the qualitative research methods that were used in this study. The grounded theory (GT) method and methodological perspective of Kathy Charmaz (2006, 2014) will be explored in this chapter and the rationale for choosing this approach will be explicated. Chapter 5 will provide a presentation of the results of the study, which will allow for the voices of the participants to be heard. The sixth and final chapter will pull the entirety of this work together. This chapter will include a theoretical presentation of the social processes that influence the development of MFA in women who use substances during pregnancy. The chapter will also provide recommendations for future directions in research as it relates to this population and how these results should inform nursing practice and education.

## **Maternal–Fetal Attachment Process**

Pregnancy represents a significant event in a woman's life with enormous physical, hormonal, and neurobiological shifts that occur within the body across the gestational period (Reszel, Peterson, & Moreau, 2014). In addition, pregnancy also requires a “renegotiation of identity and the activation of internal representations of self and other” which represents a profound psychological transition to becoming a mother (Slade et al., 2009, p. 22). This psychological process is referred to in the literature as pregnancy-related reflective functioning (RF) (Slade et al., 2009). MFA is a similar concept to RF but focuses more on identifying behaviours that would suggest a woman is protective of her fetus than does the more elusive process of RF (Amankwaa & Pickler, 2007; Bloom, 1995; Doan & Zimmerman, 2003). Indeed, MFA (sometimes referred to as “prenatal attachment” in the literature) may be defined as “the extent to which women engage in behaviours that represent an affiliation and interaction with their unborn child” (Cranley, 1981, p. 281). From this conceptual stance, positive health practices during pregnancy suggest a high degree of MFA and an engagement in pregnancy-related RF as the woman dreams of her “perfect” baby born free of injury or defect as a direct result of her maintaining a safe environment for development and growth (Lindgren, 2001). Positive health practices include abstaining from illegal drugs, alcohol, and tobacco, limited and judicious use of over-the-counter medications, obtaining prenatal care in a timely manner, adequate nutrition and rest, exercise, and learning about pregnancy and childbirth (Lindgren, 2001; Reid, Greaves, & Poole, 2008; Reszel, Peterson, & Moreau, 2014). Participation in good health practices during pregnancy is critical to fetal wellbeing as well as the subsequent health of the newborn and

mother (Dott, Rasmussen, Hogue, & Reefhuis, 2010).

The degree to which a pregnant woman is able to integrate the developmental changes to support healthy RF and MFA, as determined by engaging in positive health behaviours, is influenced by a tremendously complex matrix of both internal and external factors (Kropp, Winhusen, Lewis, Hague, & Somoza, 2010; Madigan et al., 2006). Some of these factors include mental health variables, a woman's previous relationship with her own mother, whether the pregnancy was planned or unplanned, the relationship with the father of the baby, the degree to which supportive social networks are in place around the mother, addictions, and unresolved childhood trauma (Darville & Skirton, 2010; Benoit, et al., 2014; Pisoni, et al., 2014) Therefore, the prenatal period is one where a tremendous amount of internal reflection is occurring within the woman as she negotiates multiple variables towards developing an internal representation of herself as a mother as well as her fetus as an imagined baby which may ultimately influence health behaviours and practices (Cassidy & Shaver, 2008).

### **Women at Risk for Disruption of the Maternal-Fetal Attachment Process**

One group of women particularly at risk for disrupted pregnancy-related RF and MFA, which may contribute to poor health practices, is those who use substances (e.g., cocaine, alcohol, narcotics) during pregnancy (Cormier, Dell, & Poole, 2004; Lopez, Konrath, & Seng, 2011; Mersky, Topitzes, & Reynolds, 2013). This is in part because as many as two thirds of women with substance use problems (both licit and illicit) also have a concurrent mental health disorder such as depression, anxiety, or post-traumatic stress disorder (Alhusen, Gross, Hayat, Woods, & Sharps, 2012; Koehn & Hardy, 2007). Further, a high proportion of

substance involved women came from chaotic and dysfunctional families; had at least one parent who struggled with addictions; and have a much higher than average rate of exposure to domestic violence, incest, sexual assault, child abuse, or neglect (Stewart, 2007; Lester, Andreozzi, & Appiah, 2004). Under these conditions, the pregnancy-related RF may be disorganized with both MFA and health behaviours being largely compromised. Mental representations of the self as mother and the fetus as future baby may be negatively integrated with MFA being a strong predictor of both health behaviours and maternal–infant attachment (Fonagy et al., 1991). Therefore, the need to gain a better understanding of MFA in women who use substances during pregnancy is critical in order that we understand how the process evolves and its influence on health behaviours.

### **Research Question**

The central research question posed for this qualitative study is the following: “How does maternal–fetal attachment (MFA) develop between mother and fetus in women who use substances?” This broad research question will be addressed through the specific research objectives identified in the next section.

### **Research Objectives**

The specific objectives of this study are as follows:

- (1) To describe how women who use substances during pregnancy experience the process of a developing relationship with their fetuses and how this influences their health behaviours; and
- (2) To explore what women who use licit or illicit substances during pregnancy perceive

as the enablers and barriers (both internal and external) that may influence their health behaviours and impact the physical, psychological, and social outcomes for themselves and their infants.

### **Significance of the Research Question**

In order to understand the significance of the research question and objectives, it is important to review the impact of substance use on fetal, infant, and child development in all domains including the physical, psychological, and emotional challenges that may ensue. The impact of substance use and the social stressors often associated with engaging in these behaviours will also be discussed.

### **Deleterious Effects for Fetal, Infant, and Child Development**

The effects of prenatal exposure to alcohol, tobacco, and illicit drugs are well documented (Society of Obstetricians and Gynaecologists of Canada, 2014). Each of these teratogenic substances and its effects on the developing fetus and child development will be discussed in turn.

#### **Alcohol.**

Maternal ingestion of alcohol can be particularly devastating on the developing fetus. At present, there has been no level of alcohol consumption determined to be safe during pregnancy as it is considered the most toxic of all substances to the developing fetus (Bottorff, Kelly, & Greaves, 2014). Prenatal exposure to alcohol can result in fetal alcohol spectrum disorder (FASD), which refers to a constellation of physical abnormalities including facial dysmorphology, low birth weight and small size, profound cognitive dysfunction, and

behaviour difficulties, and is arguably the most commonly known non-genetic cause of intellectual disabilities (Lester, Andreozzi, & Appiah, 2004). FASD is not a diagnostic term but rather an umbrella term for a range of diagnostic disorders that can result from maternal alcohol consumption. The resulting impact of alcohol consumption on fetal development is related to patterns of maternal consumption, timing of exposure to alcohol during fetal development and frequency of use suggesting a dose-response relationship rather than a definitive threshold for exposure (Chudley, Conry, Cook, Loock, Rosales, & LeBlance, 2005).

Four diagnostic categories related to exposure to alcohol in the prenatal period include fetal alcohol syndrome (FAS), Partial FAS, Alcohol-related birth defects (ARBD) and Alcohol-related neurodevelopmental disorder (ARND). The diagnosis of FAS requires that maternal alcohol exposure is confirmed and that a characteristic pattern of facial anomalies be present as well as evidence of growth retardation and central nervous system abnormalities. Partial FAS requires that maternal alcohol exposure is confirmed with evidence of neurodevelopmental abnormalities, growth retardation and cognitive abnormalities but facial anomalies are not required for diagnosis. Partial FAS is estimated to be at least three to five times as common as FAS (Floyd, Weber, Denny, & O'Connor, 2009). Children with partial FAS present with intellectual impairment and behavioural characteristics that are similar to those associated with FAS, but the child does not present with physical abnormalities and appears “normal.” This fact can place the child with partial FAS at greater risk of a poor outcome because his or her disability is hidden and cognitive and behavioural challenges may be seen as willful and deviant rather than related to the underlying damage that has been

sustained to the brain from prenatal alcohol exposure (Society of Obstetricians and Gynaecologists of Canada, 2014).

### **Tobacco.**

The negative effects of cigarette smoking on fetal development has been clearly established (Health Canada, 2006). The adverse effects occur through various pathways as the metabolites pass through the placenta from mother to fetus. These metabolites act as a vasoconstrictor to reduce uterine blood flow by up to 38% (Lester & Twomey, 2008). The fetus is therefore deprived of nutrients and oxygen, resulting in episodic fetal hypoxia-ischemia and malnutrition. Fetal tobacco exposure has been determined to be the most common factor related to fetal intrauterine growth retardation (Passey, Sanson-Fisher, & D'Este, 2014; Wright & Walker, 2007). It has also been linked to preterm delivery, infant mortality, sudden infant death syndrome, and cognitive and behavioural deficits (National Institute on Alcohol Abuse and Alcoholism, 2008). In the postpartum period, ongoing exposure to second-hand smoke continues to affect the health of the developing child with increased incidence of respiratory illness, ear infections, and other consequences. Despite a positive trend towards a decline in tobacco use during pregnancy, following substantial educational and marketing efforts as well as policy regulating behaviours around its use, tobacco remains a significant health concern with serious teratogenic effects for developing fetuses and children.

### **Illicit drugs.**

Illicit drugs are often perceived to produce the most harmful neurodevelopmental effects

during the prenatal period, in large part due to the media attention around crack cocaine use in pregnant women that was garnered during the mid-1980s, when the world was first introduced to “crack babies” (Lester & Twomey, 2008). The perception was further compounded by the negative stigma around use of these substances due to their illegal nature (Finnegan, 2013). More recently, research has shown prenatal exposure to cocaine and child outcomes to be less devastating in terms of cognitive deficits than exposure to alcohol in utero, but nonetheless, these children are 1.5 times more likely to require special education services than children who have not been exposed (Lester et al., 2004). Further, fetal exposure to illegal drug use is also linked to increased risk of preterm delivery, low birth weight, smaller-than-normal head size, miscarriage, genital and urinary tract deformities, and nervous system damage. Infants must go through withdrawal from the substances after delivery and are particularly vulnerable during this time to untoward health consequences (Wang, 2009).

These fetal complications outlined above represent the more immediate and individual teratogenic effects of exposure of the fetus and infant to alcohol, tobacco, and illicit drugs on growth and development. The latent effects of intrauterine exposure often begin to manifest themselves as children get older and enter the school system. The longer-term consequences for these children can be debilitating, with challenges in multiple spheres of life including cognitive processing delays, antisocial behaviour including delinquency and aggression, and psychopathology such as attention deficit hyperactivity disorder, depression, and anxiety (Alhusen, Gross, Hayat, Woods, & Sharps, 2012; Floyd, Weber, Denny, & O'Connor, 2009; Mate, 2008; Mersky, Topitzes, & Reynolds, 2013). Research has also shown that intrauterine exposure to these substances affects the brain by causing a predisposition for dependence on

drugs and ultimately to early substance use onset, placing the next generation at risk for later addiction (Floyd et al., 2009).

### **Deleterious Consequences of Substance Use on the Mother–Child Dyad**

The postnatal environment that many women find themselves in further amplifies the negative consequences for women who use substances and their children. The psychosocial risk factors often associated with addictions that have poor outcomes for the dyad include poverty, chaotic and dangerous lifestyles, history of sexual abuse, involvement in difficult or abusive relationships, and maternal psychopathology including depression and personality disorders (Schwerdtfeger & Goff, 2007). Any of these life circumstances paired with a substance-exposed infant who is often irritable and difficult to soothe sets the stage for poor MFA. Under these conditions, attachment can be severely compromised with the child challenged to establish a healthy and synchronous relationship with a primary caregiver (most often the mother) but also with peers and significant others. This may ultimately seriously impact social, emotional, and cognitive development. Not only does this add another layer of injury to the disadvantaged child, but the mother of the infant is often acutely aware that she is not meeting her child's needs, which may contribute further to her depression and substance-use practices (Logan, Cole, & Leukefeld, 2002).

Perhaps even more traumatizing to the mother–child dyad under these challenging circumstances is when the addiction results in the child being apprehended by child protection services (CPS). The mother's sense of self-worth is further diminished and feelings of guilt and shame are intensified (Flavin & Paltrow, 2010). The child is introduced into the foster care system if an appropriate kinship placement is not found. This is often the case given the

dysfunctional nature of many of these families where substance use, mental illness, poverty and violence has been present across generations. Further, because these children present with challenging behaviours related to their deficits from exposure to substances, placements often break down and children may be placed in multiple different care-giving environments, again reducing their capacity to form secure attachments (Anthony, Austin, & Cormier, 2010). It is through these interwoven processes that we find the intergenerational nature of substance abuse, neglect, maltreatment, unhealthy relationships, poverty, and poor health outcomes, which are unequivocally correlated and entangled (Yehunda, Halligan, & Grossman, 2001).

Given the deleterious and long-term consequences of poor maternal–fetal and maternal–infant attachment on child development, especially on children already vulnerable as a result of other environmental or internal stressors (e.g., abuse, trauma, mental illness), the need to better understand how women who use substances during pregnancy develop an internal representation of their fetuses and themselves as mothers-to-be is paramount. Research also suggests that there is a strong intergenerational predisposition to insecure and disorganized attachment (Schwerdtfeger & Goff, 2007). Studies in this area suggest that traumatized and insecurely attached caregivers may be emotionally as well as functionally unavailable for their infant, thereby increasing the likelihood of enhanced symptomatology within the child. The phenomenon of intergenerational transmission of trauma, particularly as a result of the parent’s experiences of abandonment or violence, has been well documented (Fraiberg, Adelson, & Shapiro, 1975; Madigan et al., 2006; Main & Hess, 1990; Schwerdtfeger & Goff, 2007). Through identification of the barriers and supportive factors that affect MFA in women

with a trauma history, we may be better equipped to develop interventions targeted at promoting healthy MFA so that the deleterious consequences of unhealthy attachment for women, children, and families may be reduced both in the present and in the context of future generations.

Our current understanding of the relationship between MFA and health behaviours is two-dimensional. It is a complex relationship that cannot be reduced to a linear equation where a “strong” MFA equals positive health behaviours. There is much more to the puzzle that we don’t know. To assume that all women who use substances during pregnancy are not adequately attached to their fetuses based on their specific behaviour (use of licit or illicit substances) is arguably a misperception by society at large who judges pregnant and mothering women to a standard that may not be attainable for all women (Boyd, *Mothers and illicit drugs: transcending the myths*, 1999; Weir, 2006). It is necessary to dig into the experience of women who use substances to broaden our understanding of MFA to include additional intersecting variables that influence their health behaviours. In doing so, we may be able to provide more appropriately tailored interventions for mothering women who are living with mental health struggles, substance use issues, trauma, and limited socioeconomic resources, to ultimately improve the health and social outcomes of women, children, and families.

## Chapter 2 - Literature Review

The question is not ever “Why the addiction?” but “Why the pain?”

—Gabor Maté, *In the Realm of Hungry Ghosts*

An extensive literature review was completed using key search terms including *maternal– fetal attachment* (MFA), *prenatal attachment*, *substance use*, and *addictions* to retrieve relevant materials from the global and Canadian literature. The literature gleaned through this search will be presented in this chapter under the following subheadings: 1) Maternal–fetal attachment (MFA), 2) Attachment theory and research measures, 3) Addiction as a neurobiological and psychological process, 4) Situating women’s substance use across the lifespan, 5) Prevalence of substance use in pregnant and mothering women, 6) Contributing factors to substance use in women, 7) Maternal–fetal attachment (MFA) in women who use substances during pregnancy, and the 8) Intergenerational nature of poor maternal–fetal and infant attachment.

### Maternal–Fetal Attachment

Despite the growing body of evidence indicating that MFA is a strong predictor of maternal health behaviours during pregnancy and of *maternal–infant* attachment after birth, our understanding of how mothers navigate through this important developmental phase during their pregnancy en route to becoming a mother is limited. Within the literature, however, several variables have been studied to determine how they influence and shape MFA in women across race, socioeconomic status, age strata, and other demographic variables. A 2009 meta-analysis by Yarcheski, et al. looked to identify the most salient

predictors of MFA as well as the magnitude of the relationship between predictor variables while using a quality index to account for methodological variability. The 14 variables reviewed included the following: social support, anxiety, depression, self-esteem, gestational age, prenatal testing, planned pregnancy, age, parity, ethnicity, marital status, income, education, and high risk pregnancy. A total of 72 studies completed during the period of 1981–2006 were included in the meta-analysis with 50% of the studies using a correlational design, all using convenience samples, and most studies being characterized as having small sample sizes (Yarcheski et al., 2009). They further categorized the 14 predictors of MFA into theoretical variables (social support, anxiety, self-esteem, and depression), pregnancy-related variables (gestational age, prenatal testing [ultrasound], planned pregnancy, parity, and high-risk pregnancy), and demographic variables (age, ethnicity, marital status, income, and education). The theoretical, pregnancy-related, and demographic variables will be presented as separate categories below with all 14 of the independent factors reviewed. Using a 95% confidence interval, the thresholds for interpreting effect size are .10 for low effect size, .30 for moderate effect size, and .50 for high effect size (Polit & Beck, 2012). See table 1 for an overview of the predictors of MFA.

### **Theoretical variables.**

Yarcheski et al. (2009) found that the most powerful theoretical predictor studied related to MFA was social support, although the effect size was only moderate. This may be a result of the construct of social support not being well defined or understood. Further research in this area is important to determine what kinds of social support are most beneficial to women during pregnancy. The low effect sizes of the theoretical predictors of

anxiety, self-esteem, and depression also warrant further research, as the lack of stability in the individual effect sizes across studies suggests that further investigation of these variables in relation to MFA is needed. More recently, a 2012 study by Alhusen et al. used a mixed study design to determine the influence of depressive symptoms and social support on MFA. Using the Maternal–Fetal Attachment Scale (MFAS) by Cranley (1981), the Edinburgh Postnatal Depression Scale (EPDS) by Cox, Holden, and Sagovsky (1987), and the social support subscale of the Prenatal Psychosocial Profile (PPP) by Curry, Burton, and Fields (1994), as well as qualitative interviews, they determined that both lack of social support and depressive symptoms had a significant negative effect on MFA (Alhusen et al., 2012). The alignment of the results of the study by Alhusen et al. (2012) with those of Yarcheki et al.’s (2009) meta-analysis around the negative relationship between lack of social support and MFA provides additional evidence around this important variable for supporting the development of MFA. The need to better understand the specific elements of social support that women find most helpful during their pregnancy are necessary to augment MFA in women who are at risk for poor attachment in the prenatal period. Also of importance is Alhusen et al.’s finding that depressive symptoms did have a statistically significant impact on MFA in their sample whereas Yarcheki et al.’s meta-analysis showed only a moderate effect size across studies. The disparity between research studies suggests that additional research in the area of mental health variables and MFA is needed.

### **Pregnancy-related variables.**

Gestational age was the most powerful predictor of MFA overall with a moderate to substantial effect size, which informs our understanding of MFA by indicating that it is a

sequential and progressive experience for women. It does not however inform us about the process of MFA. The need to understand the evolution of MFA across pregnancy is important and may inform how we introduce interventions to increase MFA and ultimately health behaviours. A literature search conducted in 2015 of PubMed and CINAHL databases using the search words *prenatal attachment*, *maternal–fetal attachment*, and *gestational age* did not produce additional research to support the findings around the influence of gestational age and MFA.

Prenatal ultrasound also showed a moderate effect size related to enhancing MFA. A mother's ability to visualize the fetus provides evidence of fetal viability and therefore enhances attachment. A 2013 study indicated similar results in that both two-dimensional and three-dimensional ultrasound technologies were shown to positively influence MFA (de Jong-Pleij et al., 2013). It should be noted, however, that all the participants in this study were in their third trimester with gestational age having been shown to have the greatest effect size of all variables in the meta-analysis by Yarcheski et al. (2009). Further research is needed to determine whether the use of ultrasound technology within the first trimester, when the fetus is most vulnerable to teratogenic substances, may influence MFA and health behaviours. The present standard of practice related to prenatal screening through ultrasound is typically done around 16 weeks of pregnancy. For women living with addictions, this may serve as a useful tool to visualize their fetuses much earlier, supporting them to engage in more positive health practices.

The variables of planned pregnancy, parity, and high-risk pregnancy had low to trivial effect sizes in relation to MFA. As a result, further research in this area is not recommended

as a high priority. The variables of prenatal education, fetal movement, and gravidy have been studied in relation to MFA but the studies did not meet the inclusion criteria for this meta-analysis.

Specifically, a study published in 2011 that looked at fetal movement counting as a means of increasing MFA in pregnant women found no significant difference between participants in the intervention group who were instructed to monitor fetal movement and those in the control group who received standard antenatal care (Saastad, Israel, Ahlborg, Gunnes, & Frøen, 2011). Using the Prenatal Attachment Inventory (PAI) by Muller (1993), the researchers were unable to demonstrate that counting fetal movement had an influence on MFA. However, it should be noted that the presence of fetal movement itself may have an influence on MFA (Cannella, 2005).

### **Demographic variables.**

The demographic variables of age, ethnicity, marital status, income, and education all showed a low effect size, indicating that the relationship to these variables was not highly correlated with MFA. These findings suggest that MFA is a more profound internal process that a woman experiences and that these external variables may have little influence on her relationship to her fetus. Therefore, focusing on these variables in future research should not be a priority in terms of MFA. The findings based on the 2009 meta-analysis of MFA by Yarcheski et al. provide some insight into this developmental process but also highlight the need for continued research, as significant gaps in our knowledge remain. An additional search of the literature yielded one more research article that looked at MFA, maternal health

practices, and neonatal outcomes (Alhusen et al., 2012). This study demonstrated a positive relationship between MFA, maternal health practices, and neonatal outcomes. Continued efforts to understand the relationship between MFA and health practices remains an important area for further research. Other important factors that remain understudied include the experience of intimate partner violence and childhood trauma on MFA. More qualitative studies in particular are necessary to expand the constructs related to MFA beyond health behaviours alone and should inform not only nursing interventions but should also improve the measurement tools we use to evaluate this important relationship between mother and fetus (Muller & Mercer, 1993).

Table 1: *Variables Related to Maternal-Fetal Attachment*

| <b>Categorization of Variables</b> | <b>Variable</b>     | <b>Effect Size*</b>      |
|------------------------------------|---------------------|--------------------------|
| <b>Theoretical Variables</b>       | Social support      | R=.29 (Moderate)         |
|                                    | Anxiety             | R=.21 (Low)              |
|                                    | Depression          | R=.19 (Low)              |
|                                    | Self-esteem         | R=.19 (Low)              |
| <b>Pregnancy-Related Variables</b> | Gestational Age     | R=.35 (Moderate to high) |
|                                    | Prenatal testing    | R=.27 (Moderate)         |
|                                    | Planned pregnancy   | R=.15 (Low)              |
|                                    | Parity              | R=.14 (Low)              |
|                                    | High-risk pregnancy | R=.05 (Low)              |
| <b>Demographic Variables</b>       | Age                 | R=.16 (Low)              |
|                                    | Ethnicity           | R=.14 (Low)              |
|                                    | Marital status      | R=.12 (Low)              |
|                                    | Income              | R=.12 (Low)              |

\* Interpretation of Effect Sizes (Polit & Beck, 2012)

## Attachment Theory and Research Measures

How a woman develops a relationship with her fetus remains largely nebulous and poorly understood (Alhusen, 2008). Within the literature, MFA is most often measured using one of three scales: the Maternal-Fetal Attachment Scale (MFAS) developed by Cranley (1981); the Maternal Antenatal Attachment Scale (MAAS) by Condon (1993) and the Prenatal Attachment Inventory (PAI) by Muller (1993). Each of these instruments is theoretically rooted in John Bowlby and Mary Main's attachment theory (Bretherton, 1992). Attachment theory postulates that the relationship between an infant and their primary *caregiving system* (usually the mother) is both innate and necessary for survival but also has significant developmental influences on how a child establishes relationships across his or her lifespan (Bowlby, 1988). From a survival perspective, the infant attempts to activate the caregiving system or a maternal reaction when distressed, ill, hungry, or afraid, to regain proximity of the mother for necessary protection and comfort. Over time, the infant's understanding of relationships is developed: If the mother responds quickly and appropriately in most times of need or distress, the infant learns that there is a secure base that will respond to his or her needs when necessary (Amankwaa & Pickler, 2007). Because this security with the infant's primary attachment figure is developing in a healthy way, it increases the child's ability to explore the world and develop cognitively and socially through an increasing repertoire of new experiences. An expectation around how a caregiver will respond supports the development of a *working model* of relationships for the child. If the child attempts to repeatedly activate the caregiving system and the response is unpredictable, dismissive, or inappropriate, the working model that develops in response to

the primary attachment figure becomes one that is insecure and unreliable (Benoit, 2004). If this pattern continues over time, the child learns to interact with the world (across relationships and situations) believing there is not a secure base or safe haven available during times of distress. Under these conditions, the child develops anxiety and other defensive processes that are often expressed as fear, anger, and sadness, which precludes healthy attachments with peers and significant others while seriously impacting social, emotional, and cognitive development.

From this theoretical stance, it is now understood that a woman's working model of how she recalls her own childhood experience and the quality of her relationships with her primary caregivers will have an impact on her developing relationship with the baby during pregnancy (Benoit, 2004). This in turn will have a significant influence on the future infant–mother relationship.

Therefore, the construction of the MFAS, MAAS, and PAI was based on the underlying premise that a mother's relationship to her fetus is manifested in her behaviours, thoughts, attitudes, and feelings that demonstrate a desire to keep the fetal environment safe for optimal development. It is also assumed “that a woman is aware of these behaviours, attitudes, thoughts, and feelings, admits them, and is capable of rating them on a ‘Likert-scale’ (Van den Bergh & Simons, 2009, p. 121). Each of these measures focuses on different aspects of the maternal–fetal relationship with different psychometric properties. The MFAS is centered on maternal behaviours related to reducing risk to the fetus (Alhusen et al., 2012) with concern around internal reliability of the measure reported on several of the subscales (Van den Bergh & Simons, 2009). The MAAS focuses exclusively on thoughts and feelings about

the baby (Muller & Mercer, 1993) but data on the internal consistency of the subscales and other psychometric data are seemingly unavailable (Van den Bergh & Simons, 2009). The PAI also focuses on thoughts and feelings about the baby and is based on pregnancy adaptation and attachment literature (Gau & Lee, 2003). Of all scales measuring the maternal–fetal relationship, the PAI does appear to be the most promising and psychometrically sound (Van den Bergh & Simons, 2009).

Based on these three scales, our understanding of how the maternal–fetal relationship develops remains limited at best. Research results have often been conflicting and contradictory with three different instruments stressing different aspects of MFA. Further, small sample sizes largely comprised of white, well-educated, and middle-class women, and the developing relationship being measured at varying time periods across pregnancy, the quality of the research has been poor (Cannella, 2005). This is particularly of concern for pregnant women who are substance involved, given that there is some evidence to suggest that MFA can influence health behaviours (Alhusen et al., 2012; Lindgren, 2001; Sedgmen, McMahon, Cairns, & Benzie, 2006). Accruing a stronger body of knowledge around how the maternal–fetal relationship develops and what factors contribute to it being enhanced or diminished is critical to developing interventions that may improve maternal, fetal, and infant health outcomes in women who are substance involved.

### **Addiction as a Neurobiological and Psychological Process**

Until the 19th and early 20th centuries, the definition of addiction held a positive connotation. In the King James Version of the Christian Bible originally published in 1611, the

term “addiction” was used to describe those deeply committed to Christian values and moral eminence (Alexander, 2008). A powerful mass movement in the early 19th century that proclaimed alcohol to be a serious menace resulted in intense public alarm over its excessive use among the socially and morally abhorrent, and the definition was narrowed to become moralized and medicalized. By the mid-20th century, addiction expanded to include not only alcohol but drugs as well, and through powerful imagery of the “ruined alcoholic and the diseased junkie” these visuals became the cultural archetypes known throughout the world” (Alexander, 2008, p. 38). An “addict” has come to symbolize the most morally and socially reprehensible individuals in our society, and criminal activity and mental illness are often interwoven in our broad perception of those with addictions.

Despite the intense stigma that continues to surround addictions, our understanding of how addiction develops has been greatly expanded through human and nonhuman research. Old assumptions around the nature–nurture discourse have given way to the field of “epigenetics.” Where it was previously thought that genes played a predominant role in how the brain develops, it is now understood that “the expression of genetic potentials is, for the most part, contingent on the environment. Genes do dictate the basic organization, developmental schedule, and anatomical structure of the human central nervous system, but it’s left to the environment to sculpt and fine-tune the chemistry, connections, circuits, networks, and systems that determine how well we function” (Maté, 2008, p. 29). It is from this stance that we understand that our genetic capacity for brain development and functioning can only meet its full potential when environmental conditions are favourable. Most women who use substances during pregnancy have not been able to meet their full potential due to

environmental stressors that have influenced their development throughout their lives (Main & Hess, 1990). For their fetuses, a similar path of toxic exposure in utero and beyond is initiated, and the intergenerational nature of lost human potential is again realized.

The first three years of life are critical for human brain development. Seventy-five percent of brain development occurs during this time where, by the age of three, the brain has reached 90% of adult size while the body has only reached 18% (Siegal, 1999). Nerve connections or synapses are established through experiences and input from the environment. The three essential environmental conditions for optimal brain development are nutrition, physical security, and consistent emotional nurturing (Maté, 2008). Without one psychologically reliable adult to nurture the child, millions of synapses will not be established, and reduced interconnections may instead result in this impoverished environment (Tronick, 2007). Since the brain modulates mood, emotional self-control, and social behaviour, we can expect neurological consequences with “a reduced ability to anticipate consequences or to inhibit irrelevant or inappropriate, self-destructive behaviours and severe disturbances in all aspects of social, emotional, expressive and perceptual functioning” (Joseph, 1999, p. 190). By altering the four dominant brain systems that are affected by the environment, including the opioid attachment–reward system, the dopamine-based incentive-motivation apparatus, self-regulation areas of the prefrontal cortex, and the stress-response mechanism, susceptibility to addictions is markedly increased (Maté, 2008). We know this because these same dominant brain systems are out of kilter in individuals with addictions. The groundwork and predisposition for addictions are successfully laid with ongoing exposure to an impoverished early childhood environment. The need to shift our

thinking and broad social belief structure around how addictions develop is necessary based on our current understanding of epigenetics. It requires that we remove the individual blame and moralistic lens through which these people are viewed. Instead, compassionate care driven by our scientific knowledge should inform our interventions for those living with addictions.

### **Situating Women's Substance Use Across the Lifespan**

Over the past 25 years, a substantive body of evidence has been generated indicating that women's experiences with both illicit (e.g., cocaine, marijuana, heroin) and licit (e.g., alcohol, tobacco, prescribed opioids) drugs have a significant impact on the health of women, children, families, and Canadian society as a whole (Health Canada, 2006; Poole & Isaac, 2001). This is not to suggest that drug use by women in our culture is a recent phenomenon. Rather, opiates have been used legally to treat various ailments for hundreds of years, and cocaine has been available for use since the 1870s across all of North America and Europe. Indeed, by the end of the 19th century, almost two thirds of the opium and morphine addicts in these regions were women (Lester et al., 2004).

Despite these alarming prevalence rates more than a century ago, few studies had been conducted on the impact of substance use on the health of women across the lifespan or on the developing fetus during pregnancy until more recently. This was in large part due to the pervasive belief that gender differences were not significant in relation to substance use and their impact on the health of women, as well as the assumption that the placenta was impenetrable and the fetus invulnerable to harm from maternal substance use (Cormier et al.,

2004; Lester et al., 2004). This notion of invulnerability however, was shattered following the tragedies caused by two drugs: thalidomide (approved for marketing in 1958 and used as a sedative and antidote for nausea) and diethylstilbestrol (prescribed for use in the 1940s and 1950s to prevent miscarriage). By the early 1970s it was determined that more than 8,000 children had been born with limb malformations due to thalidomide and that the female offspring of women who consumed diethylstilbestrol during pregnancy were at particularly high risk of developing a rare adenocarcinoma of the vagina (Lester et al., 2004).

Interestingly, despite our understanding by the 1980s that many substances readily cross the placenta, alcohol infusions were still being used in clinical practice to delay premature labour (Abel, 1981). However, the realization of the teratogenic effects of many substances on the fetus, along with the rise of the “second wave” of the feminist movement in the late 1960’s and early 1970’s, provided the necessary thrust to shift research efforts towards the issues of substance use and addiction in women and the gendered pathways that lead to use of these substances.

Today we have clear evidence that the physical, emotional, and social consequences that these substances impart for women are categorically different than for men (Cormier et al., 2004). Indeed, these gender-specific differences are critical to delineate in order to best target interventions related to misuse of these substances, particularly for women during childbearing years (Health Canada, 2006). The health and social consequences for women, children, families, and broader society around misuse of these substances during pregnancy and beyond are profound and require urgent attention (Lester et al., 2004; Floyd et al., 2009; Deren, 1986)

## **Prevalence of Substance Use in Pregnant and Mothering Women**

Prevalence rates of alcohol use and illegal substance use (e.g., use of marijuana, heroin, cocaine, speed, hallucinogens, and ecstasy) in Canada and the United States can be gleaned from a number of sources found after a thorough review of the literature. A search of the PubMed, CINAHL, Medline, and Health Canada databases using the following search terms was done: *prevalence rates, illicit and licit drugs, alcohol, tobacco, pregnancy, and women*, for the period of 2009–2014. The search turned up a single study through the Canadian Centre on Substance Abuse from 2013, although it should be noted that this paper used the 2006–2007 findings from the Maternity Experience Survey (Public Health Agency of Canada, 2009) as well as the Canadian Perinatal Health Report from 2008 (Finnegan, 2013). An additional search of the literature was done broadening the time period to 2004–2014 with three additional studies found: the Canadian Addiction Survey (CAS) published in 2004, a secondary analysis of this same data through a gendered lens by Health Canada in 2008, and the Canadian Tobacco Use Monitoring Survey (CTUMS) published in 2008 by Health Canada. An additional search of the Centers for Disease Control and Prevention (CDC) in the United States produced findings from 2009 as a comparator against Canadian prevalence rates. A second source from the United States that was reviewed was the 2010 National Household Survey on Drug Abuse results. The major findings of these studies around alcohol, licit and illicit drug use, as well as tobacco use will be presented below to provide a snapshot of women's patterns of use for these substances.

## **Alcohol.**

The CAS analyzed patterns of usage in Canada across a number of demographic characteristics including age, province, marital status, education, income adequacy, and location of household, and included respondents across gender and rural-urban divides. Using a telephone survey approach, the CAS interviewed more than 13,909 respondents over 15 years of age, with 8,188 women and 5,721 men sampled in the study and representation from all 10 Canadian provinces. Nunavut, the Yukon, and the Northwest Territories were not represented although reasons for non-inclusion of the three territories were not identified.

Differences were reported between men and women in their alcohol usage patterns from light, infrequent drinking (consumes less than 1 drink per month) through to heavy, frequent drinking (consumes more than 5 drinks per sitting weekly). Of relevance for this research are the high prevalence rates in the category around heavy, frequent drinking with 17% of women between the ages of 15–24 engaging in heavy drinking (Society of Obstetricians and Gynaecologists of Canada, 2014). The rate drops to about 2% for women 25 and older, which is thought to be related to pregnancy and childbearing responsibilities. Rates of heavy weekly drinking were highest among women reporting the lowest income-adequacy group, less than a secondary high school education, single women who had never married, as well as divorced, separated, or widowed women, and those from rural communities. Similar findings were noted in the Behavioral Risk-Factor Surveillance System from the Centers for Disease Control and Prevention in the United States from 2009, with approximately 12% of women reporting periods of binge drinking (five or more drinks at one sitting) (Floyd et al., 2009). Specific prevalence rates around alcohol use during pregnancy were not available from the CAS

survey.

A search of the Health Canada website indicates that approximately 9 in 1000 infants are born with fetal alcohol exposure with high-risk pockets in Indigenous communities where an estimated 40% of women continue to consume alcohol throughout pregnancy (The Public Health Agency of Canada, 2012). A report presented by the Canadian Centre on Substance Abuse (Finnegan, 2013) identified similar results from both the 2006–2007 Maternity Experience Survey, where 10.5% of women reported drinking alcohol during pregnancy, whereas the 2008 *Canadian Perinatal Health Report* found that 11% of women consumed alcohol during pregnancy (Public Health Agency of Canada). The Behavioral Risk-Factor Surveillance System survey from the United States reports that approximately 12% of women continue to drink alcohol throughout pregnancy, whereas binge drinking drops to about 2–3% during the prenatal period.

### **Illicit drugs.**

Data from the CAS on use of illicit drugs is not broken down by quantity or frequency of use because of the illegal nature of the substances making it challenging to get respondents to identify the substances and quantities used. Instead, the measure used to report usage rates is use of any of the eight illicit drugs (cocaine, speed, ecstasy, hallucinogens, heroin, cannabis, steroids, and inhalants) over the course of the lifetime. Gendered differences are again found in the usage rates for women, with 69.1% of women 20–24 years having used one of the eight illicit substances while these numbers decreased to 52.9% for those aged 25–34. Like alcohol, lifetime use of one or more of these drugs by women were predicted by younger age, lower socio-economic status, limited education, and single marital status.

The main difference in usage patterns of alcohol and illicit drugs for women is that drugs are much more commonly used in urban settings where women in rural communities predominantly use alcohol. In the US National Household Survey on Drug Abuse (NHSDA) findings from 2010 are reported based on current use of substances rather than lifetime use, as is done in the CAS survey, and it estimates that among women 15–44 years of age, 7.9% engage in illicit drug use on a regular basis. Among pregnant women of the same age range, 4.4% reported using one of the eight illicit drugs listed above sometime during the prenatal period. Data collected from the 2006–2007 Maternity Experience Survey reports 1% of women using street drugs during pregnancy. The 2008 *Canadian Perinatal Health Report* showed 5% of women using illicit drugs during pregnancy (Public Health Agency of Canada). Challenges, however, arise in determining true prevalence rates for illicit substance use given that these survey results are based on self-report of drug use and are therefore likely to underestimate the extent of prenatal drug exposure (Lester et al., 2004).

#### **Tobacco use.**

Data from the CAS was limited to alcohol and illicit drug use patterns and did not include prevalence rates of tobacco use. Findings from the Canadian Tobacco Use Monitoring Survey published in 2008 indicate that approximately 20% of women between the ages of 15–24 years use tobacco regularly with similar rates in women up to 44 years of age, although there does appear to be a downward trend in use by both age brackets over the past two decades. Statistics for pregnant women who smoke were not available from this Canadian survey. Results from the 2009 Maternity Experience Survey indicated that 6.7% of women smoked cigarettes daily or occasionally during the last three months of pregnancy

while the Canadian Perinatal Health Report found that 13% smoked cigarettes during the last month (Public Health Agency of Canada). The NHSDA reports slightly higher levels of tobacco use among women 15–44 years at approximately 16%. What remains consistent across North America is the profile of women who are most likely to smoke: women of low socioeconomic status and education, as well as single, divorced, or widowed women. These profiles are reflected in the usage patterns for alcohol and illicit drugs as well, although differences between rural and urban usage patterns for tobacco were not identified.

Of significant importance, and perhaps even more compelling than statistics on individual substance use, is that approximately 32% of women who use illicit drugs during pregnancy and postnatally have a poly-drug profile such that they will use some combination of alcohol, tobacco, and illicit drugs in varying types and quantities depending on availability and addiction preferences (Bottorff, Kelly, & Greaves, 2014; Lester & Twomey, 2008). Our capacity to truly understand prevalence rates and manage the health and social consequences for both women and their children around problem substance use is further compromised by the layering of multiple addictions and their harmful effects on health in both the short- and long-term.

### **Contributing Factors to Substance Use in Women**

Although the CAS and the NHSDA identified correlations between substance use among women and low levels of education, poverty, and those without partners, several other important factors have been found to be associated with problem illicit and licit drug use. Substance use for women has been found to “arise from a complex interplay of biological, genetic, psychological, social, cultural, relational, environmental and spiritual factors”

(Cormier et al., 2004, p. 1). Research has indicated that as many as two thirds of women with substance use problems have a concurrent mental health disorder—such as depression, post-traumatic stress disorder, panic disorder, or an eating disorder—that they are often struggling to manage through their addictions (Cormier et al., 2004; National Institute on Alcohol Abuse and Alcoholism, 2008; Rosenbaum & Irwin, 2006). Further, the research also shows that a large proportion of women with substance abuse problems have experienced intimate-partner violence, physical or sexual abuse, and exposure to at least one parent who has had addiction issues (Cohen & Nonacs, 2005; Cook, Flick, Homan, Campbell, & Sweeney, 2004; Cormier et al., 2004; Health Canada, 2006; Logan et al., 2002). With each additional layer of risk contributing to the potential for health and social consequences, a proportion of women entering their childbearing years are often already entrenched in a substance abuse problem. Indeed, a woman's pattern of licit and illicit drug use before pregnancy is the best determinant of whether a woman will use substances during pregnancy and in the postpartum period (Logan et al., 2002).

Sex differences do impact the health consequences of most licit and illicit drugs. Because women metabolize alcohol and other psychoactive substances more slowly than men, the harmful metabolites of the drugs remain in the body longer (Health Canada, 2006). As a result, women are more likely to develop cirrhosis of the liver, gastric ulcers, alcoholic hepatitis, brain shrinkage and impairment, as well as breast cancer, despite consuming lower levels of alcohol for a shorter period of time than men (Cormier et al., 2004). Further, illicit drug use is also linked to high-risk sexual behaviours (e.g., sex trade work), which place women at increased risk for STIs, HIV/AIDS, and exposure to violence (Logan et al., 2002).

A woman's health may be further compromised when pregnant and using substances, in that shame and guilt often preclude women from seeking either prenatal care or medical care for illnesses unrelated to pregnancy (Greaves & Poole, 2007).

### **Maternal–Fetal Attachment in Women Who Use Substances During Pregnancy**

Currently, there is limited research that examines the MFA experiences of women who use substances. A search of the PubMed, Medline, and CINAHL databases with the search terms *prenatal attachment, maternal–fetal attachment, substance use, illicit and licit drugs, tobacco, alcohol, health behaviours, and health practices* for the years 2009–2014 inclusive was done. This produced only one study of relevance to this work. A broader search included the period of 2002–2014 with only one additional study found, which produced two publications in the literature examining MFA and substance use. Below is a presentation of each of these studies in order of most recent year of publication.

A study by Alhusen et al. (2012) examined the relationship between MFA, health practices, and neonatal outcomes in women receiving prenatal care in a hospital serving predominantly poor, inner city populations. Using a convenience sample, 167 women from the U.S. who were between 24–28 weeks gestation, had singleton pregnancies, and spoke English participated in the study. One hundred percent of the women had received prenatal care at the time when data were collected. Women were interviewed and demographic information was collected. Participants were then asked to complete the following two measures: the MFAS by Cranley (1981) and the Health Practices in Pregnancy Questionnaire-II by Lindgren (2005). Following delivery, an electronic chart review was done on all infants

to determine neonatal outcomes including the presence of low birth weight, preterm birth (< 37 weeks), and small for gestational age (< 10th percentile weight adjusted for gestational age). Results showed a significant negative relationship between MFA and adverse neonatal outcomes ( $r=.52$ ). Health practices were also shown to have a significant positive relationship with MFA ( $r=.86$ ). Several important limitations of the study include the use of a convenience sample of women, which therefore limits the generalizability of the results beyond this group of women, and the use of self-report measures, which may have resulted in these women under-reporting their substance use. Further, the sample was limited to women ranging from 24 to 28 weeks gestational age, when fetal movement is present and women are likely to have had a screening ultrasound, two factors that have been shown to enhance MFA (Sedgmen et al., 2006). The MFAS scores obtained would therefore not be generalizable to women of a similar demographic profile who had not felt fetal movement or received an ultrasound. Lastly, it was not clear whether women had to be currently engaging in the use of tobacco or licit or illicit drugs at the time of participation in the study. Regardless, Alhusen et al. were able to provide compelling evidence of the relationship between MFA, health practices, and neonatal outcomes in a sample of low-income women.

Two related studies were conducted by Shieh and Kravitz (2002; 2006). Their first publication in 2002 involved the presentation of their qualitative results in a study with 40 women who were pregnant and actively using illicit drugs (marijuana, cocaine, and heroin) during pregnancy. The women were interviewed as part of a larger study using quantitative measures to explore the dimensions of MFA. The women were found to struggle with MFA, often voicing guilt, uncertainty, and concern, which impacted their ability to develop a loving

relationship with the fetus and to reduce risky lifestyle behaviours (Shieh & Kravitz, 2002).

There were several limitations to this study as recruitment was limited to women who could read and speak English at a level that was sufficient to complete quantitative measures independently. This criterion limits the inclusion of the most vulnerable women. Further, participants had to have felt fetal movement, which has been found to consistently enhance MFA (Alhusen, 2008; Cannella, 2005).

Participation was also limited to women who used illegal substances only, which may have influenced MFA given the increased negative social judgment that exists around street drug usage (Lester et al., 2004). Lastly, participants had to have used illicit drugs after their last menstrual period but did not specify whether they had to continue engaging in drug use to be included in the study. This would therefore have allowed the inclusion of women who may have stopped using drugs any time between finding out they were pregnant up to the time of the interview, which may be a significant variable affecting how women experience MFA and engage in health enhancing behaviours.

The second part of this study by Sheih and Kravitz, published in 2006, quantitatively measured severity of drug use, initiation of prenatal care, and MFA using Cranley's MFAS in women using illicit drugs. Nineteen women who used marijuana were compared against 17 women who used cocaine or heroin (these drugs were collapsed into a single category given the small sample size). Differences were noted between the marijuana and cocaine and heroin groups by both age and severity of drug use. Marijuana users were younger, whereas cocaine and heroin users typically had a poly-substance use profile. None of the marijuana users reported a multiple drug use profile. Delays in seeking prenatal care were greater in the

cocaine and heroin using group of women. However, no differences in MFA scores were found between groups. These results were surprising to the researchers as they had expected to find that the cocaine and heroin users would have more difficulty than the marijuana users in developing MFA as a result of their severe drug use patterns and late entry to seeking prenatal care. The study puts forward several possibilities for this finding including the suggestion that many women who use cocaine or heroin feel guilty about their drug use and may compensate by developing a more “intensive attachment” to the fetus to reduce the burden of guilt (Sheih & Kravitz, 2006). An alternative explanation of why both marijuana using and cocaine and heroin using women in this study had similar rates of attachment but differences in severity of drug use and delays in seeking prenatal care is that women experience greater challenges and barriers in accessing health and social care systems. Reducing the difference in the findings to the individual places blame and does not adequately address the social elements that contribute to health behaviours. The finding that attachment does occur in women who use illegal substances should be the starting place for future research.

With such limited information on the experience of women who use substances during pregnancy and their developing relationships with their fetuses, health care providers are unable to adequately engage these women in interventions that potentially increase their MFA and ultimately their desire to integrate harm reduction practices into their lives for both the health of the baby and themselves. Additional research that begins to work through the layers of this complex relationship, which simply cannot be measured by a tool that assigns a numerical value to MFA, is not only necessary but our best means of making a difference in the lives of these women and their children.

## **Intergenerational Nature of Poor Maternal–Fetal and Infant Attachment**

Given the deleterious and long-term consequences of poor maternal–fetal and maternal–infant attachment on child development, especially for those already vulnerable as a result of other environmental or internal stressors (e.g., abuse, trauma, mental illness), the need to better understand how substance involved women develop an internal representation of their fetuses and themselves as mothers-to-be is also paramount. Research clearly demonstrates a strong intergenerational link to insecure and disorganized attachment (Schwerdtfeger & Goff, 2007).

Studies in this area suggest that traumatized and insecurely attached caregivers may be emotionally or functionally unavailable for their infant, thereby increasing the likelihood of enhanced symptomatology within the child (Fraiberg et al., 1975). Through identification of the barriers and supportive factors that affect MFA in women with substance use issues, we may be better equipped to develop interventions targeted at promoting healthy MFA so that the deleterious consequences of unhealthy attachment for women, children, and families may be reduced both in the present and in the context of multiple generations.

As stated earlier, the two central objectives for this research project are the following:

(1) To describe how women who use substances during pregnancy experience the process of a developing relationship with their fetuses and how this influences their health behaviours; and

(2) To explore what women who use licit or illicit substances during pregnancy perceive as the enablers and barriers (both internal and external) that may influence their

health behaviours and impact the physical, psychological, and social outcomes for themselves and their infants.

## **Conclusion**

Many of the limitations that were discussed in the literature review will be addressed in this research project because women who use both illicit and licit substances are included; illiteracy is not an exclusion criteria as the women are only required to participate in an oral interview; and women who have not felt fetal movement at the time of participation are also included, which may allow us to understand MFA at its earliest beginnings. Further, the gaps in our understanding around MFA are significant, with limited reliability and validity of findings from tools currently used to measure attachment, requiring urgent attention so that we may be able to enhance the development of this relationship between mother and fetus.

Based on the current evidence, an initial diagram of the multiple intersecting influences on MFA and health behaviours of women who use substances during pregnancy was developed (figure 1). Surrounding these multiple variables is the social context, which exerts additional influences on MFA, substance use, and mothering. It is understood that this was an early representation of concepts that were developed based on the literature only. A second diagram can be found in chapter 6 (figure 3) that integrates the findings of this study.

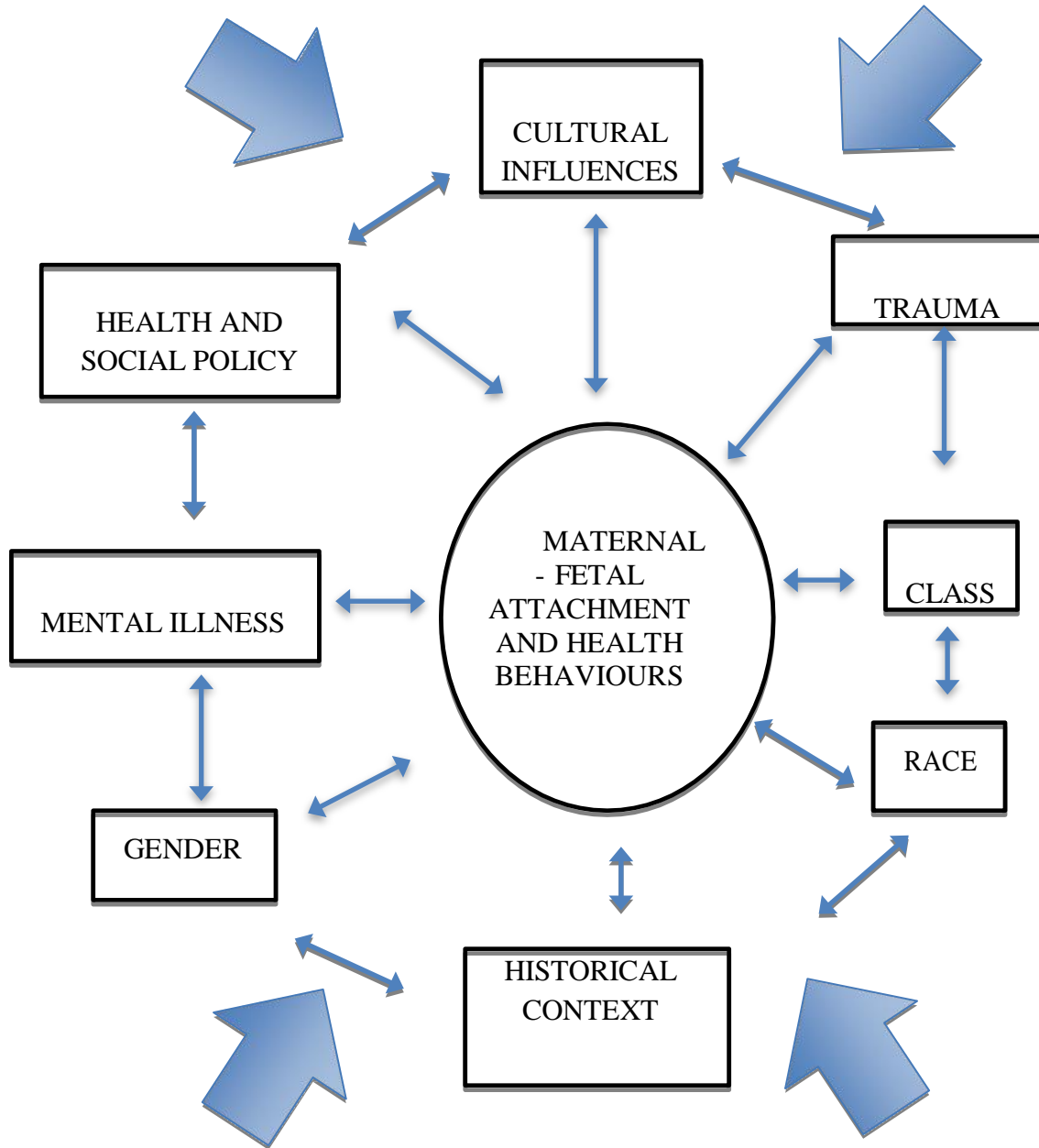


Figure 1: Intersecting Influences on Maternal-Fetal Attachment

### **Chapter 3: Theoretical Framework of Study**

Poststructuralism within the critical feminist perspective opens up spaces for alternative voices, new forms of subjectivity, previously marginalized narratives, and new interpretations, meanings and values.

Chris Weedon, *Feminist Practice and Poststructuralist Theory*

This chapter will begin with an overview of the epistemological stance from which this work is situated. Next, given the complexity of substance use in pregnant and mothering women, it is necessary to locate this work within a multi-perspective theoretical framework. Through the work of several post-structural theorists, a more fulsome understanding of the relationship between women who use substances during pregnancy and their developing fetuses can be explicated. The central focus of this chapter will be to describe the integrated theoretical framework that guided this work, from the development of the research question and research design through to data collection, analysis, and discussion.

#### **Epistemological Stance**

Epistemology refers to the development of criteria for the production of knowledge in order for that knowledge to be evaluated as scientifically sound, rigorous, and scholarly (Lykke, 2010). Before the late 1950s, nursing was not referenced as a “nursing science,” but with an increased valuing of positivist knowledge generation across the health and more traditional sciences, urgency has escalated to generate and organize nursing knowledge in a systematic fashion (Carper, 1999). Although empirically based ways of knowing remain the most highly valued explanation for understanding health and illness within the discipline of

nursing, a shift from the positivist stance as the only form of knowing has begun to gain some traction (Guba & Lincoln, 2005).

From a post-structuralist stance, there is no single truth but rather “one story among many” (Butler, 2002, p. 39), where reality is not discovered but constructed within the context of historical, political, and social biases. Discourse around any subject matter is entrenched in power dynamics between the privileged “knower” and the marginalized “other,” resulting in subordinating norms within a given society (Lykke, 2010). For people and institutions in society who are awarded the status as holders of the “truth,” such as those within medicine and law, discourses are designed to “exclude and control people” (Butler, 2002, p. 45). The discipline of nursing has been historically structured to focus on a single reality or truth, with considerable effort to align ourselves with the positivist world. In aligning ourselves thus, there remains a disparity of power between nurses, researchers, and their patients. The need for nursing researchers (indeed, nursing as a whole) to critique and challenge what we believe to be “true” regarding social processes and phenomena is necessary in order that we allow a plurality of voices to inform our knowledge development. As an example, our beliefs around pregnant and mothering women who use substances assumes these women to be “bad” mothers based on hegemonic criteria where any activity that may place a fetus at risk immediately results in the woman and her baby being placed in the disciplinary queue of potential separation from each other after birth (Poole & Isaac, 2001).

Risk discourses (which are also socially and historically constructed) in relation to pregnancy allow the state to determine who is designated “high risk,” requiring that certain groups of women be singled out for increased surveillance and expert advice (Lupton, 1999).

Having only one truth about risk defined by medicine and science removes any opportunity for deconstructing the definition of a “good” mother. Risk discourses also maintain the current conceptualization of substance use during pregnancy as deviant behaviour rather than opening up a more inclusive discourse around health behaviours during pregnancy that acknowledges a woman’s attempts to protect her fetus as best she can in her circumstances.

Examination of the developing relationship of mother and fetus through a post-structuralist paradigm using a qualitative methodology may lead to knowledge creation that can inform maternal–newborn care beyond an empirical measurement of risk assigned to illicit and licit drug use during pregnancy. With widening philosophical perspectives around health practices during pregnancy across disciplines, creating room to hear the voices of marginalized women may provide them with more appropriate services not grounded in punitive measures to control behaviours. The journey to becoming a mother is complex, and it requires that researchers acknowledge power differentials that exist between women and health care providers so that our care can be more compassionate and inclusive.

Therefore, this research undertaking will draw on Chris Weedon’s (1999) work around the “good” and “bad” mother binary that informs the social construction of “woman.” This chapter will also explore an overview of how substance use during pregnancy is situated within the “good” mother–“bad” mother dichotomy, as well as Lorna Weir’s (2006) historical overview on the threshold of the living subject and the influence of increasing technology and surveillance over the past 70 years, resulting in an escalating governance of women’s bodies. Deborah Lupton’s conceptualization of risk during pregnancy and the female body being represented “predominantly as a source of danger for its fetuses” (Lupton, 1999, p. 66) will

be interwoven within the analysis of Weir's work. Finally, the concept of social justice as envisioned by Madison Powers and Ruth Faden, where "justice is concerned with securing and maintaining the social conditions necessary for a sufficient level of well-being in all of its essential dimensions for everyone" (Powers & Faden, 2006, p. 50), will be presented to allow for the development of a theoretical matrix of these complementary theorists.

### **Theoretical Framework Chris Weedon: The "good" and "bad" mother binary.**

Discourse around mothering is the linchpin or pillar around which feminist theory has evolved since its epistemological beginnings. At times, motherhood has served as a unifying thread that has bound women together in the struggle to own their biological and reproductive selves, whereas at other times it has been largely divisive and highly contested amongst and between women (Weedon, 1997). It has been simultaneously celebrated by some as the essence of womanhood in our unique capacity to generate life within and scorned as the primary source of oppression for women when defined by the power structures of a patriarchal society (Klee, Jackson, & Lewis, 2002).

At the same time that this widely disparate and varying embodiment of mothering within the feminist community has saturated discourse, the predominant construction of motherhood within the Western world has generated a powerful binary representation of women as either good or bad mothers (Carabine, 1992; DiQuinzio, 1999; Reid, Greaves, & Poole, 2008).

Integral to our understanding of the social construction of the good and bad mother binary is distinguishing the defining characteristics of sex and gender—dichotomous yet virtually inseparable entities that influence and inform each other's existence from a

paternalistic stance: “Sex refers to the genetic, hormonal, and anatomical differences that characterize the bodies of human males and females” (DiQuinzio, 1999, p. 19) and is assumed to be invariant. Gender difference is not naturally given but results from relationships between knowledge and power that permeate and manifest themselves in both private and public spheres (Weedon, 1999). Gender therefore “refers to the psychological, social, political, and cultural meanings that these bodily differences come to have in specific social contexts” (DiQuinzio, 1999, p. 19) and, if taken to its full exegesis, has the potential for its ascribed meaning to change. Although the same holds true for sex characteristics in Western society, for gender in particular, it is in the differences between hierarchically situated characteristics that some people are more valued than others as determined by those who hold power. A discourse that assumes the white male to be the norm against which all others are measured allows for women to be relegated to domesticity and motherhood given their natural attributes of weakness, passivity, and emotionality (Kolmar & Bartkowski, 2010; Weedon, 1999). This discourse is “exemplified” in the following passage taken from the book *What a Young Wife Ought to Know*:

In place of the logical, she possesses the intuitive mind, which makes her capable of reaching a conclusion while man is thinking about it. She has less strength, but greater endurance; less daring in achievement, but more patience; less forcefulness, but more quiet insistence; less practicality, but more of the aesthetic; less ambition to assume the great responsibilities of life, but more painstaking in the little and no less important things which go so far towards making the days sweet and peaceful.

(Drake, 1901, p. 28)

This social construction of “woman” as patient and intuitive while at the same time illogical and lacking strength, fortitude, and ambition has been perpetuated across generations through a set of complex social processes, which are supported throughout infant and child development in our contextually defined child rearing practices (Carabine, 1992). Female children are taught to value their appearance above all and to express their emotions freely. They are presented with lifelike baby dolls to nurture, love, and protect as toddlers while still needing their own nurturing and protection. Male children are raised to be “tough,” because any emotion other than anger is not considered masculine. Appearance is focused on stature and musculature, where bigger is better. Athletic activities that endorse physical aggressiveness such as hockey or football are strongly encouraged for male children, to support their acceptance in a culturally sanctioned masculine construction. These practices inform the development of personal identity and result in the organization of various elements of culture including the division of labour between males and females. It is within these social processes that both overt and covert patriarchal power structures reside and understandings of self and subjectivity are developed (DiQuinzio, 1999).

For both women and men, the internalized understanding of femininity and masculinity permits only a prescribed menu of sanctioned behaviours to be considered “normal.” Indeed, these gendered ways of being are so pervasive and interwoven in our experiences of interacting in the world that alternative enactments of gender are almost inconceivable (Kolmar & Bartkowski, 2010). They shape and mold our subjectivity so intimately that the meaning of femaleness and maleness can appear to be virtually invariant, not unlike sex, because gender is causally related within a patriarchal power structure.

Feminists argue that this determinism based on sex must be deconstructed to allow gender to be expressed in a multiplicity of ways, in order for women to fully actualize their individual and self-determined potentials (O'Reilly, Porter, & Short, 2005). The good mother/bad mother binary must also be dismantled and rebuilt into a single category of mothers, who are not judged and categorized but rather enveloped with support, to ensure future generations of both male and female children can fully participate in life without patriarchal power structures determining their value based on gender. An exploration of the biological imperative for all women to bear children and embrace mothering within the circumscribed embodiment of the “good” mother as an amplification of the social construct of “woman” will next be discussed.

### **The social construction of “woman.”**

Patriarchal discourse around mothering is further constructed through the expectation of women to fulfill their biologically determined place in the world where gender and sex are unconditionally tied. Images of mothers and mothering permeate popular culture through multiple modes of transmission including the mass media, parenting manuals, medical textbooks, and popular literature (Mason, Carlisle, Watkins, & Whitehead, 2001). These portrayals communicate profoundly influential ideals of how mothering should look and be exemplified by women in order that they be labeled “good” mothers. Good mother imagery is portrayed as the quintessential standard of femininity through which all women are measured. It is neatly packaged within the confines of the signifiers of race, class, sexual orientation, marital status, and method of conception. The good mother prototype is a white, middle-

class, heterosexual female who bears children within the confines of the traditional family structure (O'Reilly et al., 2005).

From within this perspective, women are tied to a prescribed role of reproduction of the species, and to be a “woman” requires fulfillment of this role. As an extension of this, women are expected not only to desire to become pregnant and give birth as a result of their instinctual destiny, but also “to love their children unconditionally”, empathize completely with their children, meet their children’s needs selflessly, and be completely fulfilled and satisfied by the experience of child rearing” (DiQuinzio, 1999, p. 89). For women who are unwilling or unable to fulfill these gendered expectations of essential mothering, stigmatization of the highest order is rendered (Greaves & Poole, 2007) Women who actively choose not to or who are unable to become mothers as well as lesbians, single women, women with disabilities, women suffering from mental illness, addictions or both and women of marginalized race and class are all measured against the essential motherhood, with the differences between the exemplar and its lesser representation calculated to inform social position, rights, and privileges. Imperfections, which lie within the differences between the good mother prototype and other representations of mother, are almost intolerable—especially when a woman belongs to multiple stigmatized groups. It is in the struggle to be the essential “good” mother that women are further silenced, shamed, blamed, and socially excluded.

### **Substance use, pregnancy, and the “good” mother–“bad” mother binary.**

There is no other collective of women who are more stigmatized and thwarted than mothers who use substances during pregnancy (Greaves & Poole, 2007; Klee et al., 2002).

This is because of the profound tension between the socially constructed image of the good mother and the actual mothering behaviour exemplified by this group of women through their substance use. To use substances while pregnant is to defy the cardinal premise of mothering, where the expectation remains that there will be a complete abandonment by the woman of her personal needs, desires, or interests in order to fully meet the needs of her fetus (DiQuinzio, 1999). Indeed, the use of substances during pregnancy is often equated with child abuse, and “mothers-to-be” are transformed into pregnant addicts who are considered at best sick and at worst criminal” (Rutman, Callahn, Lundquist, Jackson, & Field, 2000). According to this framework, only morally depraved women would choose to place their fetus in harm’s way and therefore punitive sanctions to restore harmony between a woman and her fetus is the continuing rhetoric that feeds into the good mother bad mother dichotomy.

How women with addictions have been perceived and constructed has occurred largely as a result of marked advancements in medicine and technology in the mid-20th century (Daniels, 1993). Pregnancy has been forced out of the private domain of the woman’s body, where mother and fetus were a single entity, to enter the public sphere, where a demarcation between mother and baby has been imposed, pitting one against the other for privilege (Lester et al., 2004). The two pivotal concepts that have driven and continue to promulgate discourse around pregnancy and substance use are risk and the legal rights of mother and fetus. The movement of pregnancy from the private to the public domain as well as the concepts of risk and legal rights will be further explored from a historical perspective to provide clarity around the social construction of mothering from an evolutionary

perspective.

**Lorna Weir: The threshold of the living subject, technology, and risk.**

The term “threshold” is defined in the Merriam-Webster dictionary as “the place or point of entering or beginning—the level, point, or value above which something is true or will take place and below which it is or will not” (Threshold, n.d.). In philosophical terms, thresholds mark the transition from “inside to outside, the imperceptible to the perceptible, the nonreactive to the reactive and therefore marks the between. Women in pregnancy bear the between, the entrance across which the unborn must pass in order to be distinguished from those who carry them” (Weir, 2006, p. 1). Although not a single point in time or space, when and where the between begins and ends, where the fetus is separate from mother, is socially, historically, and culturally defined. Until the first two decades of the 20th century, when there were higher rates of both infant and maternal mortality, the “beginning” of the between was difficult to determine.

Although sometimes marked by “quickenings,” or the sensation of internal movements of the baby by the mother, this was a highly ambiguous measurement of fetal health and wellbeing (Weir, 2006). What did have a clear delineation was the “end” of the between, with the birth of a baby. If alive after passing to a place separate from the mother, the infant was recognized as having human status as both a person and individual (Weir, 2006).

With concerted efforts to reduce infant mortality rates at the turn of the century, childbirth was removed from the private sphere, which held the birthing experience as one between a woman and midwife, to the public sphere, with medicalization of childbirth and

ownership of obstetrical care transferred to physicians (Annandale, 2009). Under the guise of reducing “risk” and for pain control purposes, medical intervention, as well as specialization of antenatal care and the birthing experience were now a matter of public debate and discourse.

Although levels of infant mortality were dropping throughout this period, many deaths continued to occur before, during, or immediately following birth (Weir, 2006). Under the assumption that deaths occurring before or after childbirth were of similar causation, it was postulated that the body of the fetus late in gestation and the infant after birth were fundamentally alike, thus shifting the end of the between to a different location in time and space. From the clear delineation that had previously existed, with the end requiring a live birth, the consolidation of the period before, during, and after birth to a common interval erased this demarcation. Thus, the birth threshold became unfixed, and the relationship between mother and fetus blurred, shifting the social and legal categories of the person and individual (Weir, 2006).

By the 1950s, significant changes in technology were occurring with the introduction of ultrasound technology, allowing visualization of the fetus while in utero and providing it animation and personification prior to individuating from the maternal subject (Klee et al., 2002). This period of time also heralded the further scientization of “risk” such that it was defined as “the product of the probability and consequences (magnitude and severity) of an adverse even (Lupton, 1999, p. 19) and not merely something of natural causation. Risk was now measurable and amenable to intervention to reduce the impact on human suffering. Efforts to reduce risk were instituted through the introduction of systematic regimes of

prenatal care, beginning at 16 weeks gestation and supplemented with ongoing prenatal risk assessments, to allow containment and prevention of danger to the health of the growing fetus. The meaning of risk had been reconstituted and repackaged to meet the social ideologies of the time (Lupton, 1999).

Along with technological advancement and efforts to reduce the cloud of risk factors that drifted over the perinatal interval, governmental control over a woman's body was increasing in the 1970s (Daniels, 1993). Discourse around the beginning of the between was again shifting from a relatively time limited interval immediately before, during, and after birth to being centered on a viability argument. Defined as the time when a fetus can theoretically exist separately from the mother, the legal category of the person as individual was well positioned for a highly politicized debate. The primary determinant of fetal survival was initially correlated with lung capacity that develops around 24 weeks and is sufficient to permit newborn survival if specialized neonatal intensive care is available (Weir, 2006). More recently, temporal definitions of viability have been displaced by fetal weight, with fetuses greater than 1,000 grams at approximately 28 weeks gestational age having a reasonable chance of survival after birth without the need for technological support (Weir, 2006). This represents the low limit of viability based on perinatal mortality rates. Despite unfathomable advances in prenatal care including prenatal surgical intervention, and a risk based prenatal care system widely accepted across Canada, technology has been unable to pass the biological boundary defined by fetal weight. Viability with technological support today remains at approximately 24 weeks gestational age and fetal weight around 500 grams, with the fetus becoming politically independent from the mother at this time and falling under the

jurisdiction of public property (Daniels, 1993).

The concept of the organic oneness of mother and fetus was irrevocably ruptured and separated with increased surveillance and risk management from the 1970's onward, placing the rights of the mother and the fetus in direct conflict with one another as distinct entities. With the beginning of the between unfixed and now somewhat fluid in nature, the end of the between found itself firmly situated with the fetus at 28 weeks gestational age. It is at this socially constructed line in the sand that fetal rights supersede maternal rights, with physicians and other health care providers interjecting in decisions around a woman's body because of their moral obligation to intervene if deemed necessary. As a result, "a woman's freedom to control her body is circumscribed by the obligations she incurs to the fetus" (Daniels, 1993, p. 25). Further, it is understood that a "good" mother would choose intervention for her fetus, even if it were to place her own life at risk, to support the survival of the baby, as she is somewhat seen as merely a vessel secondary to her child.

Beyond the viability argument, where a woman is no longer entitled to the bodily autonomy as afforded to her male counterparts throughout the lifespan, discourse around the demarcation of fetal rights and hence women's bodies being under the control of the state now includes a much larger window of time. Since the 1980s, support across social and political divides has increased for imposing legal sanctions and forced treatment for behaviours deemed to place the fetus at risk from the time of conception onwards (Klee et al., 2002). Women who are pregnant and using substances, particularly illicit drugs, have been placed at the forefront of this debate and vilified for their deviant behaviour (Centre for Addiction and Mental Health, 2002; Leslie, 2007; Mason et al., 2001; Poole, 2000). As an

example of this, women in Ontario who are identified as using substances during pregnancy are “red flagged” by child protection services (CPS) so that at birth an assessment can be done to determine whether to additionally surveil a woman’s capacity to mother or to apprehend the baby. With a woman’s biological potential realized at conception, the “bad” mother who is unwilling to shield the developing fetus from environmental toxins, disease, and malformation must be contained to reduce the risk to the fetus. Control of the woman’s behaviours and body as the ultimate enemy to the personified other must be swift and all-encompassing so that any potential harm to the fetus can be eliminated (Mason et al., 2001). The risk of harm to the fetus therefore invalidates a woman’s right to self-sovereignty. The beginning of the between is now relocated to the point of conception, where a fetus is being afforded individual rights and status separate from the mother.

Fetal advocates contend that to expose a potential other to any risk that may result in a lifetime of suffering and disability while in utero, including drugs, outweighs the social cost of limiting the rights and freedoms of the body in which it is housed, which is meant to nurture and protect the developing fetus (Lester et al., 2004). Imposing a time-limited control over the mother for the gestational period, with limited social support or addiction services and occasionally legal sanctions including incarceration and forced treatment, is argued to be entirely reasonable and has indeed informed much of our current legal and social policy (Greaves & Poole, 2007).

The point of contention, however, resides in the assumption that imposing restrictions to maternal freedoms by focusing on the single risk factor of prenatal drug exposure is linear, overly simplistic, and faulty (Lester & Twomey, 2008). Developmental outcomes for children

exposed to substances prenatally are widely variable and must be considered and understood within the context of the broader social environment. Health and social policy must move beyond prosecutorial strategies that criminalize women's behaviour by charging pregnant women with delivering a controlled substance to a minor and engaging the child welfare system that overwhelmingly supports the apprehension of children from women who use drugs (Poole & Isaac, 2001). Instead, as our understanding of addictions grows, expands, and moves from a place that believes substance use by pregnant women is grounded in a selfish and reckless desire to harm a developing fetus (a moral failing) to one that situates substance use within the mental health domain, we can then look to the research on substance use to inform policy development.

In turn, this will allow for the acknowledgement of the complex and multifaceted determinants that influence and coalesce to adjudicate the health of mothers and their children (Lester et al., 2004).

### **Madison Powers and Ruth Faden: Social justice.**

A punitive approach, child protection involvement, and stigmatization for deviant behaviour in the management of illicit drug use during pregnancy reduces the blame of the behaviour to the individual so that ownership of moral failing falls securely on the "bad" mother alone (Weir, 2006). Such a reductionist stance denies the context and everyday reality of many drug using pregnant women who are mostly poor, undereducated, racial minorities, and victims of profound violence and trauma (Greaves & Poole, 2007). It also ignores the social and distributive justice arrangements in our society that result in a political economy

where health care, food, work opportunities, and correctional measures are unequally distributed based on gender, sexual orientation, class, and race (Sullivan & Tiff, 2008).

Social and health policy can have a healing and restorative agenda rather than a punitive one that aims to correct socially constructed deviant behaviours. Within this context, health and public policy directed at substance use during pregnancy must develop out of a shared responsibility for society's failings, acknowledge power differentials that result in increasing health disparities, and concede to the presence of stigma and social exclusion not only within broader society but the health care arena as well.

### **Integration of Multiple Frameworks**

A movement towards health and social policy that is situated within a social justice framework rather than a punitive one is the foundation on which post-structuralist feminism is built. This is because it allows for women's voices to resist the social discourses that reflect the dominant values of patriarchal power and provides a space for discussion that eliminates the language and meaning assigned to the "good" mother and "bad" mother. Critical feminism is both a form of insurgency because it competes with the state and other power-based arrangements and also subversive in nature because it challenges social arrangements and processes that limit human potential while preventing human needs from being met (Sullivan & Tiff, 2008). It acknowledges that we are all co-creators of our collective social world and that to assume a stance of social justice is to encapsulate immense human compassion and accountability in order to facilitate the "personal empowerment and growth of each and the collective well-being of all" (Sullivan & Tiff, p. 5). Critical feminism assumes a societal

responsibility to promote and ensure healthy fetal development and maternal wellbeing rather than assign individual culpability to a woman to protect her unborn child in the context of often horrific disadvantage and trauma.

Critical feminism, by attending to the philosophical constructs of social justice, opens health policy and program development to a participatory process that fully engages women, to enable a deeper understanding of the sociocultural influences that perpetuate the use of substances to cope with their social reality and numb the pain that permeates some women's existence (Greaves & Poole, 2007). It also elucidates barriers that preclude women from receiving help, to inform policy and practice in a way that meets the needs of pregnant women rather than serving a paternalistic and medicalized agenda. Figure 2 illustrates the integration of these multiple intersecting theoretical perspectives.

## **Conclusion**

The journey of female children into womanhood, and for many, motherhood, is significantly influenced by complex and rigid patriarchal structures that permeate Western society. The integration of the multiple post-structural theoretical perspectives woven into a single framework allows for the established norms of what constitutes being a good or bad mother to be challenged to allow for a single category of "mother" to be created, to allow support to all women regardless of social station through the perinatal period. A post-structural feminist stance served as the lens through which this research project was undertaken, and this philosophical perspective influenced all elements of this work, from the research design through to data analysis. The next chapter will cover the research methods used within this study.

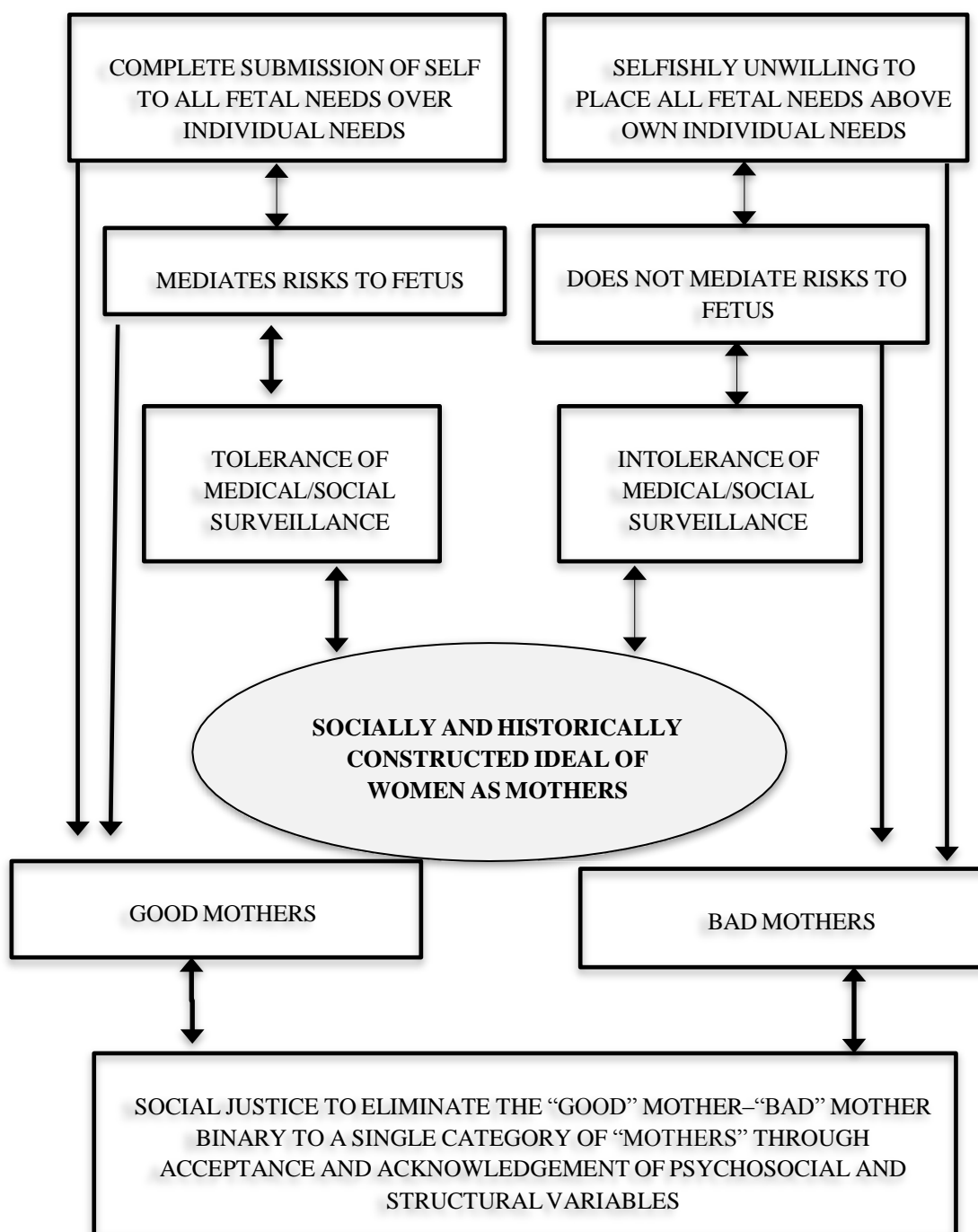


Figure 2: Integration of Theoretical Perspectives

## Chapter 4: Methodology

There can be no justice without love.

—Bell Hooks, *Feminism is for Everybody: Passionate Politics*

Grounded theory (GT) is a research method and methodology that has been an enduring part of the research landscape for over four decades. GT has evolved over time with many variations of the original method currently available for researchers to use based on their epistemological and theoretical stance. In this work, the GT methodology of Kathy Charmaz (2006) was selected, as her approach resonates with my philosophical way of being in the world. Exploring a phenomenon to its fullest potential requires a harmonious fit to support an ongoing passionate commitment towards the generation of a genuine understanding of the social reality you are exploring. Charmaz provides a guiding framework that is commensurate with a feminist position, while offering analytic tools that can be used flexibly to “reach down to fundamentals, up to abstractions, and probe into experiences” (Charmaz, 2006, p. 135). In examining the social world of women who are pregnant while using legal and illegal substances, it is critical that the approach not only describes their situation but also considers how gender, class, age, race, and material circumstance influence their actions and interactions. Further, it is pivotal that women’s experiences are located historically, culturally, and politically to unearth the complexities that mitigate their existence. For these reasons, the GT formulation of Charmaz was selected to guide this research from inception through to data collection and analysis.

This chapter will begin with an overview of GT as the qualitative process that directed

data collection and analysis for this research, as our understanding of the developmental process around maternal–fetal attachment (MFA) in women who use substances during pregnancy remains largely undeveloped. In particular, the intersection of both interpersonal and sociopolitical variables on the developing relationship has not been explored. This overview will then be followed by a discussion around the study design, research setting, and methods for recruitment for participants to the study. Data collection and analysis will then be discussed, delineating both demographic data and semi-structured interviews. The chapter will close with a presentation of the efforts to ensure rigour within the research.

## **Grounded Theory**

GT as a research method and methodology has been an enduring part of the research landscape for over four decades. Its inception was marked by the collaborative efforts of Barney Glaser and Anselm Strauss in their seminal book, *The Discovery of Grounded Theory* (1967). This landmark contribution to qualitative research literature serves as the anchor for all future iterations of the method. Several key elements of the GT method developed by Glaser and Strauss remain central in current day interpretations of their original work, although how they are actualized can vary considerably. An overview of the GT approach by Charmaz will be presented, with the key differences and similarities of her method compared and contrasted against the work of Glaser and Strauss.

Charmaz earned her PhD in sociology from the University of California in San Francisco in 1972 and studied under the tutelage of both Glaser and Strauss. Her presentation of GT methodology encapsulates virtually all of the original methodological processes

developed by her predecessors as reflected by her adherence to the core elements of their rendition including the *constant comparative method, simultaneous process of data collection and analysis, two levels of coding* (referred to as *initial coding* and *focused coding*), *theoretical sensitivity, theoretical sampling, theoretical saturation, theoretical sorting, memoing, and diagramming*. Where she does depart methodologically from both Glaser and Strauss is in her non-adherence to searching for a single *basic social process* or *core category*. Instead, Charmaz believes that a theoretical representation of a social phenomenon should reflect the complexities and multiple realities of our interactions, which cannot be distilled down to a single process or core category. She aims to elucidate the intertwining of polymorphic social processes as a reflection of the many actions that coexist in our experiences that may best be explained through multiple actions and interactions (Charmaz, 2006). This divergence is intimately linked to her pronounced ontological and epistemological shift from classic GT and, in particular, Glaser and his unchanging manner of engagement in the research process.

From an epistemological perspective, Charmaz emphatically removes herself from the positivist tradition that shrouds the original formulation. She calls for a repositioning of GT from an objectivist worldview to one that fully embraces a constructivist ontology in keeping with the current philosophical landscape of the 21st century (Bryant & Charmaz, 2007). By embodying this shift, she reconstructs several fundamental ontological tenets of classic GT. The first is the belief that there are multiple realities and multiple perspectives on these realities. Indeed, “data are not separate from either the viewer or the viewed. Instead, they are mutually constructed through interaction” (Charmaz, 2009, p. 138). From this flows her

dismissal of Glaser's representation of the researcher as a neutral but expert observer whose conceptualizations emerge from the data free of any preconceptions. Rather, constructionists acknowledge the relativity of the data and explicate how their standpoints, positions, and situations have influenced their analytic product (Charmaz, 2005; Cutcliffe, 2005). By engaging actively in reflexivity that concedes to power differentials between and within those whom they study, Charmaz's stance clearly stands in stark contrast with Glaser's notion of neutrality of the researcher (Clarke, 2005).

As an element of reflexivity, Charmaz also speaks of the need to fully contextualize and situate the historical, social, economic, and gendered influences that shape social processes and the behaviours of people within their world. To deny the significance as well as the pervasive nature of these elements on the analyst, participant, and ultimately the research findings is not only problematic but reduces the credibility of the work by its failure to address this critical empirical data (Charmaz, 2005). Indeed, where Glaser's GT methods see context as virtually irrelevant and transcendent of time and place, Charmaz's constructivist GT provides both the tools and framework to advance social justice research through critical inquiry of power structures (Charmaz, 2009).

A final point of divide can be noted in Charmaz's GT approach. Charmaz fully endorses the use of extant literature to inform and sensitize analysis theoretically throughout the research process. Further, she asserts that "a thorough, sharply focused literature review strengthens your argument—and your credibility" (Charmaz, 2006, p. 166), given the practical requirement that most research grants and proposals demand that you have a sophisticated knowledge of your area of interest. Glaser remains unmoved on this issue and sees a review

of the literature prior to a full analysis of the data as a contaminant (Glaser, 1998).

GT has evolved considerably since its original inception in 1967 by Glaser and Strauss. The differences are not subtle. Charmaz's epistemological shift from a positivist leaning to a constructivist stance provides the space and analytic tools to study the relationship between mother and fetus in women who use substances during pregnancy. Charmaz's approach is both a method and methodology that is congruent with not only the focus of the research but this researcher's philosophical beliefs.

## **Reflexivity**

A fundamental tenet of critical feminist research and GT, as described by Charmaz (2006), is the use of reflexivity and the necessity of acknowledging power differentials between the researcher and the participants (Plummer & Young, 2010). It is within and between the spaces of the power differentials that all phases of the research process occur, and these power differentials affect everything from data collection, through to data analysis, all the way to production of manuscripts for publication.

I come to the research process as a privileged, white, highly educated, and heterosexual female. I have no disabilities, and my age does not serve as a barrier to this process. I live in a safe neighbourhood with minimal crime and overt violence, and my partner and I have a stable and comfortable income. My desire to better understand why a woman uses substances during pregnancy evolved after a long personal and professional journey. When I started my nursing career more than a quarter century ago I would not have been at this place. My own desire, almost 20 years ago, to have a healthy baby with a supportive partner

was by all accounts the “ideal” situation in which to find myself when choosing to become a mother; even the option to choose the best possible timing is a privilege that many women do not have. I removed every possible environmental toxin I could control from my system and surroundings before I attempted to get pregnant. The pregnancy was all carefully planned and maneuvered. I would have the perfect baby unless genetics or some other variable was introduced that was beyond my control. And I did have a beautiful daughter, who is now 20 and in university to become a nurse.

However, my work as a nurse in child and adolescent psychiatry was an important part of my life both personally and professionally. I watched, listened to, participated in the lives of, and was actively involved with many children and their families who had been touched by poverty, trauma, abuse, substance use, and much more. The efforts of our interdisciplinary team to “help” seemed feeble and did not fit the magnitude of the suffering that many of the children and their families had endured in their daily lives. Perhaps it is maturity that brings me to a place where my social conscience has evolved such that I want to contribute to nursing in a different way.

I came to this research process with a strong desire to contribute to our understanding of these women’s experiences and ultimately to inform practice to help reduce the devastating and intergenerational nature of substance use, trauma, and poverty on women and children. But I will only be able to tell the “real” story of these women if I engage in honest reflexivity throughout the research process. To this I am committed, and I understand the magnitude of my responsibility. I am a feminist with a strong belief in social justice and it is with these fundamental beliefs that I come to this research process and know that it will

change who I am throughout the journey.

## **Ethics**

The University Research Ethics Board (REB) affiliated with this project provided their full approval to conduct this study (Appendix A). The community agencies where recruitment for the study occurred began after receiving REB approval. After data collection started, a REB modification to address a minor change in the research protocol was approved. Specifically, the initial application had not addressed or considered that some women may have delivered their babies by the time of the second interview. The modification allowed for women to complete their second interview after they had given birth if they had been recruited later in the second or early in the third trimester of pregnancy, or delivered prematurely. A second approval for modification to the research protocol was sought and received from the REB when it was felt that additional interviews were necessary to gain a further understanding of the emerging categories from the women's interviews by interviewing health care providers around their experience of working with women who were substance involved and pregnant. It was thought that understanding how health care providers perceive women who use substances during pregnancy would add an additional layer of understanding to this complex phenomenon.

The anonymity of the participants and confidentiality of the information they provided is of profound importance. Therefore measures were taken to ensure that all information shared during the study remains confidential. Only myself as the primary investigator, the thesis supervisor for this project, Dr. Peterson, and a professional transcriptionist had access to the data.

Participants were assigned pseudonyms so that their names and identities would not be associated with any recordings, transcripts, or documents that resulted from this study. All the names of people involved in the study and organizations were removed from the transcripts, and a key to these names was kept in separate documents. All of these research materials were kept in a locked cabinet in my home office with all electronic data maintained on two password-protected laptops and two password-protected desktop computers (belonging to myself and my supervisor, Dr. Peterson). All data (audio recordings, paper, and electronic files) will be destroyed five years after this thesis work has been successfully defended.

## **Research Design**

To gain a better understanding of the process of MFA in women who use substances, a qualitative study using a GT approach situated in a critical feminist stance as the method of inquiry was undertaken as it was determined to be the best “fit” to address the research question and objectives of the study. A qualitative approach is recommended in areas where little previous research has been done around the phenomena of interest (Charmaz, 2006). Women were interviewed twice using semistructured interview questions, which evolved over time to reflect increasing theoretical understanding of the process of MFA. The initial interviews took place after women had completed their first trimester of pregnancy, given that the risk of spontaneous abortion diminishes considerably after this time (Lester et al., 2004). The second interviews took place 6–8 weeks later in order to explore whether the women felt that their attachment to their babies had changed over the course of the prenatal period as had been found in other studies (Alhusen, 2008; Cannella, 2005).

Demographic information was also collected at the beginning of the first interviews and then again at the second interviews to update additional information including gestational age. Once the second interviews had been completed with the participants, interviews were done with several health care providers working with this population in order to provide an additional layer of depth and understanding to women's experiences when engaging with health care providers.

### **Research Setting**

This study took place in a mid-size Canadian city with a population of approximately 900,000 people. A 2013 report titled *Socio-Economic Indicators Atlas* for the region was reviewed to determine the socioeconomic conditions of the population overall given that socioeconomic status (SES) is an "important determinant of health and the link between health status, utilization of health services and . . . is well established" (Dall, Lefebvre, Pacey, & Sahai, 2013). Three broad domains were considered in this report including economic status, demographics, and several factors associated with economic disadvantage (e.g., immigration status, visible minority status, high school drop-out rates, income, and percentage of household income being spent on shelter expenses). Data was used from Statistics Canada's 2001 Census Report. Findings indicated that, as an overall picture of SES based on the variables identified above, the region has lower levels of socioeconomic disadvantage relative to other regions in the province. The overall unemployment rate was 5.8%. The percentage of female lone parent families in the region was 19.5%, which is similar to other areas in the province, with higher rates of female lone parents congregated in

the downtown core. Recent immigrants compose only 3.3% of the demographic, which is lower than the provincial average. The percentage of the population who are visible minorities (13.0%) is less than in the province overall (19.1%). The percentage of the population without completion of high school for the province is 25.7%, whereas it is only 20.0% within this area. The percentage of economic families below the low income cut-off is slightly lower than the rest of the province (11.7%), sitting at 10.8%. The percentage of households for the province spending 30% or more of their income on housing is 25.2%, whereas in this region it is 21.6%. Overall, relative to other communities within the province, this region fares better than many other areas based on the SES indicators reviewed. These findings do not, however, diminish the strife and disadvantage that many—in particular, young women—experience within the community.

In terms of substance use in the region, a 2013 report produced by the Public Health Department found 28% of adults (> 19 years of age) exceeded the recommended weekly alcohol consumption limit, which places individuals at risk for long-term alcohol related health risks (Willmore, Russel, Spatz Friedman, & Ali, 2013). After alcohol, marijuana is the most commonly used substance among youth (24%) and adults (13%). Each year there are approximately 40 drug overdose deaths in the city with prescription opioids such as fentanyl, methadone, or oxycodone involved in 45% of these unintentional deaths. The three injection drugs used mostly frequently included morphine (or other opioids), heroin, and cocaine. There is an increasing demand for needle and syringe programs and safer inhalation program services within the city, with an increased rate of usage of injectable and inhaled substances by 16.5% from 2010 to 2012. Statistics around tobacco use were not contained in this report.

These findings suggest that residents within this mid-sized Canadian city engage in similar levels of consumption of both alcohol and illicit and licit drugs to those reported in the Canadian Addictions Survey (2004), although increases in opioid use (both intravenous and inhalation) are noted.

For the purposes of this research, one specialized program that provides addiction services to women only, two community health centers, one specialized program for pregnancy and mothering young women and one organization that serves men and women who are homeless, served as the settings where recruitment and data collection took place. It was hoped that by drawing participants from multiple community organizations the sample would be somewhat diverse based on the type and location of services offered. Each of these organizations has a fundamental social justice framework that guides their programs, which demonstrated a synchrony between the setting and theoretical framework selected for this research. After meeting with team members from each of these organizations in order to work collaboratively around how best to recruit women at each site, a letter of support was provided by each of the organizations that were involved with recruitment to the study (Appendices B, C, D, E, and F).

## **Participants.**

### **Women.**

Participants were initially drawn from a *convenience sample* at multiple organizations across the region. *Snowball sampling* then superseded convenience sampling in the recruitment process, as relationships developed and young women receiving services within the organization began to trust me as a “safe other.” Trust was established over time with

the women and myself through an ongoing presence in the centers and as a result of my participation in groups and at meal times. Snowball sampling is often used when gaining access to a particular population is difficult (Polit & Beck, 2008). *Purposeful sampling* was eventually used to refine interview as categories and themes began to coalesce. *Theoretical sampling* then superseded purposeful sampling as defined by Charmaz (2006). Theoretical sampling refers to seeking pertinent data to develop the emerging theory. The main purpose of theoretical sampling is to “elaborate and refine the categories constituting your theory” (Charmaz, 2006, p. 98). Recruitment continued until theoretical saturation was achieved and a developing theory around MFA in this population emerged. Saturation was reached when no new or relevant conceptual ideas emerged in the data. Streubert Speziale & Carpenter (2003) state that approximately 8–15 participants are often necessary to achieve theoretical saturation. In the end, 10 women participated in this research study with theoretical saturation achieved at this time.

### **Health care providers.**

A small, purposeful sample of health care providers were invited to participate in interviews, after all women had been recruited to the study, to provide additional information to enhance emerging categories. Because information gathered by these participants was not the primary purpose of this research, only a small number (< 6) of health care providers were recruited as a technique to support theoretical sampling for category development.

### **Recruitment.**

#### **Women.**

Once ethical approval was received through the Office of Research Ethics and Integrity, bilingual posters and flyers were placed in the partnering community organizations

(Appendices G, H, and I). Criteria for women to participate in the study required that women were greater than 12 weeks pregnant at the time of the first interview and planning to continue the pregnancy, speak English or French, currently receiving care at one of the community organizations participating in the study, and agree to be interviewed twice by myself or my research assistant if they preferred their interviews to be conducted in French.

All staff working with the women at the collaborating organizations were invited to a presentation given by myself at individual sites to provide information around the objectives of the study and an opportunity to address any questions through open dialogue. A single primary contact person at each organization was identified and served as a liaison between myself and potential participants. The primary contact person directed and facilitated recruitment of interested participants by staff within their respective facilities. Only the primary contact people or their appropriate delegates approached eligible women to ask if they were interested in learning about participating in the study. Once a woman indicated an interest in participating, the primary contact gave her an information sheet that outlined the purpose of the study and the methods that were going to be used (Appendices J, K, and L). The primary contact or the delegate then asked for consent from each interested participant if they were willing to be contacted by myself and invited to participate in the study.

### **Health care providers.**

The decision to formally interview health care providers was made after discussions with peers and health care providers who work with pregnant substance using women to enhance saturation of general themes and categories that were emerging from interviews with women participants as part of the analytic process. Primary contacts in two of the participating

organizations were contacted via email to ask if they were interested in participating in a formal interview around their experiences working with pregnant woman who use substances. The email also requested that they ask colleagues if they would be interested in participating. In the end, five health care providers agreed to participate in a formal interview. One interview included two nurse practitioners at a homeless shelter working at a health clinic contained within one of the participating organizations, and a second interview with three health care providers including a nurse and two mental health care workers at a second homeless shelter for women.

### **Data collection.**

#### **Women.**

Interviews with the women participants took place in private rooms at the organization where they had been receiving care to ensure a safe environment. Informed consent was assured by reviewing the consent form (Appendix M) with participants prior to beginning the first interview and again before the second interview. In total, 10 women completed the first interview; nine of these 10 women completed the second interview.

Two kinds of data were collected during the face-to-face interviews with participants. First, demographic and descriptive information was collected to allow a detailed picture of the life circumstances that brought these participants to the point in time of participating in the study (Appendix N). The second type of data that was collected was through semistructured interviews that were audiotaped. Women were offered the choice of being interviewed in English or French. All the interviews were conducted in English, although a Francophone research assistant was available to conduct interviews in French if women preferred it. A

semistructured interview guide was used to support data collection (Appendix O). The use of broad, open-ended, and nonjudgmental questions provided a place to start, by opening the discussion and allowing stories to emerge (Charmaz, 2006). Based on the GT approach by Charmaz, questions evolved and changed as findings from earlier interviews informed future ones. After the interview, women were given an honorarium in the form of a \$50 gift card for participating in the study. The interviews lasted between 45 and 90 minutes. Participants were then invited to participate in a second interview six-to-eight weeks after the initial interview to clarify findings by member checking and to get a better understanding of how prenatal attachment develops over time.

Participants were provided with another gift card valued at \$50 after the second interview. A safety plan was developed in collaboration with each of the partnering organizations to provide support to participants who may have experienced distress following the interviews, to ensure appropriate follow-up was available given the vulnerability of this population (Appendices P, Q, R).

### **Health care providers.**

Interviews with a total of five service providers were conducted within two local homeless shelters. Two of the providers were nurse practitioners (NPs), one was a registered nurse (RN), and two were mental health support workers. All of the providers were female and had worked with the homeless population anywhere between one to 23 years. Interviews were conducted in a private location within the respective organizations where they worked. All participants signed a consent form prior to the interviews commencing (Appendix S). Each of the two interviews (one interview with two providers and a second interview with

three providers) was audiotaped and lasted 45 to 60 minutes (Appendix T for the service provider interview tool).

## **Data analysis.**

### **Demographic data.**

Demographic data for the women participants was collected at both the first and second interview. One participant self-identified as Me'tis and another participant identified herself as being First Nations. For the participant who identified as Me'tis, she also identified as French Canadian with French being her first language although she was fully bilingual (French/English). For the remaining nine participants their first language was English. All participants were between 17 and 40 years of age (mean = 20.8).

All participants were between 16 and 35 weeks gestational age at the time of the first interview (mean = 24.2 weeks). At the time of the second interview, two participants had recently delivered their babies, and another participant, who had been living in a homeless shelter, was lost to follow-up. Of the remaining seven participants, they were all between 29 and 36 weeks gestational age at the time of the second interview (mean = 31.4 weeks). In terms of prenatal care, six of the women received prenatal care during the first trimester while four had their first prenatal visit in the second trimester (mean = 10.1 weeks at time of first prenatal visit). Table 2 provides an overview of all demographic data that was collected.

Table 2: *Demographic and Descriptive Data of Study Participants*

| <b>Maternal Characteristic</b>                          |                                  | <b>N (%)</b> |
|---|----------------------------------|--------------|
| <b>Self-Identity</b>                                    | First Nations                    | 1 (10%)      |
|   | Inuit                            | 0 (0%)       |
|   | Me'tis                           | 1 (10%)      |
| <b>Marital/Partner Status</b>                           | Single (without partner support) | 4 (4%)       |
|   | Single (with partner support)    | 6 (60%)      |
| <b>Highest Level of Education</b>                       | Some High School                 | 9 (90%)      |
|   | Completed High School            | 1 (10%)      |
| <b>Current Employment Status</b>                        | Unemployed                       | 10 (100%)    |
|   | Employed                         | 0 (0%)       |
| <b>Total Number of Pregnancies</b>                      | 3 or more                        | 1 (10%)      |
|   | 2                                | 3 (30%)      |
|   | 1                                | 6 (60%)      |
| <b>Total Number of Live Births To Date</b>              | 0                                | 8 (80%)      |
|   | 1                                | 2 (20%)      |
| <b>How Many Children Currently Live with You?</b>       | 0                                | 9 (90%)      |
|   | 1                                | 1 (10%)      |
| <b>Is Child Protection Services Currently Involved?</b> | Yes                              | 6 (60%)      |
|   | No                               | 4 (40%)      |
| <b>Weeks Pregnant When First Received Prenatal Care</b> | 1st trimester                    | 6 (60%)      |
|   | 2nd trimester                    | 4 (40%)      |
| <b>Receiving Services for Substance Use</b>             | Yes                              | 3 (30%)      |
|   | No                               | 7 (70%)      |

\*N = 7; Two participants had given birth by the time of the second interview

### **Interview data for women participants.**

In total, 19 semi-structured interviews were carried out with 10 women participants (19 interviews, two interviews with nine of the 10 participants). All interviews were transcribed verbatim and the analytic process of coding data was done concurrently with data collection using the constant comparative method of analysis developed by Charmaz (2006) within a post-structuralist framework. Two levels of coding, initial and focused, were used to analyze the data. First, after each interview, initial coding took place with in-vivo codes, used frequently as they allow for “vivid imagery” (Polit & Beck, 2008, p. 405) of the language within the substantive area. Data analysis was initially done using NVivo 9 software, but I opted to return to a process of manual coding as I felt distanced from the data and wanted to feel more “connected” to the women’s stories. A data saturation table was developed to demonstrate how concepts were coded with themes becoming saturated during initial coding (Appendix U). Once strong analytic directions were established through line-by-line coding, coding incident-with-incident was done to further understand what was happening in the data and to further discern similarities between processes and experiences identified by participants (Charmaz K., 2014). Once initial codes were identified, focused coding was then used to “synthesize and explain larger segments of the data” (Charmaz, 2006, p. 57). Coding became increasingly abstract as a theoretical understanding of the phenomena under study developed. Interviews were cross-compared for both similarities and differences and then placed in a spreadsheet. Dr. Wendy Peterson and I met frequently to review the coding of transcripts and were able to reach consensus to ensure that the developing categories were coherent and the

emerging relationships between concepts were validated. As broader categories were developed, the findings were brought to thesis committee members for discussion and to check for logical flow of the findings over time. Once significant categories were fully developed through theoretical sampling and memoing, a rich theoretical understanding of how MFA in women who use substances during pregnancy develops emerged. Through increasingly abstract analysis of these interviews, five main categories and several sub-categories were developed.

### **Interviews for health care participants.**

In total, two semi-structured group interviews took place with health care providers from two separate organizations where women participants had been recruited and received their services. Interviews with the health care providers were transcribed verbatim. Data analysis was focused on the first level of analysis of the GT method of constant comparison to allow for broad categories to emerge. The categories that emerged during analysis of the health care provider interviews largely mirrored the findings from the women participant interviews. These results provided a means of further developing categories from the women's interviews and served as a theoretical sampling strategy.

### **Memoing and diagrams.**

Memoing and diagrams or pictorial representations of the data were utilized throughout data collection and analysis (Charmaz, 2006). Memos and diagrams provided an important means of documenting theoretical ideas, hunches, and emerging hypotheses throughout data collection and analysis. Memos and diagrams also helped to map out the emerging categories

and served as a conceptual guide for development of a theory. They also provided a valuable audit tool to allow for the thesis committee to check for consistency and logical flow of the emerging theory. After each interview, memos were written to identify concepts, emerging themes, ideas, and thoughts, which allowed a space to explore hunches and emotions that surfaced while engaging with participants, as well as to focus thoughts towards future directions. Fresh ideas emerged and were explored and compared against the literature. Memos also opened up dialogue with the thesis supervisor to discuss divergent thoughts and to resolve any concerns or conflicting ideas about the project. Diagrams were developed and reworked throughout the research process to represent the data within this proposed research to further enhance analysis and understanding. Through a rigid adherence to the aforementioned methods supported by the GT methods described by Charmaz, the concepts generated around MFA in women who are substance involved remained connected to and grounded in the data.

### **Framework of Quality Criteria**

Within quantitative research, the quality of a research study is measured by validity and reliability criterion. Trustworthiness is the parallel standard to reliability and validity in qualitative research (Polit & Beck, 2008). A quality framework developed by Guba and Lincoln (2005) suggests five criteria for developing the trustworthiness of a qualitative inquiry: *credibility*, *dependability*, *transferability*, *confirmability*, and *authenticity*. This framework was used to establish rigour in this research project. Each of these criteria is described below briefly, and a complete list of strategies to enhance rigour can be found in Appendix V.

**Credibility.**

Credibility in qualitative research refers to those efforts that increase the probability that credible findings will be produced (Streubert Speziale & Carpenter, 2003). Three key practices that help to establish credibility were utilized throughout this research. The first requires a prolonged engagement with the subject matter (Charmaz, 2006). A strong and genuine commitment to both the research process and the subject matter supported the achievement of this necessary element of credibility. Secondly, I returned to the literature throughout data collection and analysis to verify emerging conceptual and theoretical themes and represented a second means of establishing credibility (Polit & Beck, 2008). A third means of establishing credibility was accomplished by returning the findings to all of the participants to ensure that the emerging conceptual and theoretical categories represented a clear picture of their developing relationship with their fetuses (Loiselle & Profetto-McGrath, 2007).

**Dependability.**

Dependability refers to sustaining practices that provide evidence for the conclusions that are drawn throughout data collection and analysis (Streubert Speziale & Carpenter, 2003). Dependability was maintained in this research process through the use of a variety of audit tools including maintaining a journal with observational notes, memoing, digitally recording interviews, and generating verbatim transcripts. Discussions with the mentors for the research project (thesis supervisor and committee members) were also scheduled throughout the research process to ensure findings were clearly developed and followed a logical flow (Streubert Speziale & Carpenter, 2003).

**Transferability.**

Transferability of findings refers to the probability that the study findings were generalizable to others who have shared similar experiences (Polit & Beck, 2008).

Transferability was achieved by examining the experience of women who use substances and their developing relationships to their fetuses in a variety of contexts (e.g., women who have stopped using substances during pregnancy versus those who have not) and through full exploration of the emerging conceptual and thematic categories throughout data analysis. In the end, it is acknowledged that generalizability of findings in a qualitative research study can be a limitation, and the results should be applied cautiously to similar populations (Streubert Speziale & Carpenter, 2003).

**Authenticity.**

Authenticity refers to the extent that the researcher presents a range of lived realities in a fair, honest, and faithful way (Polit & Beck, 2008). Authenticity emerges in a report if it truly represents the feelings associated with participants' experiences and invites the reader into a vicarious position of "living" the experience with the participants. It should allow the reader to become sensitized to the issue being depicted and provide a sense of the "mood, feeling, experience, language, and context of those lives" (Polit & Beck, 2008, p. 508).

Authenticity in this study was achieved through ongoing reflexivity, prolonged engagement with the data, audiotaping and verbatim transcription, thick and vivid descriptions, and an evocative writing style in the final report.

### **Confirmability.**

Confirmability is attainable when all other process criteria have been met (Streubert Speziale & Carpenter, 2003). Therefore, confirmability of the findings was achieved, as credibility, transferability, and dependability of the findings were established as a whole. Through a vigilant attendance to each facet of the qualitative research process, rigour was achieved with dependable and credible findings being produced.

### **Requisite Properties of a Grounded Theory**

In order to facilitate the application of a GT to practice, four “highly interrelated properties” or criteria must be present (Glaser & Strauss, 1967, p. 257). As part of the original construction of GT by Glaser and Strauss, Charmaz endorses the properties of fitness, understanding, generality, and control (Charmaz, 2006). The first criterion of *fitness* requires that the developing theory must remain closely grounded or connected to the data. If this occurs, no “forcing or distorting” of the emerging conceptual categories occurs to fit the researcher’s preconceived notions but rather a faithful representation of the realities of the area under study emerges (Glaser & Strauss, 1967, p. 239). The second property of *understanding* requires that people who work within the field are able to easily understand the resulting substantive theory. If perceived as being too abstract or difficult to translate into practice, the chances that the theory will be used or invested in are greatly diminished. The property of *generality* requires that a theory be flexible and broad enough in nature that it can be reformulated easily by practitioners to encompass the quickly changing realities of practice. Lastly, the emergent theory must serve its users with sufficient *control* over the variables and

interrelated conceptual themes such that in practice the theory is malleable enough for practitioners to apply it to virtually all possible situations they face in their everyday experiences. Each of these requisite properties will next be reviewed in the context of this research.

### **Fitness.**

In order to ensure that the property of fitness was met and did not represent a biased or distorted representation of the data, each of the participants was asked to provide their views and comments on the emerging theoretical representations that had been generated to reflect their experiences of their developing relationship with their fetuses as women who are substance involved. As experts, they were the most qualified to serve as “keepers of the data” and they were able to provide additional clarity and direction throughout the process. This important step of returning the findings to the participants allowed me to feel confident about ongoing analysis so that a true fit of the experiences described by women struggling with substance use during pregnancy was attained (Guba & Lincoln, 2005).

### **Understanding.**

The criterion of understanding requires that those within the field who may apply the theory to practice are able to easily understand the resultant theory. By returning the emergent theory to all of the participants as well as through discussions with community partners working with this vulnerable population, the theory was felt to be easily understood and to have resonated with both their personal and professional experiences. It is within this context that the value of a theory can be assessed and the reason for it being developed strengthened

and solidified (Guba & Lincoln, 2005).

### **Generality.**

The third property of generality requires that a substantive theory be narrow enough to reflect the specific issues within an area of inquiry, but it must also be broad enough to shine a light on the big picture. The various methods that enhance the generality of a theory include both gathering sufficient amounts of data and using a diversity of sources to draw the data. Within this project, data was collected through interviews with women and health care providers. By ensuring that large quantities of data from various sources were attained, the resulting information that was gleaned from the data represented both a specific understanding and broad reflection of the phenomenon in a variety of contexts (Guba & Lincoln, 2005).

### **Control.**

Finally, the criterion of control must be found within a theory for it to be useful for adoption to practice. For a theory to have the element of control, it must provide the user with flexibility and modifiability of the variables around the phenomenon to allow the user predictive power and mastery of the theory. The element of control was attained in the end by providing users of this theory with both general and specific interventions to provide care for substance involved women who are pregnant (see chapter 6 for discussions related to practice recommendations). In this way, practitioners can mold and shape their practice as their expertise dictates to treat both individuals and populations with similar characteristics (Streubert Speziale & Carpenter, 2003).

## **Conclusion**

This chapter provided an overview of the GT approach developed by Charmaz that helped guide this research. The methods used to ensure trustworthiness of the data collection and analyses were also discussed. The next chapter is focused on presenting the results of this qualitative study with the major categories identified around how women who are pregnant and using substances experience the development of maternal-fetal attachment.

## Chapter 5: Results

Words mean more than what is set down on paper. It takes the human voice to infuse them with deeper meaning.

—Maya Angelou, *Continuing the life work of Maya Angelou*

In this chapter, the findings related to women's substance abuse patterns will be conferred as well as the major categories from the women participants' interviews presented. The qualitative categories and sub-categories from the women's interviews will predominate this chapter, while those from the health care provider interviews will provide additional depth to some of the categories that emerged during data analysis. The chapter will close with a synthesis of the overall results and the development of a substantive theory around maternal-fetal attachment (MFA) in women who use substances during pregnancy.

### Patterns of Substance Use of Women Participants

An overview of the patterns of substance use for the participants is provided to allow for an understanding of how women altered their use following the decision to continue their pregnancy. Eight of the 10 women used tobacco during the first trimester of the pregnancy; six continued to use tobacco through to the time of the second interview. Nine of the women used alcohol during the first trimester of the pregnancy; three continued to use alcohol at the time of the second interview. Eight of the women used marijuana during the first trimester of the pregnancy; three continued to use at the time of the second interview. Two participants used ecstasy during the first trimester of the pregnancy; none of the participants continued to use this drug at the time of the second interview. Two participants used cocaine during the

first trimester of their pregnancy; one continued to use cocaine through to the time of the second interview. One participant used oxycodone during the first trimester of her pregnancy but had discontinued use by the time of the first interview (the first interview was during her second trimester). Three of the 10 participants had discontinued all substance use (including tobacco) at the time of the first interview and remained substance free by the time of the second interview. Table 3 shows the substances used by participants in the first trimester of pregnancy. Table 4 shows the substances used by participants at the time of the second interview.

Table 3: *Substances Used During the First Trimester of Pregnancy*

| Participant | Tobacco | Alcohol | Marijuana | Cocaine | Narcotics | Crack | Ecstasy |
|-------------|---------|---------|-----------|---------|-----------|-------|---------|
| 1           | X       | X       |           |         |           |       |         |
| 2           |         | X       | X         |         | X         |       |         |
| 3           | X       |         | X         |         |           |       |         |
| 4           | X       | X       |           |         |           |       |         |
| 5           | X       | X       | X         |         |           |       |         |
| 6           | X       | X       | X         | X       |           |       | X       |
| 7           | X       | X       | X         |         |           |       | X       |
| 8           | X       | X       | X         |         |           |       |         |
| 9           |         | X       | X         |         |           |       |         |
| 10          | X       | X       | X         |         |           | X     |         |

Table 4: *Substances Used at the Time of the Second Interview*

| Participant | Tobacco   | Alcohol | Marijuana | Cocaine | Narcotics | Crack | Ecstasy |
|-------------|---|---------|-----------|---------|-----------|-------|---------|
| 1           | X   |         |           |         |           |       |         |
| 2           |   | X       |           |         |           |       |         |
| 3           |   |         |           |         |           |       |         |
| 4           | X   | X       |           |         |           |       |         |
| 5           | X   |         | X         |         |           |       |         |
| 6           | X   |         |           |         |           |       |         |
| 7           |   |         |           |         |           |       | X       |
| 8           | X   |         |           |         |           |       |         |
| 9           |   |         |           |         |           |       |         |
| *10         | NO DATA AVAILABLE – PARTICIPANT DID NOT COMPLETE SECOND INTERVIEW |         |           |         |           |       |         |

## Overview of the Five Main Categories from the Women's Interviews

From the women's interviews, five central categories emerged. These categories include *Choosing the mothering path*, *Balancing the risks*, *Needing safe passage*, *Breaking the cycle*, and *Mothering against all odds*. Several sub-categories were also developed.

Table 5 was developed with the major categories and their sub-categories to serve as a roadmap for the reader when navigating through the interview results.

Table 5: Major Categories and Sub-categories from the Women's Interviews

| <b>Choosing the mothering path</b> | <b>Balancing the risks</b>            | <b>Breaking the cycle</b>          | <b>Needing safe passage</b> | <b>Mothering against all odds</b> |
|------------------------------------|---------------------------------------|------------------------------------|-----------------------------|-----------------------------------|
| Unplanned pregnancy                | Using substances to cope              | Moms protect their kids            | Finding safety              | Feeling hopeful                   |
| Wanting to keep the baby           | Wanting to protect the baby from harm | Wanting a better life for baby     | Wrap-around services        | Baby as bridge                    |
|                                    | Feeling guilty, feeling remorseful    | They will know I am there for them |                             | Feeling connected to baby         |

Each of the categories and sub-categories will now be further explored with a rich presentation of the social context that surrounds the women in this study as they navigate the complex process of MFA.

### Category 1: Choosing the mothering path.

*Choosing the mothering path* served as a central category of the first stage that women experienced in their journey towards becoming a mother with progressive MFA. This

represents their desire to continue the pregnancy following an internal struggle around an unplanned pregnancy or a pregnancy that was unwanted by her partner. The challenges associated with an unplanned or unwanted pregnancy are significant as women work through an internal battle around whether they feel they are able to manage motherhood. Juxtaposed against their own fears of becoming a mother under less than ideal conditions, is pressure from the external world as significant others judge them largely as “unfit” to continue a pregnancy and care for a child. Although faced with significant internal and external conflict as well as poverty, unstable housing, and varying degrees of substance abuse impacting their quality of life, all of the women chose to continue their pregnancies. The sub-categories within this category include ‘unplanned pregnancy’ and ‘wanting to keep the baby.’ These two sub-categories will be explored more fully to provide a rich understanding of the experiences of these women when faced with an unavoidable decision around whether to maintain a pregnancy or terminate.

### **Unplanned pregnancy.**

For nine of the 10 participants in this study, their pregnancies had been unplanned. Eight of these nine women had partners that wanted the pregnancy to be terminated. This created a tremendous internal conflict for the women as they struggled to make the decision whether to continue with the pregnancy or abort. Maternal age was a significant factor influencing this decision for many of the women as eight of the 10 were under the age of 20 at the time they became pregnant. At a time when they were just making their way through the normal developmental process of individuating from their parents, the news of an unplanned pregnancy meant that a life-altering decision needed to be made as they struggled to decide if

they should continue the pregnancy. For example, one woman recalled,

It was scary, yeah. I didn't know what to think, like and I didn't even know what to tell my boyfriend, it was hard. I guess I had a lot of thinking to do like whether I wanted to keep it or not, and when I finally like told my mom and dad, my mom was happy but upset, and my dad didn't take it that well. (Tania, Interview 1)

For some of the other participants, an unplanned pregnancy presented further challenges as many were engrossed in significant substance use with both financial instability and home insecurity as a natural consequence of this lifestyle. One woman said,

I was doing ecstasy, coke, and lots of beer, lots of beer because when I first got pregnant I was still in [name of province] and I hated it so I was drinking, I wanted to make it go away. So I would pick up a 24, it would last me maybe a day and a half, I just wanted to be done and I wanted to be literally passed out on the couch before the baby's dad got home. I didn't want to be bothered with anything or anyone. (Jennifer, Interview 1)

Another participant experienced the news of her pregnancy similarly as she had not been aware that she had missed her period for several months. While so immersed in her substance use, she felt that she was out of touch with her body, as much of her energy was spent looking for drugs, doing drugs, or recovering from her last "hit." Substance use consumed so much of her daily existence that stopping to listen to her body as she experienced nausea and fatigue

seemed a normal consequence of her life. As a result, she continued to use substances heavily well into her second trimester. This participant explained,

It was a shock. I really didn't think I was pregnant and I just went along with my normal routine, not knowing like what harm I could put my baby through and stuff like that.

And just went on, you know normal teenage stuff, party this, party that... (Lisa, Interview 1)

Most of the women continued their same pattern of substance use in the early weeks after finding out they were pregnant as they wrestled with their new reality. During that time many of the women experienced a range of emotions that oscillated between anger, fear, ambivalence, and guilt as they struggled with knowing that they could be harming their fetuses while not yet being prepared to give up using substances. Substance use provided an escape that would allow them to forget decisions that needed to be made around whether to continue the pregnancy or abort. This is illustrated in the following quote:

It fucked me up. Like it's just stupid, the behaviours that you do, the things that... Like I started selling my body, like for a week after I found out I was pregnant... I was like, you know what I mean, doing things that I shouldn't have never even thought of doing ever, and I would never do that sober, ever. Take one hit of crack and that's all you think about, where are you going to get the next money, and then it becomes more money, not just \$10 it's \$50. And then you get all mad and you don't want to be around your boyfriend, you don't want to be around anybody because you want to go

suck cock for fucking another rock, right. And it's like I can't...No, like oh my god, I'm pregnant and I'm fucking running around smoking crack, sucking people's dicks? Like oh my god. (Christine, Interview 1)

For a couple of women in the study, after the initial shock, they continued their illicit drug use for a short period of time and then were able to reconcile that a decision needed to be made which also included the need to tell their partners of the pregnancy. This represented a turning point for them when they made the decision to disclose their pregnancy to others, as it forced their substance use and pregnancy into the spotlight for others to weigh in on. This quote illustrates how significant others viewed pregnancy and substance use:

It wasn't just like quickly like "quit," but it was like when my partner (or whatever he was) like kind of like [said]...how do you expect to have a kid when like you already treat it bad now, like by doing that? (Ashley, Interview 1)

With the pregnancy revealed to partners and significant others, the decision around what to do with the pregnancy became open for public debate. What had remained an internal battle for the women to make decisions about their bodies was now exposed for others to scrutinize and to attempt to influence whether the pregnancy should continue or not.

### **Wanting to keep the baby.**

Among the three women in the study who had partners that were accepting of the pregnancy eventually, only one did not consider an abortion. For this woman, her beliefs

around abortion were so strong that despite being only 15 years old and suffering with depression as well as engaging in cutting and substance use, her internal struggle was short lived around whether she would continue with the pregnancy. She described her feelings around the pregnancy as being “really emotional but it was good. I wasn’t disappointed, I wasn’t...like I’m totally against abortions and all that kind of stuff so I knew I was keeping her.” (Karen, Interview 1)

For most of the other women, the tremendous negative feedback and pressure from others to terminate the pregnancy was substantial and contributed to significant distress for the women. Judgment from others was pervasive and was viewed as a personal attack on their moral character and capacity to become mothers. The women in this study entered into pregnancy with minimal support from significant others and the crisis that resulted from an unplanned pregnancy left many questioning themselves as “good enough” to take on the challenge of being a mother. The following quote from one young woman around feeling unsupported by her partner is clear when she says “I didn’t know what to do. Like my boyfriend was saying to go get an abortion because we’re not ready, we’re really young...it felt as though he didn’t support me at all.” (Lisa, Interview 1)

A second participant suffered emotional abuse from her boyfriend when she disclosed to him that she was pregnant. This is illustrated in her statement that follows:

He didn’t take it so well. When I told him he like, he didn’t believe me and he didn’t believe that it was his. He was like calling me a bunch of names and stuff and telling me to get an abortion, and I agreed with him at first to get the abortion but I kind of

like rethought about it. (Tania, Interview 1)

For the single participant who had planned the pregnancy with her partner, once pregnant, he became extremely abusive and physically threatening when she refused to terminate the pregnancy. She stated,

Well, me and my boyfriend at the time had planned the pregnancy and we went to see a doctor and got vitamins and....But once I was actually pregnant he freaked out and started treating me really badly. He's very emotionally abusive, he started suggesting I get an abortion because I was sick and tired like a lot of the time and he wasn't getting sex enough. So he wanted me to get rid of the baby and then not want us to be together anyway when I wouldn't have an abortion. At first he kept trying to kick me out and then would beg me to come back. Now he wants me to sign a disclosure agreement so that the baby doesn't know that he is their father. (Abbie, Interview 1)

The decision to continue the pregnancy was often mired in the need to have "something of their own" to love and care for and many women became fiercely protective of their fetuses despite significant judgment and scrutiny from those around them. Many shifted to a stance of "me and my baby against the world," where they shut down the opinions of others and, despite rejection and loss of their partners; they chose to continue down the path to motherhood. This woman's experience of rejection was palpable when she stated,

What he said to me was he wasn't interested in participating in the baby's life and he would never accept me and he'd make my life like a living hell for the rest of my life for deciding to keep the baby. (Rachelle, Interview 1)

Most of the women were displaced from their homes and left to seek shelter for themselves as a consequence of their decision. None of the participants expressed anger towards their babies, as they felt responsible for not using birth control methods consistently to reduce the chance of pregnancy and decided to continue the mothering path of their own accord. Their anger was directed at significant others who chose to reject them and ultimately their children. With a firm decision in place to become mothers, a plan around how they would engage with substances while pregnant became the next priority.

### **Category 2: Balancing the risk.**

Societal expectations around substance use (both licit and illicit) during pregnancy largely adhere to an abstinence only stance with the assumption that women will not engage in substance use while pregnant. For those that do continue to use substances, they are the ultimate "bad" mother for not wanting to protect their fetus from harm's way. The second main category of *Balancing the risk* encompasses several key elements of the women participants' experiences with substances while pregnant. Included in this category are the reasons why some women struggle with ongoing substance use despite their overwhelming desire to want to protect their fetuses through various methods of harm reduction. This category also speaks to their feelings of guilt and remorse related to their substance use and its

potential impact on their developing fetuses.

The three sub-categories within the category of *Balancing the risk* are ‘using substances to cope’; ‘wanting to protect my baby from harm’; and ‘feeling guilty, feeling remorse.’ Each of the sub- categories will now be further explored to allow the central category of *Balancing the risk* to be fully understood.

### **Using substances to cope.**

For all the women in this study, substance use had begun in late childhood or early adolescence as a result of multiple factors including early and pervasive exposure to substances in the home, sexual abuse and emotional neglect, and difficulty regulating their emotions with feelings of low self-worth and depression. Further, all of the women grew up in socially disadvantaged homes with poverty, multiple new parental partners coming and going, and a general lack of emotional stability available through which to learn healthy coping skills.

One participant described how she became involved with substances at an early age amidst all the chaos of her parents’ divorce, her father’s addictions and suicide attempts, and her mother’s multiple emotionally and sexually abusive partners. In an effort to escape from her reality she turned to alcohol and drugs as a means to cope with the profound emotional pain that saturated her daily existence. In the following quote she explains when she started using substances:

I had my first drink when I was eight and I smoked my first joint when I was 13 I guess. I started really drinking when I was 13. And I was pretty bad for a little while, I smoked crack when I was 14. Tried ecstasy when I was 14 and I didn’t start meth

until I was 16, and by that point I have been in and out of recovery with my dad.

Drug use was normal in my life. My babysitter smoked crack, my dad was a drug user, my brother used drugs, my mom's boyfriend used drugs, all the people around me used drugs. (Rachelle, Interview 1)

This participant went on to describe becoming homeless and on her own at 14 years of age.

For her, being alone on the streets was a better option than staying with either parent as they struggled with their own substance use and mental illness. She described her experiences with her parents by saying,

My mom moved to [another province] when I was 13 to get married and left me with my dad. And then my dad's a drug addict and so he was using a lot of the time. When I originally moved in with him he was clean and then he got really sick...He kind of had a breakdown and he ended up relapsing. At first it was just smoking pot and stuff but then it progressed into pretty much anything that ends in PAM, so it was pretty lethal, he overdosed a lot. (Rachelle, Interview 1)

A second participant began drinking alcohol and using illicit drugs at 13 as a means of disconnecting herself from her experiences of being sexually abused by her father while her mother drifted in and out of the home leaving she and her siblings in unsafe conditions resulting in them all being removed from the home by child protection services (CPS). She describes her childhood with her parents in this way:

[When I was] a young child my mom wasn't really around much. She just did her own thing. Like when she was either getting high or going to get high we didn't matter, we were just somebody who was around. My dad was like a monster. Yeah, when it came to all of his kids he was great, like he would wake us up for school, you know, like make our lunches and make sure we got to school, make sure we got home. But when it came to just me I was like daddy's little doll where he could play house and I hated that, you know. Like I lived with that [sexual abuse] since I was eight, eight to 13 until I finally spoke up; but my mom didn't believe me. She said, "I've been married to him for like 16 years, he wouldn't do that, he's your father." I said, "Yeah, maybe he wouldn't do it to you but he would do it to me." (Lisa, Interview 1)

For yet another participant, her experience as a young child of sexual abuse from multiple different men while surrounded by illicit drug use in her home created the conditions for her own substance use to begin before the age of 10. Her substance use continued to escalate throughout her adolescence as a means of coping. She describes how her experience of abuse and her exposure to drugs and alcohol impacted her when she said,

My mom's boyfriends sexually molested me, two of them, and she just let it kind of happen. She's still on the coke, she drinks, she used to drink a lot, like a lot. And when I went to live with my dad...My dad had a wife and his wife's brother made me and my sister do sexual favours too, so in both households growing up, it was a horrible situation for me. (Christine, Interview 1)

The continuation of substances served as a means for the women to cope with the multiple ongoing stressors associated with living in a shelter, financial insecurity, and limited supportive relationships. The women in this study experienced little self-determination as they waited for the “system” to tell them when they would secure low-income housing for themselves and their future babies. This state of precarity served as a significant stressor, which is illustrated in this woman’s quote:

I just like the relaxed feeling and just I feel like it takes away some of the stress....Sometimes my boyfriend will be like, take some, and I’m like, no, I don’t want to, I don’t want to harm the baby. But then when you see everybody else doing it and you like the feeling from before, it’s hard to say no...When you smoke weed, it’s like the problems go away for a bit but then they’re thereafter. (Abbie, Interview 1)

### **Wanting to protect my baby from harm.**

All of the women in the study spoke of a “hierarchy” of risk to the fetus around substances—alcohol and “hard drugs” (e.g., cocaine, oxycodone) were considered unacceptable within this group of women, although several indulged in sporadic alcohol ingestion throughout their pregnancy albeit with significant guilt. Many women shifted their illicit drug use to smoking marijuana only as it was seen as “safer.” Smoking tobacco was seen as unhealthy but the “least of all evils” so most women who had smoked prior to pregnancy continued to smoke or increased the amount they smoked while reducing their alcohol or illicit substance use as this was seen as “less risky” for the fetus. The continuation

of any of these substances served as a means for the women to cope with the multiple ongoing stressors and few supportive relationships.

As a further example to illustrate the idea of a hierarchy of substances, another woman talked about smoking to ease her “nerves” while she waited to hear about housing for herself and her baby in the coming months. There was a tremendous sense of pride in her ability to abstain from drugs and alcohol but tobacco use remained as an acceptable risk to her fetus. She stated,

As soon as I found out that I was pregnant it was like, done, I didn’t have any problem. Like I smoke, I’m an avid smoker. I should probably quit, but when it came to everything else, drinking, drugs, it was very, very easy for me to be like, nope, done. (Jennifer, Interview 1)

As part of the process of establishing a “hierarchy” for substances, all of the women in this study considered health information from multiple professional and nonprofessional sources to determine which substances they felt were “safe enough” to use as well as to determine how frequently they would use them. Despite being aware of the potential negative consequences of substances such as alcohol during pregnancy, women also regulated their substance use in terms of how much they would use. This woman explained how she was managing her substance use in this way:

So I have started drinking again and I'm trying to moderate it (laughs), which is actually...I'll have like a cooler or something here or there, but there have been two separate occasions where...See I'd say I drank too much because for me knowing that I'm pregnant I know that I drank too much, but for me before I was pregnant that wouldn't have been a lot, you know. (Rachelle, Interview 2)

Another woman discussed her alcohol use with her physician to determine what amount she could drink without "doing damage" to the baby. She acknowledged that she had felt unable to quit entirely so wanted some direction from her health practitioner around "safe" consumption and stated,

I have had a few drinks, mostly over Christmas, which was stressful and then on a few other occasions with my girlfriends I had some wine. When I asked my doctor he said that if I wanted to sit down and have a glass of wine or beer it was fine, but not to sit there and do shots. (Jennifer, Interview 2)

For all of the participants in the study, decisions around substance use were made consciously with significant effort around balancing the risk of using substances that could potentially impact fetal development with their own need to cope with multiple competing stressors. While some women were able to find a clear demarcation with a decision to completely abstain from substances, others took a less rigid approach and continued to use during their pregnancy. Regardless of whether they chose to completely abstain or continue after finding out they were pregnant, all of the women struggled with guilt and remorse for

having used substances during the first trimester and worried that they may have harmed their babies during this highly vulnerable developmental period. This leads to the next sub-category of ‘feeling guilty, feeling remorse’ under the main category of *Balancing the risk*.

### **Feeling guilty, feeling remorse.**

This sub-category reflects how the women worried that their health behaviours and choices around substance use may have harmed their fetuses. The guilt and remorse around substance use was identified by all women at their first interview and again for all of the nine participants who returned for a second interview. For the women who chose to abstain entirely, the decision was based on not wanting to be responsible for negative outcomes for their babies, which made quitting substances easier. One woman explained the changes she made to reduce risk to her fetus:

As soon as I found out and that I was going to keep him, I stopped and then started being more healthy, like eating more. Like the whole ecstasy and stuff I stopped that like right away, even like marijuana I stopped that. My mom was like really impressed. I even smoked cigarettes and like I stopped that too. I’m scared like it’s going to...my baby is going to like be affected by what I did at the beginning of my pregnancy.

(Tania, Interview 1)

For women who continued their substance use, their feelings of guilt helped to contain their substance use. They oscillated between feeling guilty and remorseful around previous substance use and ongoing substance use. They indicated a desire to provide a safe

environment for their developing babies despite ongoing use. This woman struggled with her guilt around ongoing substance use and its potential impact on her baby:

Really and truly like when I'm trying to like tell myself no, and just like I said...I keep thinking like by me doing this I could, she could come premature; she could have lung problems, like all kinds of stuff. I think what makes it worse is the fact that like knowing that, if she were to come out with it I would know it would be my fault and not something just...It was the pregnancy, something just happened; I know it would be my fault. (Lara, Interview 1)

The guilt and fear of the impact of substance use on the fetus, particularly related to their consumption during the first trimester of pregnancy, continued until the time of delivery for one of the participants who gave birth before the second interview:

Well you know like in the end I didn't drink at all, like you, people would offer like a sip to taste and I was like, no, no thanks. Everything I did right I'm proud of because she didn't come out with like FAE and stuff like that, so...(Lisa, Interview 2)

Pregnancy served as a tremendous motivator to try to reduce consumption. Some of the motivation came from external societal pressures where women feared they would be judged by others and made to feel that they didn't love their babies. The following quotes demonstrate the shame and judgment that two participants felt:

I think that the popular culture would say if you're doing drugs or you're doing these things, when you are pregnant, then you don't love your child as much or your baby as much. (Lara, Interview 1)

I just want to be more mature about what I am doing. Like I don't want to walk around being pregnant and everyone's like, oh that's the girl that drinks and does drugs. (Ashley, Interview 1)

Whether through internal processes around feeling guilty or through external pressure from societal ideals of mothering, for the participants in this study, feelings of guilt and remorse were heavily intertwined in the experience of becoming a mother while using substances.

### **Category 3: Breaking the cycle.**

Of all the categories that emerged during data collection and analysis, the third category titled *Breaking the cycle* was the most densely filled of all conceptual categories. The women participants spoke passionately of the desire to “do things differently” so that their children could have a better life than the one they had for themselves. The chaos, abuse, neglect, exposure to substances and parental mental illness that they had experienced as children had left an indelible imprint on these women. Three sub-categories emerged under the category of *Breaking the cycle*: ‘moms protect their kids,’ ‘wanting a better life for baby,’ and ‘they will know I am there for them.’ Each of these sub-categories will now be explored.

**Moms protect their kids.**

This sub-category is an in-vivo code used by many of the participants. More than half of the women in this study experienced profound sexual abuse by a close relative, their mother's partner, or their own father. Despite the abuse from men around them, the women expressed the most anger towards their mothers for not protecting them from the abuse. Above all else, being protected from sexual abuse was seen as the most critical failing of a mother and held the deepest pain for the participants who had been sexually assaulted. This young woman experienced profound sexual abuse and questioned how her mother left her in such a vulnerable situation:

The night that I was sexually molested by one of her boyfriends, the guy she was dating asked her if he could have a threesome with me and her, and she didn't tell me this until like two years ago. And I was only four years old and why would she still have stayed there and then I get sexually molested? (Christine, Interview 1)

For another participant who had endured years of sexual abuse from her father, the pain of her mother not believing her was palpable as she spoke:

I think she knew while it was happening because I would try and tell her and kind of talk to her about it and be like, mom you need to make it stop, and she never believed me ever. And I said, "If he touches my sister we're going to have a problem"...like I protected my sister. I would stay awake all night just to make sure my sister was

okay. (Lisa, Interview 1.

Safety from abuse was seen to be a fundamental element of what “good” mothers were to provide and in the absence of protection, the women struggled to believe that their mothers loved them. They felt that recovery from the trauma associated with the abuse was difficult and that it would stay with them forever. Recovery was hampered by having to manage the ultimate betrayal of their mothers and the lack of societal response to sexual assault. One woman described how her lack of protection from her mother changed who she was:

It shapes you; it makes you realize that men are like just disgusting. They’re just not right people, those people out there. And you know what, I can go steal a chocolate bar from Dollarama and get put in jail for three months for a breach, but as soon as a guy rapes a girl it’s like, oh probation for a year. It’s really, like that ruins your whole fucking life, your whole life you got to think about that. (Christine, Interview 1)

Beyond sexual abuse, many women spoke of feeling emotionally abandoned, neglected, or unwanted by their own mothers. From this they felt a profound sense of rejection and sadness with a hole that was not possible to fill. This participant spoke of her mother not caring for her and allowing her the freedom to do whatever she wanted as a young adolescent:

I could do whatever I wanted...But then as time went on I came to realize that my mom didn’t care. What was the point in me staying there when, you know, like, I didn’t have anybody that cared, she only cared about herself. (Lisa, Interview 1)

For another participant, she experienced both emotional neglect and physical abuse from her mother, which caused tremendous distress for her with the police and CPS involved. She said,

It was really bad, like we'd fight every day and we'd...sometimes like we'd hit each other and call each other names and stuff. Like our fights were so bad like we called the cops on each other and the cops were there like mostly every day. (Tania, Interview 1)

Several of the women had been exposed to such significant neglect or parental substance use that CPS had been involved in their lives as children. Three participants were removed from their home permanently and were crown wards of the province. Despite there being imminent safety risks easily justifying the need for being removed from the home, in many ways the removal was traumatizing in and of itself. The desire to remain with their mothers often superseded their need for safety in their own minds. Although they felt abandoned, neglected, and unprotected, they felt that being “ripped” away from their mothers was wrong and that CPS should have provided support to keep mother and child together. This young woman remembered her experience vividly:

I hate them. They took me from my mom; they fucked my whole life up. You don't take a fucking four-year-old child right from their mom's house like they did it, me screaming and yelling. I was right there talking with my mom and my mom is bawling her face off, crying fucking hysterically. Like that's traumatizing, like come

on. They just ruin kids' lives. (Christine, Interview 1)

Another participant who had CPS involvement in the home throughout her childhood described having an older sibling serve in a parental role with both of her parents unavailable to herself and her siblings as a result of mental illness and substance use. She stated, "My dad wasn't around, he's schizophrenic. My mom was an alcohol abuser so she wasn't really around either. My older sister is the one who raised us" (Rachelle, Interview 1). The lack of healthy and present parental role models provided fertile ground for these young women to engage in early and frequent substance use themselves.

Despite less than optimal experiences as children with little safety and nurturance, all of the women, including those who had been permanently taken into CPS care, continued to have ongoing contact with their mothers. There remained a fundamental connection between the participants and their mothers that seemed to necessitate the desire for maintaining a relationship with them. Several alluded to the intergenerational nature of substance use, abuse, and neglect and as adults had been made aware of the trauma that their own mothers had experienced as children and young women. There seemed to be a level of understanding and even forgiveness for their mothers as many felt they had done the best they could given their own circumstances. One woman described her relationship with her mother in the following way: "She loves me but she just....I think she feels guilty inside so she does a lot for me, she feels guilt within herself from doing what she's done. It's not like her fault because she was fucked too" (Lisa, Interview 2).

These experiences as children remained as open wounds as the women dreamed of wanting a better life for their own babies and themselves as mothers. This leads to the sub-

category titled ‘wanting a better life for baby.’

**Wanting a better life for baby.**

As the women worked to reconcile their own childhood experiences, they were committed to making things different for their children. They dreamed of a better future together as all waited on a list for subsidized housing to allow them a place to raise their children the way they had wanted to be raised. With most of the women coming from poverty, having basic housing to build a better future was a priority. With significant financial stressors weighing on them all, creating a safe and healthy space for their children was paramount. This woman wanted her daughter to know how special she was to her by providing the essentials:

I would love her to have her own room but I know that’s not going to happen. But just like all the toys that she could want and this good space for her to like develop and...making sure like she has bottles and formula and diapers and all that stuff, and her own little bed and...I want her to feel like it’s pretty and look back at it and be like, “Oh mommy went crazy when I was born. (Lisa, Interview 1)

Other women dreamt of a more idyllic life for their children, with a vision of creating a home that paralleled what they saw on TV with mothers and their children interacting together. They wanted to build a life with a “white picket fence” not unlike what they would have wanted for themselves. An example of the desire for routine and stability for her own child is found in this quote:

I'm not sure what it feels like [being a mom] but I know that every Sunday night I'm going to cook dinner and they can eat at the dining room table and we can watch the Sunday night Disney movie (laughs). (Rachelle, Interview 1)

Many of the women talked about wanting to be very engaged and active with their future children. Sports and other activities would allow a physical proximity to them that would show that they cared about them:

To me like always being with my kid and like being active in their life and doing stuff with them and taking them out. I'd love for my kids to like be in activities and sports and stuff like that. My boyfriend wants him to go snowboarding and (laughs). But like if he doesn't like that then I don't want to push that onto him, right. I also want to be like able to do things outdoors with him or take him out places too, instead of always be cooking and cleaning and...Because my mom was like that, always cooking and cleaning. (Miranda, Interview 1)

Yet another participant spoke of engaging their children through activities and wanting to be a "fun mom." This idea of being a "fun mom" was described by many women and although a seemingly simplistic description of what they felt a "good" mother would be like, it spoke to the fact that many were adolescents and trying to live a good childhood in parallel with their children. This woman stated,

I've seen other parents doing stuff with their kids that mine haven't, so I want to do that with them. You know I am young so I'll be like the fun mom but not too fun where it's, you know, like your best friend. (Lisa, Interview 1)

Collectively, the women wanted a different life for themselves and their babies and not the life they had been exposed to as children. This sentiment is evident in the following quote:

I just don't want to be like my mom with my baby. Like I just want it to be a good life, like I just...Like I know what I want in life, I just want me and my boyfriend and the baby in our own home. (Christine, Interview 1)

Part of wanting a better life for their children meant protecting them from exposure to illicit drugs and other substance use because many had grown up surrounded by drugs and the chaos associated with the drug culture. The women spoke passionately about containing exposure to what they perceived as unsafe others to ensure their children would be protected from the same fate that they had endured. The desire for this participant to be able to provide safety for her child away from the drug culture is clear:

You know I don't want to bring my kid to a [recovery] meeting and hang around people who talk about crack, because that's just so like normal to them. You know, like that's how I learned. I had no idea about any of that stuff, [until] I spent so much time around meetings that eventually I just...It was normal. (Rachelle, Interview 1)

For many women, protecting their children from exposure to drugs and alcohol meant they had to abandon friendships and consciously remove themselves from the drug scene. From this came loss of significant others and a need to search for new relationships that were more positive. For women who were cohabitating in a shelter for pregnant women, it meant building new friendships with others with similar dreams of keeping their children away from illicit drugs. This woman acknowledged the loss of less stable relationships but felt hopeful about new relationships that were emerging that were in line with her desire to provide a safe environment for her future baby:

Yeah, well, living with a bunch of girls isn't always great but...Because of the loss of relationships, I lost a lot of friends, so because I'm here I have...And at the Centre I have a lot of...Like I'm gaining new relationships, better relationships, different relationships, people who understand what I'm doing, who are doing the same thing.(Tania, Interview 2)

Despite these losses, the women felt that it was necessary to make these changes in their lives to recalibrate things for a better future for their children:

I was this big partier who used to go out and it was...that's what I did. I would go to school, I would go to work, and then I'd go out and party, and it's...I don't want to say that I miss it because I don't miss that aspect of it. I miss the going out part. Because now that I'm pregnant I don't...Like my friends have all changed, I find that I'm connecting more with my friends who are pregnant or who have babies...Like I'm 21 weeks pregnant and it's like whoa, like it almost feels as if a whole lifetime has gone by

because I feel like this completely different person now. (Jennifer, Interview 1)

As an extension of this sub-category that primarily encompassed wanting a different life in terms of safe housing and reduced exposure to the illicit drug scene along with physical proximity to their children, the next sub-category that the women wanted for their children was a safe emotional space. The last sub-category under the third major category is ‘they will know I am there for them.’

### **They will know I am there for them.**

This sub-category speaks to the desire that the participants had to be more emotionally connected to their children. All but one identified feeling abandoned, neglected, or unwanted by their mothers. This is an important concept in that these women would describe their early relationship experiences with their mothers as largely uncaring. This lack of emotional safety and closeness was intertwined throughout the interviews with women desperately not wanting their children to experience this deep loneliness. One woman stated this about her daughter:

She’s going to be a mommy’s little girl, I’m going to be there every second just to make sure that she knows that she’s loved, she knows that she can trust me and that she can tell me anything. And that I’m not going to hurt her, I’m not going to ignore her; I’m going to be there when she needs somebody to be there. (Lisa, Interview 2)

Another participant spoke of how painful it was to feel abandoned by her mother and

struggled to comprehend how a mother wouldn't know that their child needed emotional security. She described being "hurt" by her mother's absence:

I guess nobody really being there and it was like, there's like certain things that you would expect as a mom...Like a mom should know and a mom should and shouldn't do certain stuff, I guess stuff like that...Like the things that affected me and the things that hurt me, I guess trying not to allow them to enter into her life. (Jennifer, Interview 2)

One young woman described how her mother's passivity around protecting her from emotional abuse from several of her boyfriends has stayed with her and the anger and rage that has resulted when she sees other children being neglected or "treated badly." The lack of safety and feeling uncared for strongly coloured how she would like to parent her child:

I couldn't imagine my child growing up feeling the way I did. Like no one cared, like no one could help, like no one was there...She had a lot of emotionally abusive boyfriends, somewhat sexually abusive although never hands on. And one of those she kept for a very long time so I really didn't get along with her very well after that because she didn't do anything. Made me very angry, I don't trust people. I get really, really upset when I see people neglecting children or treating them badly, or you know, moms who don't...They only think about themselves and they don't think about their kids, makes me really angry, like really angry. (Rachelle, Interview 2)

Despite not having a mothering role model to demonstrate emotional closeness for all but one participant, the women felt they could provide the love and care to their children that they didn't have. One woman eloquently described how she intrinsically knew she could provide for her daughter's emotional needs:

Like I couldn't be close with my mother and I know I can be close with her. Like I know how to do it even though I don't have the manual. You know, because if you respect them and you love them then that's like the big part, you know. (Lara, Interview 2)

As part of their journey, the women were able to articulate how they could best be supported by those around them including health care providers to help make the transition to motherhood as easy as possible. This leads to the next main category titled *Needing safe passage*.

#### **Category 4: Needing safe passage.**

The category of *Needing safe passage* encompasses the women's need for safe and nonjudgmental services at the individual level through to a systems level. All of the participants in this study felt extreme stigmatization and judgment from others from the time they found out they were pregnant until the time of the second interview which, for two of the women, was after the birth of their babies. As women with few financial resources, lack of stable housing, and substance use issues, the swelling of their bellies signaled an intensive level of surveillance from partners, relatives, strangers, and health care providers. The sub-category identified within the main category of *Needing safe passage* include 'finding safety'

and ‘wrap-around services.’

### **Finding safety.**

All of the women in this study struggled to trust family, friends, and health care providers with the news of their pregnancy for fear of judgment that might jeopardize their future as mothers. Given that most of these women had not found safety with their parents, trust was the most challenging barrier for them to seek support from others. Gaining trust was a slow process with women remaining hypervigilant to any signs that their trust had been misplaced at the individual level, particularly related to their ongoing substance use. One participant described her fear of disclosing to others about her substance use:

Yeah because I feel like whatever I tell them, they’re just going to go tell [CPS], or use it against me...I feel like people constantly judge me or they won’t understand; it’s hard to keep that all in. (Lisa, Interview 2)

Having the opportunity to find “safe others” to discuss their challenges and fears related to their pregnancy and substance use served as a significant determinant around accessing resources to help manage their substance use. For those women whose food and shelter were dependent upon remaining abstinent from all substances, they felt particularly vulnerable and fearful of disclosure. This woman was fearful that her past would continue to haunt her:

Like the fact that I did drugs or the fact that I was in bad relationships and...I guess people don’t understand because they’ve never been in those situations so they kind of look down on you for it. Like why did you do that, that was stupid...So it’s...You kind

of have to tiptoe around what you say and who you say it to. (Jennifer, Interview 2)

One participant described how fear of CPS finding out about substance use during pregnancy contributed to a woman's stress and ultimately resulted in increased usage to help her manage the anxiety of potentially losing her children:

I know even [at name of agency] if you tell them that you have a problem with substances then they have to call [CPS] just so that the file is opened. So telling someone something like that is big and scary and you don't know what's going to happen. Like is CPS going to come and bite you in the ass because of you being honest and you wanting to get help? When it comes to substance abuse I don't think that CPS realizes how hard it is to get off of something. You know, if you're doing a lot of blow it's hard to get off of, especially if you're not in the right mindset. If you're addicted to coke, what's the first thing you're going to do when you get stressed out? You're going to do a line. And if CPS is your stressor, every time you think of CPS you're going to do a line. (Rachelle, Interview 2)

All of the participants felt a constant obligation to ensure they were being "good enough" to the fetus during pregnancy. Similarly, among the women with other children they needed to be "good enough" mothers to reduce the risk of having CPS intervene and potentially apprehend their babies in the future. The fear of CPS and a heightened level of surveillance was described by this woman's statement:

The staff is helpful but you can't trust some of them, like if you do one thing wrong they will call [CPS] on you. It's very hard to talk to a lot of the staff here because...Like as you get to know them you get to know that they don't joke around, they don't talk to you, they don't really give you advice; they call [CPS]. And they don't even tell you they called CPS until you realize, hey, you're the only one I told and now [CPS is] here to take my children away from me...so now I'm going to get a psych assessment and I get drug screened every month, well every time I go to the OB/GYN. I'm clean. There's no worry. (Lara, Interview 2)

Under these conditions of fear, substance use was taken “underground” and resulted in the women not accessing resources such as addiction counselors to support their harm reduction or abstinence efforts. Rather than reaching out for help, the fear of reprisal created a culture of secrecy and deceit. This woman described the hidden world of substance use that resulted in an “abstinence only” shelter for pregnant women:

There's a lot of fear. If you were to talk to a lot of the girls here you would realize that so many girls have hid a lot of stuff. You would never even think about telling [providers] that you had a drink on the weekend when you had your child, you would not even think twice about telling them because... [CPS] will be on you faster than you can get away from it. (Abbie, Interview 2)

In the absence of safety with health care workers and service providers, women participants would turn to each other to talk about their substance use to allow for an open

and nonjudgmental discussion. Having these opportunities to discuss their behaviours and the guilt associated with having used substances created a space for them to process their substance use and move forward to “try to do better.” Finding a safe other for this woman provided an important support as she struggled with her guilt:

It's kind of difficult here because they really frown upon it [alcohol use] so I don't talk to anybody about it. I think in their mind they are giving you an opportunity to talk about it, but because they frown upon it so badly, I don't want to talk about it...I talk to like one of my housemates, she just...Whenever something happened she doesn't judge me for it at all, like at all. She talks to me about it; she asks me how I'm feeling. She doesn't go, you shouldn't have done that or like...Because I'm usually sitting there going, I shouldn't have done that. (Rachelle, Interview 2)

For two of the participants, finding safety with a service provider did prove helpful as they felt that having open and honest relationships with professionals allowed them to work towards reducing their substance use by safely accessing addiction counselors. For service providers who worked collaboratively with women and who supported the women with connecting with CPS on their own terms, new partnerships were formed, and CPS under these conditions were, as this woman stated, seen more as an ally and motivator than the enemy:

I think [CPS] for a lot of women is a huge motivator, and for a lot of women it's the breaking point on whether they decide if they're actually ready to do this or not. Because in the end, if you're not ready to get clean and parent your child, you're not

ready to get clean and parent your child and there's no amount of support or help or pushing or anything that's going to make you do that...I had a CPS appointment and it was one that I made myself. I called and she met with me and I just asked her if there was anything extra I could do to guarantee or...well there's no guarantees, but...(Jennifer, Interview 2)

Women ultimately wanted “safe passage” to disclose their substance use to health care and service providers and felt that CPS could play a significantly more positive role in supporting women to meet their goals around decreasing substance use or maintaining abstinence. With the current punitive system in place, there was little motivation to get addiction counseling services with their future as mothers threatened with disclosure. Participants believed that there was a time and place when removal of children from the home by CPS might be necessary under extreme circumstances but also felt that if CPS considered their “whole picture” and didn't make decisions to remove children based on “small mistakes” that more children could be safely maintained in the home. This sentiment is illustrated by the following quote:

I think it needs to be more like if you go there and see there's concern then by all means like step in and do something. But if you go there and she's, and it seems like she's really...Like she's using but she's still doing what she needs to do, then I don't know, work with her on the use, not so much on what you think needs to change. I think by taking the child away it only hurts them more. (Tania, Interview 2)

Many women felt that there was always a risk they would lose their children related to substance use whether it was current use or in the past. Beyond finding safe others, participants were asked what they felt would be helpful in terms of services for women who use substances during pregnancy, which leads into the second sub-category of ‘wrap-around services’ under the main category of *Needing safe passage*.

### **Wrap-around services.**

The sub-category of ‘wrap-around services’ refers broadly to the service delivery model that women thought would be most helpful for them to feel supported and allow them to best address their individual health and social needs. The term “wrap-around service” was used to reflect the need to “envelope” these women with comprehensive services in a single location to reduce barriers to accessing services. For one participant, as she edged closer to her due date, needing to access multiple service providers and food banks to feed herself and her three-year-old son while taking public transportation contributed significantly to her already burgeoning challenges:

It’s not centralized and they make you go all over the place...It’s like running around for scraps and they make you feel like they’re giving you like, you know...The only thing I take is one box of cereal, six eggs, sometimes cookies, because I can’t carry anything else. (Lara, Interview 2)

Other participants echoed similar experiences and issues related to having limited financial resources and needing to use public transportation to access services. As their

pregnancies advanced, finding the energy to travel via public transportation was difficult with services located across the city. Taking a bus often required that they make several transfers and many hours to coordinate basic necessities and health services. Navigating multiple service providers across the city posed significant challenges for this woman:

Like without a partner and car...Because like I said, on Wednesdays it's the diapers, and if you want meat you got to go there, and it's all scattered everywhere and sometimes you're just like, oh my god. Even if you weren't pregnant it's hard to do that.

(Miranda, Interview 2)

A second participant also spoke of the energy required to meet her basic needs and wanting to have services in a single location to reduce stress and allow women to focus on becoming a mother:

If they centralized things instead of making people run because you're already exhausted as a mother and then you just feel overwhelmed. And then you're like, I'm not going to run around in three places. I get food here. I get diapers there. That's what's going on right now in the city and that's crazy. (Lara, Interview 1)

This participant also spoke for the need to have babysitting services available on-site in any model that was developed to allow women to participate in counseling for mental health and addiction issues. With these services available, women could focus on the work that needed to get done to support their mothering journey:

Yes and something is that while you're getting these services somebody watches your kid. Oh, that's a big one. Because like people are talking to you and then your kid is running around and they're giving you...They're scolding you for not watching your kids but hey...You know? (Lara, Interview 2)

With the amount of work and energy to get basic needs met, sometimes decisions had to be made around which appointments they would attend. Appointments were prioritized based on need, with workers associated with Ontario Disability Support Payments or Ontario Works Payments being top on the list to ensure food and shelter needs were met first. Prenatal care was a priority as well but for most women because of their substance use and/or age, they were considered "high risk" pregnancies and required ongoing monitoring through hospital clinics.

Many women felt uncomfortable and stigmatized in the hospital setting by health care providers who only knew them as "crackhead" mothers. Motivation to attend these appointments was not based on engagement with health care providers but rather fear as they were worried that CPS would be notified of "bad" behaviours. Women felt that the baby alone was the priority rather than the mother-baby unit. This woman felt that health care providers were ill prepared to work with women who had substance use issues during pregnancy:

The staff needs specialized training or something. They should be trained. And they need to care about the women's health too. It doesn't help women to be so judged.

(Jennifer, Interview 2)

For participants who were receiving services including prenatal care, parenting classes, addiction counseling, access to a food and clothing cupboard, and social services under a single roof, it provided a safe haven to congregate together with a shared journey to becoming mothers while allowing for “one-stop shopping” for their health and social services. Supportive and centralized services were an important enabler to accessing services for this woman:

I got to learn a lot (laughs). Some of what I learned has not come in handy at all; it was kind of useless information. But what I did learn and what I did take out of it has helped in making sure that I know what I’m doing. I know how to handle the situation and stuff like that. And I didn’t have to take money out of my pocket to get the same service; I didn’t have to go like to 500 different places to have all the services I’ve had here. (Abbie, Interview 2)

With these wrap-around services, the women also indicated that care needed to be nonjudgmental and safe and not require total abstinence in order to receive services. This would provide space to actively engage in harm reduction efforts with support from professionals and give them the factual information they needed to make informed choices around their substance use:

I think that they need to talk to someone...Because sometimes all you need is to vent and get it out and talk to someone and then you leave the room and you’re like, okay I’m good...And give us the facts so we get the information we need. (Karen, Interview

2)

In many ways, the women in this study were able to provide general ideas around the kind of services they thought would be most helpful for them while pregnant and managing substance use, unstable housing, and financial stress. They did, however, struggle with specifics and despite being asked what the best possible service delivery model would be for them to make the journey to mothering under these circumstances, they struggled to be able to “dream big” (e.g., comprehensive, intersectoral care all in one location) to advocate for themselves and their future children. This may be a reflection of their history of poverty and lack of resources that made it difficult for them to dream beyond having basic health and social services available to them. This takes us to the last main category titled *Mothering against all odds*.

### **Category 5: Mothering against all odds.**

As their pregnancy progressed, women felt increasingly empowered and protective of their fetuses. The transition to become a mother had shifted significantly over the course of the pregnancy from the time of the first interview to the second interview. Many women had been somewhat ambivalent around their fetuses in the early months but over time a significant shift had occurred, with the nine women who completed the second interview being very hopeful about their future with their baby and a fierce commitment to fighting for the best life for them and their babies. In the final category, *Mothering against all odds*, three sub-categories were identified: ‘feeling hopeful,’ ‘baby as bridge,’ and ‘feeling connected to

baby.’

### **Feeling hopeful.**

The sub-category of ‘feeling hopeful’ reflects the increasing confidence women had in themselves in becoming a mother despite the numerous challenges that they had endured to get to this place throughout their lives. Many women continued to struggle to find secure housing for themselves and despite needing to continue living in a shelter; one woman explained how she felt like this was all part of the “process” and was hopeful for the future with her son:

Definitely...I am ready. I’ve always known that I wanted kids. I always kind of thought that it would be different than my situation and the circumstances but I’m assuming the role nicely...I have a little baby who is going to be here in ten weeks.

(Ashley, Interview 2)

For another young woman who had significant financial limitations and several interpersonal relationship losses through the course of her pregnancy, she experienced a tremendous shift from seriously considering abortion to her current state of mind as she approached mid-way through her third trimester and stated “I had never imagined getting pregnant and I thought it would be like one of the worst things ever, but it’s actually...Like I don’t think I’ve ever been so happy, so I don’t know” (Tania, Interview 2)

Many of the women had plans to go to college in the future despite being aware of the challenges associated with juggling motherhood and academics. Through the pregnancy process, most had significantly reduced their substance use and were making efforts to reduce chaos in their lives. Where many had “lived in the moment” with drugs and alcohol, they had

become much more reflective and focused on creating a positive future for themselves and their children. As an example, one young woman stated,

I want to take the General Arts and Sciences for pre-Nursing and try to be an RN...I care about people a lot and my mom's a PSW so I've seen what she does and I want to do a little bit more. And then being in the hospital when I was in the hospital having my son I really liked how the nurses treated me so I want to be like that for somebody else. (Abbie, Interview 2)

Another participant who had not known the sex of her fetus or felt fetal movement at the time of her first interview and had been very ambivalent towards her fetus, had transitioned to a place of hope for a better future for she and her daughter:

I guess a lot of my worry is because I want the best for her, right? I want her to enjoy her household and have a great life so by like me going back to school and finishing...She'll have a better chance. Like I guess for me being like a girl in my family and like seeing how it was tough on me with my family and everything, I guess I want to like change the course, I guess of her future or maybe make it so that it's a little bit different for girls in my house. (Ashley, Interview 2)

As a further example of how powerful and life-altering a pregnancy had been for many of these young women, one woman who had experienced profound sexual abuse and been taken from her family as a crown ward by CPS, described her journey of becoming a mother in after the birth of her daughter as follows:

I don't think anything could have made it better. I don't think anything at all could have made it better because it was great. Like I achieved so much, I did a lot, and I had her and like she's just beautiful, she came out perfect. (Lisa, Interview 2)

From profound sadness emerged a strength and resiliency in these women to make a better future for themselves and their children. Hope very often emerged as a by-product of feeling cared for by others including peers, health care professionals, and family. With some encouragement and compassion, all of the women who completed the second interview felt prepared to take on the world and be a mother. One unexpected avenue of support and encouragement for many of these women that grew over the course of the pregnancy was with their own mothers. While most had extremely difficult relationships with their mothers from childhood through to their pregnancy, having a baby was a unifying experience for the women and their mothers. This leads to the concept of the next sub-category, which is 'baby as bridge.'

### **Baby as bridge.**

With all but one participant describing a tumultuous and painful relationship with their mothers from childhood onwards, the introduction of a pregnancy into the relationship provided a shared space for the women and their mothers to connect. The baby served as a bridge to begin the delicate process of healing the relationship between mother and daughter. Most often it was the mothers of the participants who reached out to connect with the participants rather than the reverse, as the women remained very emotionally guarded towards

their mothers. At times, their mothers' efforts to reach out to the women caused confusion and distress as the participants struggled to understand how their mothers had not cared for them but were now demonstrating a desire to participate and care for the developing fetus. The tension of wanting to trust her mom while remaining cautious is evident in the following quote from one woman:

It was really difficult having a relationship with my mom. It was kind of not possible until closer to the end of my pregnancy when she was always there for me. She was helping me out more than everybody else and she was always there for me when I just needed someone to talk to. And after the baby was born our relationship got even stronger where I have stayed at my mom's for like a day or two, and I have slept over. And she does help and she gets me everything I need if I can't afford it for the baby, so I do have a really good relationship now with my mom. (Lisa, Interview 2)

This is not to suggest that all fences were mended as many of the women continued to work through their childhood trauma, but the baby served as a means of focusing love and attention on a "safe other" between mother and daughter. An additional example of this is seen in the following quote from another woman:

It's gotten stronger. It's very much all about baby now (laughs), which is good. She's no longer panicking about it. She's very calm about it, and she told my grandfather which I was really, really scared about, but...She sat him down and she was like, this is what's what, there's nothing we can do, she has made her choices, we just have to be there and support her and...So coming from my mom and knowing her the way I do,

that was unexpected. I kind of expected her to freak out and it to be World War III again, but she was very loving and supportive. (Jennifer, Interview 2)

For one participant, who had engaged in physical altercations with her mother on a near-daily basis prior to her finding out she was pregnant, the pregnancy created an immediate end to the physical fights and forced them to discuss their differences through communication rather than fists. Although still tenuous, this woman's relationship with her mother had changed as a result of both mother and daughter wanting to protect the baby from harm: "We got more closer and we talk more about things and...It's just been a lot better, like we haven't fought so much" (Tania, Interview 2)

The baby also served as a bridge for the boyfriend of one participant to his father; where they had not spoken in several years following the dismantling of the parental marriage, the pregnancy provided a safe window to reopen communication. The baby served as a powerful motivator to build new relationships between parents and their children where significant damage had been previously done. With support from parents, peers, and health service providers, all of the participants in the study felt a strong affinity to their fetuses by the second interview. This leads to the final sub-category of *Mothering against all odds* titled 'feeling connected to baby.'

### **Feeling connected to baby.**

This final sub-category represents the increasing emotional connection and attachment of the women to their developing babies. By the third trimester, with all participants aware of the

sex of their babies through ultrasound and having felt fetal movement, regardless of continued substance use or not, the women clearly had a strong emotional affinity to their fetuses. Not only had all of the participants at a minimum engaged in harm reduction behaviours related to their substance use but they were also diligent around attending prenatal appointments and committed to “eating healthier” to enhance fetal wellbeing. Women passionately described their feelings towards their babies and anxiously awaited their arrival. An example of the growing relationship for one woman and her baby can be felt in the following quote:

When I found out I was pregnant I was excited but I was kind of like, okay there’s a baby in me but whatever (laughs). But now that I feel him kicking and I know he’s getting bigger it’s like I love him and it’s completely different than what I felt when I was looking at the pregnancy test going, oh shit (laughs). (Miranda, Interview 2)

For one participant in particular, the connection she felt towards her baby at 18 weeks into her pregnancy and when interviewed again at 31 weeks had increased exponentially. When asked how she would describe her relationship with her baby at the first interview, this was how she responded:

It’s weird, like I don’t feel it right now so it’s like I don’t really know. Everyone talks about like, oh they feel this really deep connection. I don’t know if it’s like because I can’t feel him or her but I don’t know, like I don’t really feel a connection just yet. Like I know something is in there but it’s like I guess I’ll feel it once he or she moves. (Ashley, Interview 1)

Her voice had been non-emotive and detached as she spoke of her baby. Thirteen weeks later, she had experienced fetal movement and had found out that she was carrying a female baby. This participant's relationship to her fetus had evolved tremendously and when asked to describe how she felt about her baby at 31 weeks gestational age, she quickly responded that she "loved" her baby with a smile and her hands encircling her belly. When asked why she felt there had been such a change in her connection to her baby she stated,

I feel like I'm at a different place and I do believe it's because I feel her like all the time, like I know she's there, I see her and like...I've already like had a rough pregnancy so it's like I have that attachment and bond with her. I wish she would just come now, but I know she's not ready to come. (Tania, Interview 2)

For the oldest participant in the study who was having her second child, she described the relationship with her children as "the best love I ever had." She stated that becoming a mother as a "deeply spiritual journey" that was both difficult but the most rewarding experience of her life. She described her son in this way:

Like me and my sister are adopted and people were always saying to us "You guys are so lucky that you got adopted by them." And to me it was like, "No, they're so lucky that they had the chance to have children." You know, because that's the way I see my son, you know? He's not mine, he's God's and I'm here just to guide him. You know? (Lara, Interview 2)

With all but one participant returning for a second interview, the women very clearly demonstrated attachment towards their developing fetuses through their efforts to engage in harm reduction behaviours. How they experienced their babies both physically and emotionally evolved over time. From a socioeconomic perspective, none of the participants had stable housing by the time of the second interview. Six remained in shelters, two were staying with family as a short-term housing plan, and one was placed on the high priority list to move from her current subsidized apartment to one with more security from the ongoing threats from the father of her children.

Becoming a mother was a journey for all of these women under less than optimal conditions. The journey was marked with previous childhood or recent trauma, substance use issues, poverty, tenuous social support, and fear of apprehension of their children by CPS. Despite these ongoing stressors, there was a clear desire to break the intergenerational cycle of abuse and exposure to substances. They were passionate around wanting to be “good” mothers. What was not clear, however, was if passion alone would be enough for these women to manage the experiences that they wore in their DNA through exposure to multiple traumatic experiences as children. There was a will, but with poor parental role modeling and time-limited social support, the future remained unclear for these women and their children.

### **Semistructured Interview Data of Health Care Providers**

Three main categories emerged from the stories of the five health care providers who participated in the study, namely *Providing a safe place*, *Lack of services*, and *Believing that attachment was possible*. Table 7 was developed to show how the

relationship between the categories from the women participants' interviews intersected and overlapped with the categories from the health care providers' interviews.

Table 6: *Intersection of Major Categories and Sub-categories*

| <b>Choosing the mothering path</b> | <b>Balancing the risks</b>            | <b>Breaking the cycle</b>          | <b>Needing safe passage</b>                     | <b>Mothering against all odds</b>               |
|------------------------------------|---------------------------------------|------------------------------------|---|---|
| Unplanned pregnancy                | Using substances to cope              | Moms protect their kids            | Finding safety                                  | Feeling hopeful                                 |
| Wanting to keep the baby           | Wanting to protect the baby from harm | Wanting a better life for baby     | Wrap-around services<br><i>Lack of services</i> | Baby as bridge<br><br>Feeling connected to baby |
|                                    | Feeling guilty, feeling remorseful    | They will know I am there for them | <i>Providing a safe place</i>                   |   |
|                                    |                                       |                                    | <i>Believing that attachment was possible</i>   |   |

*\*Categories in italics are from health care provider interviews*

Each of these main categories will be explored more fully to provide a clear understanding of how these categories arose and coalesced with the categories that developed from the women participants' interviews.

### **Category 1: Providing a safe place.**

All of the health care providers spoke of needing to provide a safe space that was free of judgment to allow for a trusting relationship to develop with these highly vulnerable women living on the street and in shelters. This main category parallels the women's category of *Needing safe passage*. It also shines a light on the trauma that many

of these women have experienced which was also evident in the women's category of *Breaking the cycle*. Engaging with this population was challenging for service providers who worked diligently to build bridges with these women despite significant barriers:

There isn't a woman down here that hasn't suffered some sort of abuse or trauma from somebody...A lot of emotional and psychological sort of abuse. They aren't out to get pregnant. Pregnancy is not their main focus...The number one is the substance. It will always be the substance. (Registered Nurse)

Most often, these women did not present to health care providers of their own accord. Usually another woman living on the street or drifting in and out of homeless shelters (a peer) would identify a woman who was pregnant to outreach workers in an effort to get them health care as their pregnancy started becoming apparent:

Usually another woman will come up to us and say, "I know this woman and I think she is pregnant. Can you talk to her?" That is usually how we get the introduction. Then building the trust can take longer than a pregnancy. (Nurse Practitioner)

For many of the women in the care of the health care providers, living on the streets was not chosen but rather a circumstance they were born into with mothers who were also part of the drug culture. As a result, their mothers would often put them out on the street to work to provide money to feed their drug habit:

Some of the women have been prostituting since before 12 and then there's mothers who maybe were not here living on the street but were living in subsidized housing but using substances if they had mental illness and they just weren't caring for the child so the child was left to the elements of whoever was in the apartment which is a common story. And then often they're left looking after their younger siblings as well or they're being raised by older siblings because the parents are not well enough to manage. (Mental Health Worker)

The health care providers described the women as not being aware that they are pregnant, as their days blended together as a result of their substance use in order to reduce the emotional pain of their trauma. A side effect of engaging in ongoing substance use also was that many women no longer had regular periods and they were not "in touch" with their bodies:

Yeah and the women with trauma are really out of touch with their bodies, is the other piece of it. Like they are so...It's bizarre sometimes. It's like from a medical perspective, you know, we're trying to figure out what's going on. The symptoms don't make sense and they can't tell you that they're feeling strange but like you know there's something...There's something going on...And depending on the substance, they don't recognize the symptoms even something like pain. (Registered Nurse)

For health care providers, they described trying to provide care to pregnant women with such difficult trauma histories and engagement in substances as the hardest

population to reach while being extremely emotionally draining. Their efforts to help these women by developing a relationship with them were difficult but their desire to protect the mother and baby by going the extra mile to try and achieve the best possible outcome was apparent.

Through compassionate and nonjudgmental care they worked hard even if it only meant putting aside an extra plate of food for them to ensure they were well fed while pregnant. One health care provider described providing food for these woman as sometimes “the one thing that that I can do” when often there was little else that they could provide without a woman’s trust.

Once small gains were made connecting with these women, a direct and nonjudgmental approach was most often used to let the women know that they were there to support them no matter what obstacles presented and to provide them with health information so that they could make the best choices for themselves. They tried to actively engage women in planning to manage the pregnancy to allow them options to empower their decision-making.

Sometimes engagement with these women was made more difficult by the men in their lives who either pressured them to have abortions or, in some cases, used the pregnancy as a way of controlling them to keep the women with them. Both groups of health care providers identified male partners as potential barriers to connecting with the women during pregnancy:

I mean I'm a woman who would like to have children someday and I think about all the stuff the women have gone through. I mean I think most women, you think about having kids and it scares you to death and you think about all the stuff that these girls are going through and I'm like, "I don't know how they do it." Like I just don't but there is also the part of me that wants to protect both the woman, especially when there's these dicks around, and then the babies themselves, right? Sometimes these women don't want to be pregnant. They aren't interested in keeping the baby but their partners pressure them into keeping the baby. (Registered Nurse)

Once a woman decides that she would like to continue the pregnancy, efforts to support them "where they were at" in their substance use was an important aspect of the care they provided. All of the health care providers that were interviewed espoused a harm reduction model. They felt that to work from an "abstinence only" model would jeopardize their capacity to work in collaboration with the women as it would by default create a judgmental schism:

Like we have to bribe our clients to take care of themselves. So we often care more about their health than they care about their health...So if you look at it, say in the big picture, you have somebody who has a routine of using substances, they have that routine for a reason. It's how they maintain living from day to day. (Nurse Practitioner)

For these health care workers, they tried to envelope the women as best they could with limited resources while remaining hopeful that with repeated efforts to create a safe place and relationship with their clients that they would be able to reduce the health risks

for the women and their babies. Through compassion and gentle engagement, they looked out for them and were fiercely protective; something that many of these women had never experienced before in their relationships with their own mothers:

We're trying to get even just some compliance with psychiatric medication, staying here, letting us see you every day, taking five minutes and talking with us. We're outside peeking out at them and seeing what's going on outside. We're keeping an eye out for where the boyfriend is. We know who her friends are; we're talking to her friends saying, "Have you seen so and so today?" Like it's a big web of things that [has] to happen. (Registered Nurse)

There was no expectation that they would be able to connect with all women but even small successes were celebrated. One group of health providers relayed a story of a woman who had been heavily involved with drugs while pregnant and ended up in jail. While in jail, she had not been using substances and had an ultrasound. Upon release from jail, she immediately returned to the homeless shelter to show the workers her ultrasound picture. She remained on high doses of an antipsychotic medication for the remainder of her pregnancy and was able to keep her mental illness under control while reducing her crack use. This woman was able to reduce the risk to her fetus not only by reducing her substance use, but also by not engaging in the risky behaviours associated with her drug use. Although she was ultimately not able to keep her baby, the health care workers described her commitment to taking antipsychotic medications to manage her mental illness that also resulted in a reduction of crack use as her attempt to keep her baby

safe. Out of this data emerged the second major category from the interviews with the health care providers titled *Lack of services*.

### **Category 2: Lack of services.**

The second major category that emerged from the health care providers' interviews was a *Lack of services*. This category is intertwined with the sub-category of 'wrap-around services' from the women's interviews. They described the services for women who use substances during pregnancy as limited at best. From their perspective, they often felt they were holding women together by a thin thread and that, without adequate services to meet the needs of these women with complex social situations, keeping mothers and babies together was difficult at best. Because of their substance use, women were categorized as "high risk" and as a result were required to receive prenatal services in the hospital. This presented significant challenges for the women and health care providers who tried to bridge the two worlds in which these women found themselves. The health care workers described the hospital as "cold, "institutional," and "kind of like jail." For women with significant substance use and mental illness, the logistics of getting them to appointments was difficult. Not only was it difficult to get them to their appointments on time, the duration of the appointments was long, with the women sitting in a queue for ultrasounds and other diagnostic tests for hours. For many women, the wait in this foreign world was intolerable:

The entire process for one visit is too long. They can't tolerate it. They are jonesing for the substance...Just their mental health, the fact that it's in a hospital setting, the

institutional setting is upsetting. (Mental Health Worker)

The health care workers described how accompanying these women to appointments was like dropping them on “Mars” from the subculture that they “felt safe” in within their community around the shelter. They felt that the anxiety of being placed in this setting created an even greater distance between the women and a safe place to provide health care to their clients:

And you have somebody in there; they’re extremely self-conscious because they’re out of their element. This is a subculture here, they’re comfortable here. If you leave their subculture then they’re not comfortable so you have mainstream women there who are staring, who can’t help but stare because you have someone with track marks up their arm and they’re pregnant. So...And the women, they know that. So it’s just...It’s really anxious for them, like its anxiety provoking and there really isn’t a place to get away like to have like a quiet place for them to wait instead of in the waiting room with everybody else. (Mental Health Worker)

They felt that care for these women should be available in their own community of safety to enhance engagement in health services. If this was not possible, they felt that services in the hospital needed to be altered to accommodate their needs. Health care providers wanted a safe and quiet place for these women and a clinic tailored to their needs so they wouldn’t have to wait for hours for maximum success:

It needs to be orchestrated quickly and efficiently and in and out. Either that or done

something like for us, like things like blood work and stuff can be done [in the clinic] but then to go for an ultrasound and then have to wait an hour, that's not going to happen.

(Registered Nurse)

As an extension of this, they explained how receiving services in an unsafe place was, for these women, somewhat traumatic. While not only out of their environmental element, the women were also forced to pay attention to their pregnancy without substances to manage the emotional pain:

We're going to take you out of your element, we're taking you out of your routine, we're putting you somewhere where you're stressed and not only that but we're making you pay attention to the fact that you're pregnant. And then all of the guilt and feelings that come with that, we're actually making you, for that time, without your substance, pay attention to the fact that you're carrying a fetus while you're using, while you're living on the street. (Mental Health Worker)

Under these conditions, the health care workers were challenged to get women to agree to return for additional appointments in the hospital setting. They wanted services to be localized to the community in which these women were comfortable and to support continued engagement between the health care system and these clients:

Especially [if the environment] was warmer. If you went you could have a cup of coffee, they might give you some food, you know. If they knew people were more understanding of their issues with addictions and stuff like that. (Mental Health

Worker)

The sentiment was supported by another health care provider:

Like any community health care downtown, I think most of our clients would feel pretty comfortable going in because they know how we work, you know, “I feel comfortable with these people because they understand where I’m coming from.”

Like whereas the hospital completely doesn’t. (Nurse Practitioner)

With no services tailored to this population, the health care workers described how they “stretched” to try to meet the needs of these women in a system where services for the marginalized population were already “too stretched.” They wanted a health care environment for these women under a single roof with coordinated services that included healthy relationships with CPS and the police. Through collaborative relationships, they felt they could provide more effective, long-term services for these women and improve the likelihood that these women could maintain a relationship with their children. The health care providers felt limited in what they could offer under the current system of care:

And I think also just that feeling of like we don’t have a whole lot that we are able to offer. I mean I think that we do as much as we can. Like we said, we all stretch a little further and try to offer them food and, you know, get them all set up but I mean like in terms of just counseling in general, for any of our clients, we don’t have enough access to stuff like that. And that’s what a lot of people are seeking...So it’s tough because it’s like one of the most difficult situations that probably any of our clients actually

face is that, you know, pregnancy, so...And yeah, the fact that it's often not the first and won't be the last...It's just the cycle but, you know, you see continuing on and it's, you know, the downward spiral afterwards with the clients that is hard to see.

(Registered Nurse)

Despite limited resources, the health care providers remained tentatively hopeful for the women they served. They ached for these women and wanted to believe that the intergenerational cycle would be broken for some. This leads to the final category of *Believing that attachment was possible*.

### **Category 3: Believing that attachment was possible.**

The last major category of *Believing that attachment was possible* reflects the belief of the health care workers that despite horrific circumstances and conditions, most of the women they had worked with that used substances during pregnancy did form some attachment with their fetuses. This category from the health care provider participants does not parallel a single category from the women interviews but rather touches many of the categories that emerged from these interviews. The health care providers felt that one of the biggest barriers for women in attaching to their fetuses was the fear of loss of their children at birth:

I believe they do develop an attachment. I think they try to numb it as much as they can probably so they don't have to...If you know the baby's going to get taken away...You know, if you know it's all going to be bad, well you're going to...Because

we know when a woman's baby gets taken away, she uses more, she puts herself in more risky situations. (Mental Health Worker)

The fear of such a significant loss created an environment where substance use allowed them to shut down so they wouldn't attach to their babies. If they maintained some distance from the fetus, it would provide protection from the eventual emotional suffering. The health care workers described how they saw women lose their babies and the resulting grief created a spiral deeper into their substance use. One nurse described the experience in this way:

The grieving is huge...And it's just another in the line of trauma that they have had their whole lives...And I think if they punish themselves too like I think there's some punishment, there's some, "I did it," you know? And a lot of guilt and shame and...So where would you...You'd want to go where you're feeling comfortable. When you're feeling guilt and shame you're going to want to go with people that feel the same way. And what are they doing? They're using together. (Registered Nurse)

During the interviews, the providers also made reference to how the impact of previous trauma and substance use impacted the mothers' capacity to become attached to their fetuses. Using substances to numb their pain took them outside of their body and this was perceived as a barrier to attachment:

You know, it's about getting them in tune with...I mean if they're going to have any attachment to the baby, they have to be in tune with their body because it's their body that's carrying the baby. It makes sense that if they're not attached to their body,

they're not attached to their baby. (Nurse Practitioner)

The health care workers also described having a very limited professional relationship with CPS. CPS workers were perceived as having a minimal understanding of the trauma and mental illness that these women carried with them. They were seen as adversarial rather than collaborative with their focus entirely on children rather than seeing the dyad of mother and baby working to ensure the best outcomes for both women and their children. For many of the women with whom the health care professionals had worked, they had already had interactions with CPS as children and they had experienced being apprehended from their mothers. Despite wanting to have a baby, the workers felt that for many of these women their chance of keeping them was nonexistent. Working under these conditions, however, the health care workers felt that most women wanted to deliver a healthy baby, even if they weren't able to keep them. This was what they could try to provide for their children even if they weren't going to be able to mother them in the future. One health care provider stated, "I think they are motivated to have a healthy baby...Because a lot of them want to bear healthy children. Even if they can't keep it they want the baby to be healthy."

The health care workers felt that the effort that women made to try to reduce substance use was a definite display of their attachment to their babies. Although conditions weren't ideal and apprehension may have been the best course of action for some of the children born from these women, these efforts were seen as small successes in a system with few resources and services available to this population. With limited mental health and addiction services available in general and even fewer for pregnant women who are substance involved, the health care workers described a system that was unable to

respond to the specialized needs of this population.

## **Maternal–Fetal Attachment: Internal and External Factors Impacting MFA and**

### **Health Behaviours**

Collectively, the categories drawn from the women and health care participants' interviews provide a deeper understanding of the individual internal and external socio-structural intersecting factors that influence the development of MFA in women who uses substances during pregnancy. The internal factors include a woman's history of abuse and trauma or neglect, unresolved attachment issues and conflict with primary caregivers, mental illness, and addictions. The external socio-structural factors that impact marginalized women who are pregnant and using substances include health service delivery models, health policy, social determinants of health, sociocultural factors and beliefs, and gender. Figure 3 provides a diagrammatic presentation of these competing factors that coalesce to influence the health of women and their babies. Because of the intergenerational impact that these influences have on future generations, it is unrealistic to limit these variables to the perinatal period. Individual factors are only a small part of the puzzle and targeted efforts to provide safe, supportive, and specialized programming to meet the immediate needs of women during pregnancy can only affect change on a small scale. Without efforts to address the broader sociocultural inequities that allow for continued issues of poverty, unstable housing, stigma, and gender bias in Canada, and mainstream health policy that rejects harm reduction as an important means of ethically and compassionately caring for marginalized populations, the health of vulnerable women and children will remain compromised. The women participants

in this study described having a strong attachment to their fetuses and engaged in positive health behaviours to reduce risk and improve birth outcomes. Despite the persistent presence of significant adversity outside their control, it is hoped that their tenacious resiliency will enable these dyads to remain together and achieve optimal health and wellbeing.

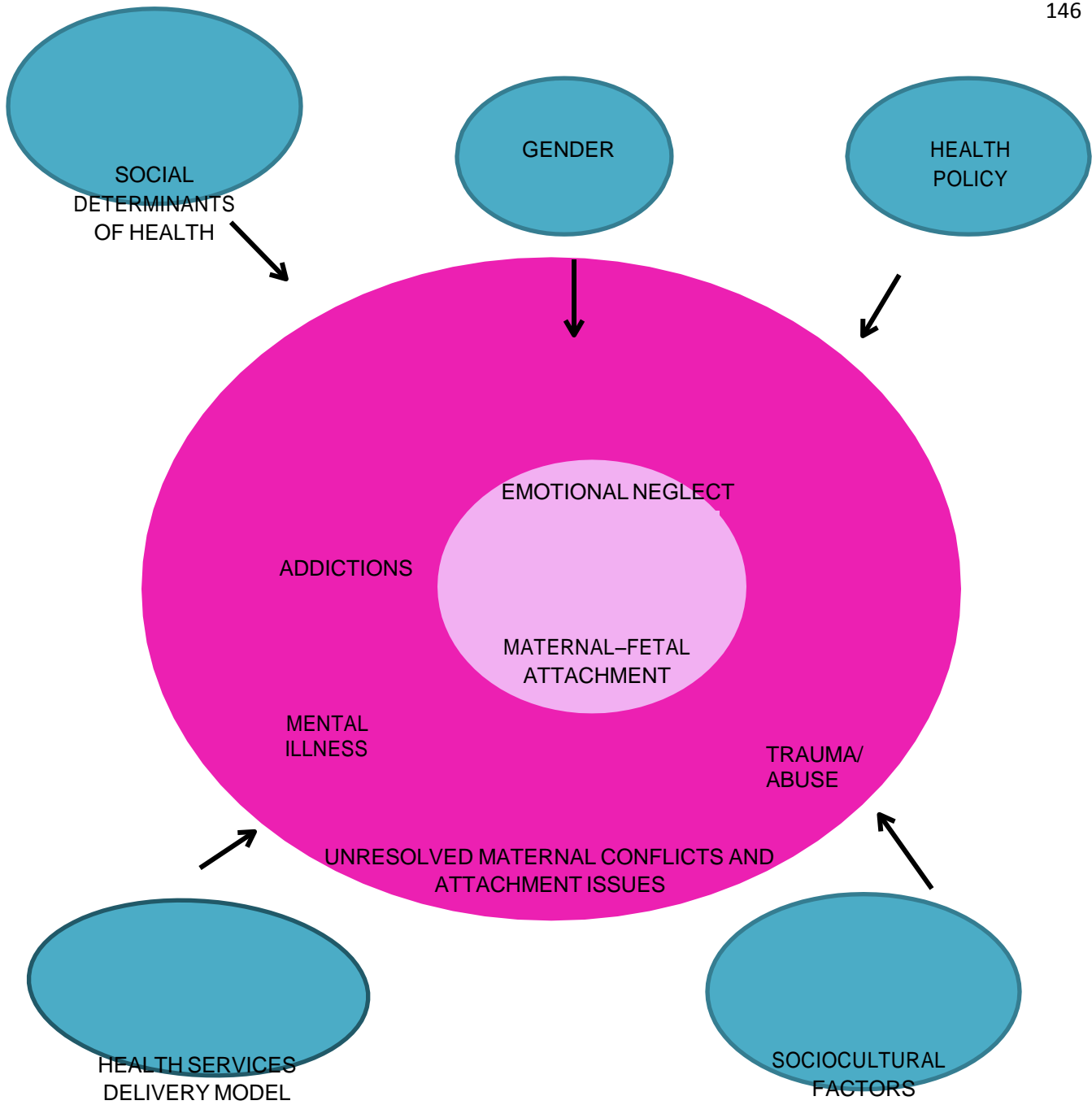


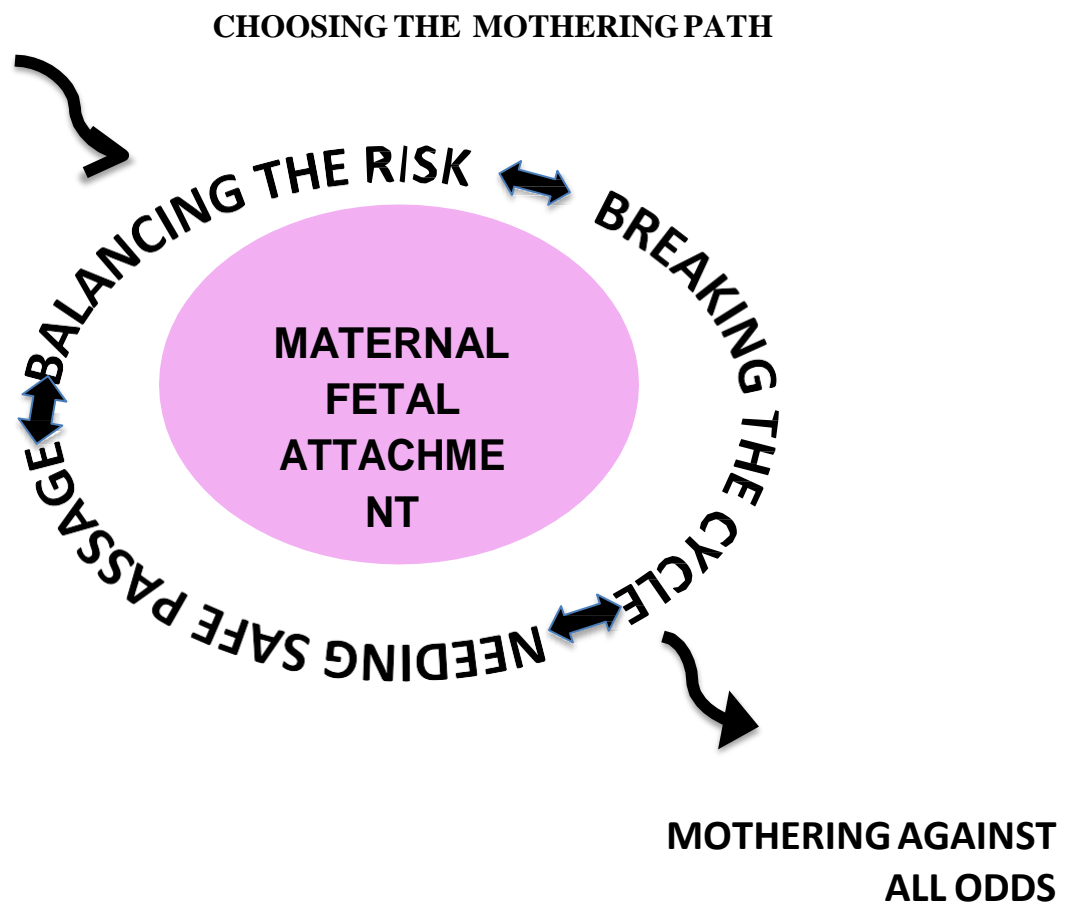
Figure 3: Factors Influencing the Health of Women and Babies

## Development of MFA in Women Who Use Substances During Pregnancy: A Substantive Theory

Through development of the major categories within this GT study, a substantive theory of how maternal-fetal attachment develops in women who use substances emerged. The transition to motherhood has been largely ‘measured’ through the use of logico-empirically based tools that have sought a “single definitive truth” (Parratt & Fahy, 2011, p. 447) to determine whether women have achieved the necessary developmental milestones to become a ‘good’ mother. The use of a qualitative approach grounded in a post-structuralist feminist stance has allowed women’s experiences of their evolving relationship to their fetuses to emerge while remaining contextualized in their everyday experiences. It is a journey that is time-limited and begins with an empowered although conflicted conscious decision to “*choose the mothering path*” despite adversity and significant judgment from others. After “*choosing the mother path*”, there are numerous psychosocial processes that these women navigated which are represented by the categories of “*balancing the risks*”, “*breaking the cycle*”, and “*needing safe passage*”.

These three categories do not share a linear step-wise relationship but instead are co-occurring processes that are interconnected and enmeshed. There is a constant tension or “push and pull” between a desire to keep the baby safe amidst significant stressors, a profoundly strong yearning to break the cycle of abuse and trauma that they had experienced, and the need for safety from others. Safety allow them to reach out and engage with health care providers to receive both instrumental and emotionally supportive care to best achieve these goals. Ultimately, the women in this study were hopeful while deeply attached to their

fetuses and felt well prepared to “*mother against all odds*”. The “mothering against all odds” category represents the culmination of the significant emotional work that was done by these women as they journeyed towards delivering (or having delivered) their babies. Despite ongoing challenges, they were not passive to the social forces that surrounded them but actively embracing or “embodying motherhood” through their individual experiences of self, baby and others. Figure 4 provides a diagrammatic representation of the resultant substantive theory of MFA in women who use substances.



*Figure 4:* Development of MFA in Women Who Use Substances During Pregnancy

## **Conclusion**

The next and final chapter of this work will provide a discussion of the results from this study and place them within the context of the existing literature discussed in chapter 3. The limitations of the study and implications for future research and nursing practice will also be presented.

## Chapter 6: Discussion and Implications

Stepping onto a brand-new path is difficult, but not more difficult than remaining in a situation, which is not nurturing to the whole woman.

—Maya Angelou, *Continuing the life work of Maya Angelou*

This chapter will provide a discussion of the major themes that emerged in the qualitative data that were presented in chapter 5. The findings discussion is informed by the theoretical approaches identified in chapter 2 and contrasted with the current knowledge identified within the literature review found in chapter 3. Major ideas that will be presented in this chapter include a discussion around pregnancy as a time of reorganization of self; maternal–fetal attachment (MFA) and the enablers and barriers to engaging in positive health behaviours identified by the women participants; the influence of trauma on MFA and the limitations of current tools to measure this construct; the need to reconceptualize MFA within the context of social structures and policy; and recommendations around a service model of care for women who are substance involved during pregnancy and as mothers. The chapter will close with a discussion around the limitations of this work and the implications for future research, education, and nursing practice.

### **Pregnancy as a Complex Process Requiring Reorganization of Self**

Several factors have been associated with the increased risk of unplanned pregnancy; particularly in young women within the literature (Finer & Zolna, 2006; Frost, Lindberg, & Finger, 2012; Kornides, Kitsantas, Lindley, & Ches, 2015). For all but one participant in this study, their pregnancies were unintended. Considering the demographic profile of the participants, and given that socially disadvantaged women with lower education and a history

of childhood abuse, substance use, and mental illness are more likely to experience unplanned or unwanted pregnancies (Madigan, Wade, Tarabulsky, Jenkins, & Shouldice, 2014; Siegel & Brandon, 2014), this finding was not surprising. Although many of the women in this study were conflicted around whether to continue the pregnancy or terminate, the decision to continue the pregnancy was largely because of religious beliefs and a sense of obligation to the fetus. This parallels findings in the literature with women who treat abortion as a moral issue, most often choosing to continue the pregnancy (Claridge, 2013; Smetana, 1981). Decision making around continuing an unintended pregnancy is complex as it creates a tension between the desire to continue the pregnancy for religious or moral reasons and the socioeconomic and cultural factors including financial concerns, lack of partner support, stigmatization, and the competing demands of other children, which are cited as the most common reasons women seek an abortion (Biggs, Gould, & Greene Foster, 2013; Hall, Kusunoki, Gatny, & Barber, 2015).

For the sample of women in this study, the decision to continue their pregnancy was also influenced by a profound emptiness or void from early emotional deprivation and conflict with their own mothers and the need to have “something of their very own” to care for. This desire to fill a deep loneliness from unmet affectional needs as children has been shown to influence the continuation of a pregnancy for women with attachment difficulties from their own childhood experiences (Fonagy et al., 1991; Fraiberg, 1987). Despite emotional, psychological, and sexual abuse both historically and for many in the present perpetrated by the father of their babies, the desire to become a mother superseded the profound judgment and pressure from others to abort.

Once the decision to continue the pregnancy was made, this marked the beginning of an

“enormous transition, transformation, and reorganization” (Slade et al., 2009, p. 22) of self as pregnancy is a profoundly psychologically demanding period requiring adaption to this new way of being in a short window of time. The journey to motherhood is a complex process that is rooted in early childhood experiences across multiple generations with both genetic and environmental influences shaping how we are parented and how we will parent in the future (Scaramella, Neppl, Ontair, & Conger, 2008; Schwerdtfeger & Goff, 2007).

The conceptualization of the prenatal period as a journey requiring reorganization is reflected in the work of scholars such as Vangie Bergum (1997), and Ramona Mercer (2004) with pregnancy being a time of significant psychosocial development and transition. In her review of Rubin’s theory of maternal role attainment (MRA) and research that emanated from the theory, Mercer (2004) defines the transition to becoming a mother (BAM) whereby a woman moves from a “known, current reality to an unknown, new reality...which requires restructuring goals, behaviors, and responsibilities to achieve a new conception of self” (p. 226). The transition is seen as an evolution over time and can include the periods of preconception and pregnancy, and it expands across the lifespan of the woman as she redefines herself in her mother role through an ongoing developmental process in tandem with her child.

In her multistage model, Mercer (2004) defines the prenatal period as a time of “commitment, attachment and preparation” (p. 231). This conceptualization of becoming a mother parallels the literature related to MFA as defined earlier in this work (chapter 1) where pregnancy was seen as a significant life event requiring a “renegotiation of the self” (Slade et al., 2009, p. 22). Within this research study, similar findings emerged with the nine participants who completed two interviews demonstrating a marked increase in their affinity

towards their fetuses as they redefined themselves over time from being an individual to a dyad. The women also demonstrated increasing reflective functioning (RF) as they dreamed of what their babies would look like as well as ascribing personality characteristics to their future children—particularly once aware of the sex of the baby. These findings are also aligned with several of the dimensions measured by Cranley's 1981 Maternal Fetal Attachment Scale (MFAS) with attachment being demonstrated through assignment of attributes to a woman's fetus and differentiation of self from the fetus. Collectively, if evaluating whether these women experienced a change in MFA over the course of their pregnancy, the dimensions considered by Cranley's MFAS and Fonagy et al.'s 1991 conceptualization of RF were present and increasing over time.

### **Understanding Risk Within a Broad Social Context**

For the women in this study, all were faced with income, food, and housing insecurity, which ultimately contributed to their substance use as a means of coping with these ongoing stressors. This is significant in that several studies have shown that when looking at birth outcomes for women who use illicit drugs during pregnancy and match them with women who have similar social circumstances, the birth outcomes of women who do not use substances during pregnancy are very similar (Alhusen et al., 2012; Passey, Sanson-Fisher, & D'Este, 2014; Wright & Walker, 2007). Despite these challenges, the nine participants who completed both interviews adopted either a harm reduction approach to limit the risk of harm to their fetuses or were able to achieve and sustain complete abstinence from all substances.

Overall, the women were highly protective of their fetuses and felt tremendous guilt when they turned to substances to manage ongoing stressors related to living conditions and

interpersonal relationships. Financial concerns and worries about stable housing dominated their thoughts and required a great deal of energy. Substances were used to help emotion regulation when self-soothing was not possible; use was an escape from the everyday worries that consumed much of their energy and personal resources. The women were acutely aware of the risks associated with substance use and all made efforts to reduce or limit their substance use or engage in substances that they felt were less harmful for their babies. With the ongoing stress, however, of limited financial means and lack of autonomous decision making around secure housing, substance use did allow temporary alleviation from their reality.

For the women in this study, pregnancy served as an important motivator to reduce substance use to protect their babies. The concept of pregnancy as a “window of opportunity” for integrating health behaviour change is widely supported in the literature (Boyd & Marcellus, 2007; Kropp et al., 2010). Although external pressure from health care providers and the threat of losing their babies did impact women’s decisions around their patterns of use, the internal desire to keep their babies safe was far more salient. Ongoing efforts to protect their fetuses and the guilt that ensued when they felt they had been careless in managing their substance use were seen as motivators to “do better.” This was somewhat in contrast to the findings of Shieh and Kravitz (2002) who described the development of maternal attachment towards a fetus as “incompatible” with substance use because the “compensatory emotion such as guilty feelings about damaging a baby” can result in relapse and heavier drug use because of the emotional pain of “damaging” their fetus (p. 162). Although Shieh and Kravitz (2002) found that women did demonstrate a capacity for MFA because they reported that they were “willing and able” to make lifestyle changes (p. 162),

they suggest that this was primarily correlated with their experiences with fetal movement as a motivator and reminder of the existence of the baby rather than as a function of a more complex internal process such as increasing RF. This disparity in findings may reflect several differences in demographics between the participants in the current study and that of Shieh and Kravitz. The mean age of the women in this study was significantly younger at 20.8 years versus the women in the 2002 study whose mean age was 26.6 years. This age difference suggests that the women in the earlier study may have been more entrenched in substance use for a longer period of time. A second important difference was that the majority of the participants in the present study were primiparae unlike the Sheih and Kravitz study sample where the majority of women were multiparae with many stating that they had had children taken away because of drug use previously. These variances may account for how women experienced “guilt” associated with their substance use as none of the participants in the current study had lost custody of their babies due to drug use. For the women in this study, pregnancy alone served as an important enabler to choosing positive health behaviours.

How women engaged in substances after finding out they were pregnant was based on a hierarchical system of risk, which determined how they would use, limit, or abstain from some substances rather than others. Alcohol and “hard drugs” such as crack or heroin were seen as being the most harmful to their fetuses while marijuana and tobacco were seen as the least harmful. This is important in that although the evidence indicates that alcohol is the most teratogenic of all substances to the fetus, smoking tobacco is the most common reason for intrauterine growth retardation and preterm deliveries (Boyd, 1999; Boyd & Marcellus, 2007; Passey et al., 2014; Weir, 2006). Several of the participants opted to increase their tobacco use while reducing other substances in an effort to reduce risk. It is difficult to determine whether

the beliefs the women held around the level of risk for the different classes of substances were because these are beliefs held by the majority of the lay public or whether it was related to experiences and beliefs held by their peers and families of origin. Substance use during adolescence and adulthood is strongly predicted by familial substance use patterns (D'Onofrio et al., 2012; Scaramella et al., 2008) with almost all of the women participants in this study having had significant exposure to problematic parental substance use during childhood. Further, the concept of evaluating and assigning a hierarchy of risk around substance use in pregnancy for women who are poly-substance users has been identified in other research findings with cannabis and tobacco use most often continuing in women who use multiple substances (Passey et al., 2014). Understanding the underlying factors that inform how women evaluate risk related to their substance use provides an important context for developing intervention strategies to help women make informed decisions about their substance use.

Another important means of reducing substance use for the women was through a reorganization of relationships with others. The women described the period of pregnancy as a time where many of their relationships changed, dissolved, or increased based on wanting to limit their exposure to substances. Decisions around whether relationships would continue were conscious and directed as women became invested in their fetus once the decision to continue the pregnancy was made. These decisions came with not only loss of friendships but an important element of reorganizing of self as future mother and protector of her child. The women often eliminated relationships that would support ongoing exposure to drugs and alcohol and looked for relationships that were seen as supportive of their efforts to protect their babies. This active renegotiation of relationships with others parallels the findings of a

meta-synthesis by Nelson (2003) with the initial stage of the transition to mothering being one of commitment and acceptance of the need for sacrifices. As part of the evolution is an adaption to changing relationships with family and friends, with some becoming closer and others drifting apart (Nelson, 2003). For the women in this study, choosing relationships with other women who similarly were transitioning into the mothering role was an important means of reducing exposure to substances to allow for the adoption of more positive health behaviours.

In addition to reducing or abstaining from substances, all of the women in this study made efforts to improve their nutritional intake despite limited financial means and all received prenatal care once they knew they were pregnant. This finding that all of the women accessed prenatal care in a timely fashion is in stark contrast to the results of several studies that have found that women often access care very late when using substances out of fear of judgment and potential for losing their children to child protective services (CPS) (Alhusen, 2008; Finnegan, 2013; Kropp et al., 2010; Shieh & Kravitz, 2002). There are several possibilities as to why all the women in this study engaged with health care providers by the end of the second trimester: First, the mean age of the participants was relatively young with many of the women still attending secondary school. As a result, many of the women were referred to specialized services that were available for young pregnant women in the community. Second, many of the participants were living with their family of origin when they became pregnant so that disclosure of the pregnancy to their parents often served as a vehicle to connect them to health care providers. Many women received prenatal services initially from primary care providers such as family physicians and in local community health centers before being referred to maternity care services for high risk pregnancies. Regardless,

based on these behavioural criteria, the participants demonstrated a close affinity to their fetuses and made considerable efforts to reduce risk to their babies.

### **The Significance of Trauma in the Development of Maternal–Fetal Attachment**

Relational experiences with primary attachment figures during infancy and early childhood lay the foundation for future emotional, psychological, and cognitive development (Benoit, 2004; Bowlby, 1988; Bretherton, 1992). As described in chapter 2, the capacity for an infant to elicit an appropriate and consistent response from primary care providers when upset allows for a secure base where they learn that their needs will be met and their distress alleviated in the absence of the capacity to self-regulate emotions (Allen & Fonagy, 2006; Fonagy et al., 1991). The ability for a primary caregiver to sensitively and empathically respond to her child’s needs and to “hold” him in her mind and not view his efforts to elicit a response as manipulative and insensitive to her own needs is known as reflective functioning (RF). Over time, the child develops a “working model” of what he can expect from others and how he views himself as having agency to elicit helpful responses to his needs. For infants whose cries are met with anger or other negative emotions, their working model of how others will care for them becomes distorted, and with limited support to help regulate their emotions, this skill does not develop appropriately to enable healthy reactions to distress across the lifespan (Barlow & Svanberg, 2009).

All of the women in this study described either feeling emotionally neglected by their mothers or being exposed to significant chaos, parental addictions and mental health issues, or physical or sexual abuse. Traumatic experiences were woven through their stories of early childhood and memories of relationships with their mothers, fathers, and siblings. Profound

anger and sadness punctuated their recalling of terrifying events that left them without a safe haven in which to develop a sense of security in those around them. The need to feel protected is innate in infants and children for healthy psychological and emotional development. For these women, an appropriate response to this need was absent, and it was incomprehensible to them that their mothers had not protected them or that they had experienced traumatic rejection by them. The women were passionate about wanting to “break the cycle” and not expose their children to similar suffering. Unfortunately, “the determination to want something better for the child than one had oneself may be strong, but sadly, in itself, conscious determination seems to fall far short of what is required” (Fonagy, Steele, Steele, Moran, & Higgitt, 1991, p. 959). Without their own safe haven as children on which to pattern future healthy relationships, the potential for the intergenerational transmission of disturbed patterns of attachment for these women with their infants warrants our attention (Schwerdtfeger & Goff, 2007). The link between insecure attachment and future substance abuse, psychopathology, and poor interpersonal relationships continues to accrue support within the literature (Fraiberg et al., 1975; Fonagy et al., 1993; Hugh-Bocks, Krause, Ahlfs-Dunn, Gallagher, & Scott, 2013; Logan et al., 2002). A 2014 grounded theory study of 33 women that looked at the transition to motherhood in the context of past trauma also highlighted the profound “emotional and cognitive work” women with past trauma histories must undergo on the journey to mothering (Berman, et al., 2014, p. 1257) The concept of “ghosts in the nursery” in the following passage provides a sense of the vulnerability that these women and their future children bring to their present and future maternal–infant relationship:

In every nursery there are ghosts. There are the visitors from the unremembered pasts

of the parents; the uninvited guests at the christening...Even among families where the loved ones are stable and strong the intruders from the parental past may break through the magic circle in an unguarded moment, and a parent and his child may find themselves reenacting a moment of a scene from another time with another set of characters...Another group of families appear to be possessed by their ghosts. The intruders from their past have taken up residence in their nursery claiming tradition and rights of ownership. They have been present at the christening for two or more generations. While none has issued an invitation the ghosts take up residence and conduct the rehearsal of the family tragedy from a tattered script. (Fraiberg et al., 1975, pp. 387–388)

The need for appropriate interventions that address these “ghosts in the nursery” is critical for breaking the intergenerational cycle of trauma, abuse, and disturbed patterns of attachment. For the women in this study and their future babies, the potential for “ghosts in the nursery” to influence maternal–infant interactions requires our attention. With all participants having a history of trauma and abuse, interventions that extend beyond the physical care of the dyad is imperative. Without efforts directed towards addressing these fundamental issues around attachment and unresolved trauma in these mothers, the potential for the development of insecure attachments cannot be ignored.

### **Limitations of Current Measures of Maternal–Fetal Attachment**

All nine women who completed both interviews in this study reduced or eliminated substance use, improved their nutritional intake, and engaged in consistent prenatal care. They also described an affectionate relationship to their babies that increased over time from the first

interview to the second. Based on these indicators, the women had attached to their fetuses as evidenced by their desire to reduce potential harm through more positive health choices and in the exemplars they used to describe their love for their babies. This is in keeping with the variables measured by Cranley's MFAS. Measuring MFA based primarily on health behaviours, however, is simplistic and one-dimensional. It does not account for the socioeconomic disadvantage and other social factors that may influence health choices. MFAS and other attachment scales including the Maternal Antenatal Attachment Scale (MAAS) by Condon (1997) and the Prenatal Attachment Inventory (PAI) by Muller (1993), with their focus on health behaviours are perhaps better predictors of fetal outcomes, as they do not capture the complexity of the variables that influence MFA and ultimately maternal-infant attachment after birth. For women with complex psychosocial histories, the need to better understand their capacity for RF is needed given the correlation between RF, MFA, and attachment patterns postnatally.

As a result of our growing understanding of the variables that influence a woman's relationship with her developing fetus, there has been a shift from a focus on behavioural expressions of attachment to mental models of attachment that focus on a woman's RF which has been shown to be heavily influenced by her own childhood attachment experiences (Fonagy et al., 1993). A recently published study by Ensink, Berthelot, Bernazzani, Normandin, and Fonagy (2014) showed that pregnant women with a history of abuse and neglect had much lower levels of RF than a low risk sample. Because trauma influences RF, this has implications around how women traverse the psychological transition during pregnancy to motherhood. Lower RF scores were associated with difficulty investing in the pregnancy, and were also shown to negatively influence a woman's feelings about her baby

and motherhood (Ensink et al., 2014). Postnatally, women with trauma and lower RF may experience intense emotions such as fear, helplessness, or anger when an event triggers trauma-related affect states and result in disturbed maternal–infant attachment (Ensink et al., 2014). Further research around the constructs of RF and trauma is needed given the importance of developing interventions to increase RF in women with a trauma history during the prenatal period.

### **Safety through a Harm Reduction Lens**

Women who use substances during pregnancy must feel safe and supported in their interpersonal relationships and when seeking prenatal care. The overwhelming need for safety as described by both the participants and health providers in this study speaks to the importance of this key finding. For most of the participants in this study, engagement with service providers was primarily focused on women achieving and sustaining abstinence from substances for fetal wellbeing. With the expectation of abstinence and regulatory control of women's bodies through the threat of punitive measures including reporting substance use to CPS, women were often forced to hide their substance use rather than seek treatment. Although two of the women received prenatal care in a community health setting that endorsed a harm reduction approach, the remaining eight participants were receiving services where there was a zero tolerance policy for alcohol or illicit drug use. Such policies ignore the complex social factors that have contributed to the women's current location in life and result in an unsafe environment in which to address their ongoing challenges with substance use (DiQuizno, 1999; Smye, Browne, Varcoe, & Josewski, 2011). Instead, these policies place women and their fetuses in conflict where the safety of the fetus becomes of primary

concern and discourse neglects to include the broader social context of the lived experience of women (Boyd, 2004).

From a health care provider perspective, women who use substances during pregnancy experience significant stigma and social exclusion and are often further marginalized by health care providers who are highly focused on fetal health and see these mothers as a danger to their baby (Benoit et al., 2014). The health care providers who were interviewed philosophically embraced a harm reduction approach in their practice and assumed a nonjudgmental stance in their work with largely homeless populations in community-based programs. They were, however, witness to the experiences of the women they were caring for when escorting them to the hospital to receive prenatal care.

The institutionalized world of the hospital is an unsafe and unwelcoming environment for these women because of its sterility, focus on fetal wellbeing, and concerns associated with corporate policies that may require employees to report substance use during pregnancy to CPS. Of the health providers interviewed for this study, part of their role in providing safety for these women was to protect them from institutional health care providers who find substance use during pregnancy morally reprehensible. A 2014 qualitative study by Benoit et al. examined the views of 54 health care providers to better understand their beliefs around working with pregnant and early mothering women who use substances. The majority of the participants viewed substance use during pregnancy as deviant behaviour and assigned blame to the individual women for placing their fetuses at risk for harm. None of the providers in the Benoit et al. study acknowledged the social and structural inequities that contextualize substance use for these women or the need for a societal response to this issue. These constructions by health care providers of women who use substances during pregnancy

heightens the stigma and marginalization as these beliefs become “professionalized, and thus to some degree legitimated, as they occur within a medical framework” (Mason et al., 2001). Instead of working to engage with these women early in their pregnancy to encourage healthier pregnancies and positive birth outcomes, many health care providers continue to perpetuate the stereotypes of pregnant and mothering women as criminals, child abusers, and unfit to mother. The expectation that these women utilize health care resources under these conditions is absurd and demoralizing.

Evidence supporting a harm reduction model as an effective means of reducing health risks to women and improving birth outcomes has been mounting (Smye et al., 2011; Torchalla, Linden, Strehlau, Neilson, & Krausz, 2015). The five central principles underlying harm reduction include pragmatism, humanism, reducing negative consequences, balancing the costs and benefits for individuals and society, and finally focusing on the immediate needs identified by those who are marginalized by substance use (Beirness, Jesseman, Notarandrea, & Perron, 2008). Pragmatism acknowledges that some level of drug use will always exist and that amelioration of drug-related harms is a more realistic objective than achieving abstinence. The principle of humanism promotes the dignity of all individuals and respects the choices of others without moral judgment. Reducing negative consequences is part of a continuum of care to improve health while reducing risk. Balancing the costs and benefits for individuals and society acknowledges the tensions of promoting individual health and the common good. Pauly (2008) illustrates this principle of balancing costs and benefits using the example of safe injection sites (SISs) which have been shown to reduce the incidence of diseases, overdoses, and soft tissue infections, as well as reduce health care service usage, ultimately serving the individual and greater good of society. Reducing

negative consequences focuses on the immediate reduction of harm related to substance use and “neither excludes nor presumes the long-term treatment goal of abstinence” (Beirness et al., 2008, p. 3). With these underlying principles, there is a shift away from a moral judgment associated with substance use and a call to supportive action that is not punitive.

### **Social Justice as a Fundamental Element of Harm Reduction**

As an extension of the principles of harm reduction, the philosophical underpinnings of social justice can be intertwined to allow for health care providers to view problematic substance use during the perinatal period within the context of the inequities that include a lack of quality housing, poverty, unemployment, and social support (Smye et al., 2011). Harm reduction is an approach to managing substance use that in and of itself is not sufficient to improve the health and wellbeing of women and their children. A social justice framework allows for the structural injustices that contribute to the health inequities to be examined and the root causes explored to allow for broader system changes (Pauly, 2008). By integrating a harm reduction approach within a social justice framework as the overarching principles when caring for women who use substances during pregnancy, a safe and supportive environment emerges that allows for improved outcomes and removes the shame and oppression that fuel an abstinence only approach.

Integrating these core principles should occur beyond the program level to a system-wide adoption of these principles. Services that intersect with women who use substances during pregnancy should assume this stance. The women in this study identified significant distress and fear of CPS not only because of the risk of having their children apprehended but because many had been apprehended themselves as a result of their parents' mental illness

and problematic substance use. Health and social service workers who provide care for women during pregnancy and CPS workers who are primarily invested in the welfare of the fetus should form truly collaborative relationships to enhance the wellbeing of pregnant and mothering women. With health care services focusing all their energy on protection of the fetus, women become merely vessels and it denies the relational necessity of mother and baby as a dyad. The emotional relationship between a woman and her fetus grows over time and the “mother-child unit deserves a set of rights that is more than the sum of the rights of the fetus and the woman” (Varcoe et al., 2002, p. 114). From this stance, caring for pregnant women who use substances, with a primary focus on envisioning the dyad as a single unit needing to remain unified before and after birth rather than protecting fetuses from their mothers, shifts the blame from the women alone to one where broad social and structural factors can be examined critically.

### **Delivery of Health and Social Services for Women Who Use Substances During Pregnancy**

Within the theme of needing safe passage, the women in this study endorsed a service delivery approach that was integrated, with all services under a single roof. When social and health services were in multiple locations across the city, women experienced challenges with transportation and childcare and diminished financial resources which left them needing to make choices around what services were critical to access for survival (food and shelter). Although the women prioritized ongoing prenatal care, there was little time, energy, or available resources for the women to focus on psychological issues and concerns around substance use. For women who did receive their services in a “one-stop shopping” model, they were able to receive prenatal care and education, social service support, warm meals,

access to diapers and baby supplies, and skill training around caring for a newborn. Women did have access to addiction counselors but most felt it was not safe to use this service given the abstinence model within the center and their experiences of watching other pregnant women being “turned in” to CPS when substance use was exposed. Some attachment-based interventions were available postnatally to women who were demonstrating difficulties in responding to their infant’s cues sensitively and appropriately, but professional trauma-related counseling was notably absent. Although there were limitations to the centralized services provided as noted above, the women who did access these services felt that most of their needs were met compared to women who received services at multiple agencies.

Having limited services was also identified by the health care providers as a significant issue and parallels the categories that emerged in the participant interviews with few resources available to serve this unique population of women. In working with the organizations to recruit for this study, it became clear that the services that were available to some women were fragmented and disconnected from one another. This observation was particularly evident for women who were involved in the judicial system. This finding of disconnected services is significant in that forged partnerships between multiple organizations would help support an infrastructure to allow the development of an integrated service model for delivery of care (Sword, Niccols, Yousefi-Nooraie, Dobbins, Lipman, & Smith, 2013). With several community organizations providing different aspects of care, a centralized model that pregnant and mothering women can access that addresses their physical and mental health needs including addiction counseling that is trauma-informed within a harm reduction model is critical. Pediatric health care as well as social service support must also be available. With health care workers who care for these marginalized women piecing together limited

resources that can quickly unravel, the potential of breaking the intergenerational cycle of trauma, abuse, and addictions is not possible.

The need for comprehensive care delivered by intersectoral and interdisciplinary teams for pregnant and mothering women is well supported in the literature (Greaves & Poole, 2007; Poole, 2000; Sword, Niccols, & Fan, 2004). The results of this study complement the findings in the literature with women wanting a wrap-around service model that was comprehensive to meet all their needs in one location. A review of the literature returned several key elements as necessary for optimal outcomes for pregnant and mothering women and their children. Below is a list of the elements that have shown to influence maternal–newborn health and wellness:

1. Care must be shifted from a sole emphasis on the fetus and child to a woman-centered and dyadic emphasis (Greaves & Poole, 2007);
2. Treatment and recovery must be provided with mothers and their children together in care (Sword, Jack, Niccols, Milligan, Henderson, & Thabane, 2009);
3. A harm-reduction approach must be the underlying philosophy of care (Centre for Addiction and Mental Health, 2002);
4. Comprehensive pre- and postnatal medical and nursing care must be provided (Poole, 2000); as well as comprehensive psychological, psychiatric, and counseling services (Ensink et al., 2014);
5. Assistance in accessing available social and financial supports must be provided (Health Canada, 2006); as well as nutrition counseling and support (Poole, 2000);
6. Programming must be grounded in growth-promoting relationships which are pivotal to women's experiences in healing (Leslie, 2007);

7. Support in developing/improving parenting skills and understanding of child development must be provided (Landy & Menna, 2006); as well as advocacy around housing and legal issues (Guarino & Bassuk, 2010);

8. Referrals and transportation if needed must be provided to ongoing community supports and other specialized services (Health Canada, 2006);

9. Integrated services must be provided across the spectrum of care from outreach, day treatment, residential, and acute care (Greaves & Poole, 2007);

10. Care must be provided in a nonjudgmental and genuine manner that is respectful and understanding of the social climate from where women's substance use arises (Greaves, Chabot, Jategaonkar, McCullough, & Poole, 2006);

11. Programming must include culturally sensitive and competent care (Health Canada, 2006).

The need for evidence-based program models to be available for pregnant and mothering women and their children is critical for optimal outcomes. Several successful models in Canada that have embraced these elements, including the Sheway Project in Vancouver, British Columbia and Breaking the Cycle in Toronto, Ontario, have demonstrated positive outcomes including a substantial increase in women accessing prenatal care, improvements in nutritional status, reduction in low birth weight babies, decreases in substance misuse, improvements in housing stability, substantial reduction in child apprehension rates, and increased rates of babies with up-to-date immunizations (Poole, 2000). Nursing voices should be at the forefront to lobby for these services to be available and accessible to women and children across Canada.

## Maternal–Fetal Attachment in Women Who Use Substances

The final category titled ‘mothering against all odds’ captured the tremendous resiliency and hope that the women participants had for themselves and their babies despite limited social support, financial resources, challenges associated with addictions and mental illness, previous trauma, and unstable housing. There was an emotional shift in how they viewed their babies and mothering between the first interview and the second interview for the nine participants who completed both. The women were highly protective of their fetuses and many spoke of an intense love that continued to grow. Their attachment to their fetuses increased over time as they waited in anticipation to meet their babies. This finding of increased attachment as gestational age increases and fetal movements are noted is well documented in the literature (Alhusen, 2008; Cannella, 2005; Kropp et al., 2010). For all the women in this study, visualizing their fetuses through ultrasound technology and being made aware of the baby’s sex were pivotal moments that seemed to solidify and enhance their attachment. Ultrasound technology made the baby real and a separate other. The finding around the use of ultrasound technology as a tool to enhance MFA is consistent with the literature (Alhusen, 2008; de Jong-Pleij et al., 2013; Yarcheski et al., 2009). Results from the ultrasound also helped reduce anxiety and gave many of the women peace of mind that the baby was developing “normally” or at least that there were no obvious abnormalities evident despite exposure to substances.

The finding in this study of ‘baby as bridge’ under the main theme of *Mothering against all odds* was unexpected given the neglect, trauma, and abuse that many of these women experienced in their relationships with their own mothers. ‘Baby as bridge’ seemed to develop as a parallel process to increasing MFA over time for several of the participants

who had contact with their mothers. Relationships with their own mothers remained tentative with the participants retaining emotional distance from their mothers, but the need to feel accepted and cared for by their mothers was deeply rooted within. The pregnancy seemed to provide a safe distance between the women and their mothers with the focus on the baby rather than past or ongoing relationship issues. The women remained cautiously optimistic about the future with their mothers. The concern that emerges is whether the women would experience emotional dysregulation as a result of re-engagement or increased engagement with their mothers who are the “uninvited ghosts in the nursery.” This has clinical relevance as exposure to others who were the source of painful memories may significantly disrupt a woman’s attachment to her baby with unresolved trauma being activated in the late prenatal and early postnatal periods (Fonagy et al., 1991).

The health care providers who participated in this study believed that many of these women do attach to their fetuses and make efforts to engage in harm reduction practices for the health of the baby. For some women, detaching themselves from their fetuses provided protection from a potential future loss of the child especially when previous pregnancies had resulted in an apprehension. These findings mirror the results of the 2006 study by Shieh and Kravitz who also found that women who used illegal substances during pregnancy attached to their fetuses and engaged in harm reduction practices to reduce risk to their fetuses. In their 2002 study, they also found differences between women who had experienced the loss of a child (or multiple children) as a result of their drug use and either employed defense mechanisms to detach from their fetuses as a safeguard or worked harder to try and avoid apprehension with the current pregnancy (Shieh & Kravitz, 2002). The health care workers in the current study spoke about providing safe, supportive, and compassionate care and

worked collaboratively with the women to help meet their nutritional needs and to reduce the risk of harm to their fetuses. These fundamental values are necessary when working with vulnerable women but in the context of limited resources and no centralized service to follow these women throughout the perinatal period, the chance to make a substantial difference for these women and their future babies was severely limited.

### **Strengths and Limitations of the Study**

As with all research, there are limitations that must be identified. One of the inherent characteristics of qualitative research is that the findings are based on subjective data and reflect the personal experiences of both the participants and the researcher. Therefore, caution must be used around generalizing the findings beyond the present participant sample to other settings.

Within this study, several strategies were used to increase the trustworthiness of the results including my ongoing reflexivity, returning the findings to the participants to ensure that their story was an authentic representation of their experience, and ongoing engagement with my thesis supervisor for the project and with thesis committee members. The interviews with health care providers who work with this population also served as a means of checking on the themes and the study's overall understanding of women's experiences.

A second limitation of this study was the use of a convenience sample. Women who participated in the interviews were already engaged with health care providers and services suggesting that they had an established attachment with their fetuses by virtue of accessing these resources. Regardless, given that the findings suggest that engagement with health care providers and efforts to reduce risk to their babies is only one part of the equation in terms of

attachment and that the influence of trauma on MFA may be a more important predictor of future outcomes, the results have important implications for practice and research. A final limitation of the study was that most of the women were receiving services at the same agency, which reduced the diversity of the sample. It should be acknowledged, however, that recruitment of marginalized populations is challenging especially when the fear of disclosure of substance use practices to a researcher is perceived to be potentially threatening to pregnant women who have legitimate concerns related to CPS becoming involved.

There are some important strengths of this study worth mentioning. First, my experience as a mental health nurse and the interview style used were important contributing factors to ensuring the results were rich and captured the essence of the women's experience. Second, the use of two interviews in this hard-to-reach population is an important strength of this study in furthering our understanding of how MFA develops in this population of women over time. At present, we are not aware of any other study in the literature that has captured women's experience at two points during the prenatal or early postnatal period. The focus of most studies related to MFA has been on a single point in time during pregnancy. Lastly, the women in this study were interviewed and were not required to complete written measures so that participants with a low level of literacy were not excluded from the sample. Collectively, these strengths have contributed to improving our understanding of how women who use substances develop MFA in several important ways.

### **Implications for Nursing Practice**

The implications for nursing practice around caring for women during the prenatal period who struggle with substances, previous trauma, mental illness, and challenging social

circumstances require that we shift our care from one that is deeply entrenched in moralistic evaluations of women to one that acknowledges the social inequities that have been shown to have equal or greater influence on the health and wellbeing of women and children (Wright & Walker, 2007). For improved birth outcomes, engagement with these women by health care providers, and nurses in particular, requires a nonjudgmental and compassionate approach that removes the blame from the individual woman to allow for safety when accessing health care. Pregnancy offers a powerful “window of opportunity” for health care providers to nurture the internal motivation that many women experience to provide care and safety to their fetuses (Boyd & Marcellus, 2007). Results from this study support this assertion with women actively making efforts to reduce their substance use and the opportunity to capitalize on this requires that specialized services that support the unique needs of this population be accessible for pregnant and mothering women. Further, it is also important to note that providing women with health information around healthy behaviours alone does not equal an uptake in these behaviours. A 2014 study by Reszel et al. found that, although pregnant women received health information and were aware of the risks associated with substance use and the importance of nutrition and exercise, emotional support was the single greatest factor in determining whether women felt they could make health behaviour changes. This has important implications for practice in that nursing has focused heavily on providing health education for women during pregnancy. The need to ensure that women are provided with the necessary emotional support to meet their health needs requires that we shift our practice to this patient-centered approach.

The current hierarchical structures in health care settings promote the exclusion of these women who require intensive support throughout the perinatal period. Care must be holistic,

women-centered, and trauma-focused so that women can build safe, trusting, and empowering relationships as they transition into their roles as mothers. Health care providers can have a powerfully positive or negative impact and can contribute to health outcomes in a profound way. Practitioners need to acknowledge how their own beliefs influence the care that they provide and how they may contribute to the continued stigmatization of women who use substances during pregnancy. There remains an unspoken “them” and “us” mentality in health care that perpetuates the “good” mother–“bad” mother dichotomy (Mason et al., 2001). Attention to these biases is needed at both the individual clinician and systems level for these stigmatizing practices to change in order that the health and social care needs are met.

### **Implications for Future Research**

Our understanding of how MFA develops continues to build, but several questions remain that require further research and inquiry. Further study is needed around how childhood trauma experiences influence MFA. With the recent development of new and promising measures that focus on the impact of the “ghosts in the nursery” as a predictor of behaviours and attitudes of women toward their fetuses during the prenatal period and postnatally, continued efforts to understand the relationship between RF and trauma are needed. Ongoing research to support the reliability and validity of tools measuring RF is important to ensure they provide clinically relevant information to direct intervention studies. From this, research that addresses the specialized needs of pregnant women related to childhood neglect and abuse must be a priority in order that the intergenerational cycle of substance abuse and trauma is broken.

As an extension of any efforts related to reducing the intergenerational cycle of

substance abuse and trauma, additional research around supporting healthy relationships between significant others who may have contributed to a woman's trauma history is needed. The finding from this study that pregnancy may offer an opportunity to "build bridges" between generations and has the potential to heal or cause additional distress is noteworthy and should be explored further.

Given that ultrasound technology has such a powerful influence on the development of MFA by allowing women to visualize the fetus as a separate other, the need for intervention studies that look at how this technology can be used earlier in the gestational period to influence health behaviours is an important direction for future research. Studies that look at the potential impact of ultrasounds at regular intervals earlier in pregnancy before fetal movement may influence women's decisions around integrating positive health practices earlier in pregnancy.

### **Implications for Nursing Education**

Nursing education related to maternal–newborn care remains heavily focused on the physical wellbeing of women and their babies throughout the perinatal period. The emphasis on the developmental course of pregnancy and efforts to reduce risk through increased screening and surveillance has medicalized pregnancy, labour, and delivery. This has resulted in nursing curriculum being concentrated around the medical care of women with little attention around the emotional care of women during this significant period of psychological transition. The unique care needs of women with mental illness, addictions, and a history of trauma are only superficially addressed and often within the context of how these issues may impact fetal and newborn physical wellbeing. Undergraduate maternity education must also inform the next generation of nurses that mental illness and addictions

are not just a remote possibility for women during pregnancy and in the postnatal period but that screening for these issues are as important as management of a woman's physical health. Our discomfort and lack of understanding of these issues can have serious implications for women, children, and families.

It is also imperative that nursing education is couched within a social justice framework that acknowledges the complex social factors that impact maternal–newborn health. Without a good understanding of the influence of poverty, housing, and food instability on health, the focus on blaming women for their “risky” behaviours during pregnancy in nursing will continue to contribute to a culture that is punitive rather than compassionate and supportive of all women regardless of circumstance.

Lastly, harm reduction as an option for women who use substances during pregnancy must be considered. Nursing education must include harm reduction as an important part of the continuum of care in reducing risk and improving health. Removing judgment around substance use and supporting women to reduce risk rather than accepting an ideal of abstinence will help avoid forcing women's substance use during pregnancy underground. Nursing can lead to improved maternal–newborn health care by ensuring nursing education supports a philosophical stance of harm reduction within a social justice framework.

## **Conclusion**

MFA in women who use substances during pregnancy is an important determinant of future maternal–infant attachment. The findings from this research have provided support indicating that these women experience attachment to their fetuses over time and are motivated to engage in harm reduction efforts to reduce deleterious consequences for their

babies. Of significance, however, is the complex and interwoven nature of childhood trauma and the systemic socioeconomic and cultural variables outside the control of these women that must be urgently addressed for sustainable and appreciable improvement in maternal and child outcomes. Nurses can contribute to maternal–child health in important ways through advocacy, and further integration of evidence into our practice, education, and research. Pregnancy is a time of renewal and hope for women with complex social histories, and nurses have an opportunity to influence the health and wellbeing of these dyads well beyond the current generation. Our understanding of how these women experience pregnancy and decision about health behaviours has been enriched and the barriers and enablers that influence their choices elucidated through this work. This contributes to the growing body of evidence around how best to support and care for these mothers and their babies.

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## Appendix A: University Ethics Approval

### Ethics Approval Notice Social Science and Humanities REB

#### Principal Investigator / Supervisor / Co-investigator(s) / Student(s)

| <u>First Name</u> | <u>Last Name</u> | <u>Affiliation</u>                  | <u>Role</u>        |
|-------------------|------------------|-------------------------------------|--------------------|
| Wendy             | Peterson         | Health Sciences / School of Nursing | Supervisor         |
| Michelle          | Foulkes          | Health Sciences / School of Nursing | Student Researcher |

**File Number:** H05-11-04

Type of Project: PhD Thesis

**Title:** Development of the Maternal-Fetal Relationship in Women who are Substance-involved

| Approval Date (mm/dd/yyyy) | Expiry Date (mm/dd/yyyy) | Approval Type |
|----------------------------|--------------------------|---------------|
| 06/08/2011                 | 06/07/2012               | Ia            |

**(Ia: Approval, Ib: Approval for initial stage only)**

Special Conditions / Comments:

Recruitment may begin at the following locations:

XXXXXX  
XXXXXX  
XXXXXX  
XXXXXX  
XXXXXX

Other recruitment locations will be added to this ethics approval notice once letters of permission from these same organisations are submitted to the Office of Research Ethics and Integrity

Signature:

Protocol Officer for Ethics in Research  
Chair of the Health Sciences and Sciences REB

## **Appendix B: Letter of Support from Community Site One**

April 12, 2011

Dear Members of the Research Ethics Committee:

RE: Development of the maternal-fetal relationship in women who are substance involved; understanding the influence of intersecting variables on prenatal attachment and health behaviours.

On behalf of XXXXX, it is my pleasure to provide a letter of support for the above research project. I have discussed the research project with the Principal Investigator, Michelle Foulkes, and her Thesis Supervisor, Dr. Wendy Peterson and we enthusiastically support this endeavour. As Coordinator at XXXXX, we are happy to collaborate with Michelle Foulkes to bring this project to fruition and support recruitment to the study given that we provide services to pregnant women in order to reduce the deleterious effects of substances to both the mother and her developing baby.

We look forward to the results of this research project. We are eager to learn how women who use substances during pregnancy can best be served by hearing how we may be able to help them reduce their substance use and journey through pregnancy. We also support the knowledge transfer activities related to this project to ensure the findings reach the broader community working with these women.

Sincerely,

Coordinator

## Appendix C: Letter of Support for Community Site Two

April 12, 2011

Office of Research Ethics and Integrity  
University of Ottawa, Tabaret Hall  
550 Cumberland St., Room 159  
Ottawa, ON K1N 6N5  
[ethics@uottawa.ca](mailto:ethics@uottawa.ca)

**RE: Development of the maternal-fetal relationship in women who are  
substance involved: Understanding the influence of intersecting variables  
on prenatal attachment and health behaviours**

Dear Members of the Research Ethics Committee:

As the Director of Primary Health Care at Somerset West Community Health Centre, I am pleased to offer support to the research project with the above title. As a Family Physician who is actively involved in obstetrics, I am well aware of the impact of substance abuse during pregnancy and its deleterious effects on the unborn child. Such research investigating the impact of interventions would be very beneficial to our clientele.

Seeing as we actively follow hundreds of women annually during their pregnancy, we are very pleased to assist with the recruitment for this study and trust that the findings are disseminated widely. We appreciate the efforts of both Michelle Foulkes and Dr. Wendy Peterson in improving access to services for these marginalized clients in our community.

Sincerely,

**Appendix D: Letter of Support from Community Site Three**

May 3<sup>rd</sup>, 2011

**Office of Research Ethics and Integrity**  
Tabaret Hall  
Room 159 - 550 Cumberland Street  
OTTAWA ON K1N 6N5  
[ethics@uottawa.ca](mailto:ethics@uottawa.ca)

**RE: Development of the maternal-fetal relationship in women who are substance involved: Understanding the influence of intersecting variables on prenatal attachment and health behaviours**

Dear Members of the Research Ethics Committee;

It is with pleasure that the Centretown Community Health Centre of Ottawa, Ontario offer our support to the research project entitled "Development of the maternal-fetal relationship in women who are substance involved: Understanding the influence of intersecting variables on prenatal attachment and health behaviours". As Director of Primary Care at Centretown Community Health Centre, I have met with Michelle Foulkes as the Principal Investigator of the project and communicated with her thesis supervisor, Dr. Wendy Peterson and are eager to support this research given that we deliver care to women who use substances during pregnancy. We are pleased that this important issue is being looked at in our community and hope that the findings may help us in our program development for this unique population.

We are not only eager to help with recruitment but also support the dissemination of any findings that may come out of this important research. We look forward to working with both Michelle and Dr. Peterson given their commitment to improving the services for the population of marginalized women.

Sincerely,

**Appendix E: Letter of Support from Community Site Four**

March 1<sup>st</sup>, 2010

**Office of Research Ethics and Integrity**

Tabaret Hall

550 Cumberland St

Room 159

Ottawa, ON, Canada

K1N 6N5

[ethics@uottawa.ca](mailto:ethics@uottawa.ca)

**RE: Development of the maternal-fetal relationship in women who are substance involved: Understanding the influence of intersecting variables on prenatal attachment**

Dear Members of the Research Ethics Committee;

XXXXX. provides service to some of our hardest to reach and homeless members of our community. Many of the women we serve who are pregnant also have significant mental health and substance-use disorders. Therefore, we are very pleased to support the above research project as it is an important issue that needs attention in our community. After meeting with Michelle Foulkes, Principal Investigator for this study and her thesis supervisor, Dr. Wendy Peterson, we are confident in supporting this research project and are happy to facilitate recruitment to this study where possible.

In collaborating on this project, we look forward to any results that may come from this research. We are hopeful that this may inform our practice and future program development. We are also pleased to be participating in a project that has been endorsed by many of our community health partners.

Sincerely,

## Appendix F: Letter of Support from Community Site Five

October 6, 2011

Office of Research Ethics and Integrity  
Tabaret Hall  
550 Cumberland St., Room 159  
Ottawa, Ontario K1N 6N5

Dear Members of the Research Ethics Committee:

**RE: *Development of the maternal-fetal relationship in women who are substance involved; understanding the influence of intersecting variables on prenatal attachment and health behaviours.***

On behalf of St. Mary's Home, it is my pleasure to provide this letter of support for the above research project. I have discussed the research project with the Principal Investigator, Michelle Foulkes, and our Leadership Team. We enthusiastically support this study. St. Mary's Home is happy to collaborate with Michelle Foulkes to bring this project to fruition and support recruitment to the study. St. Mary's Home is focused on comprehensive services to pregnant and parenting youth across Ottawa. Many of our youth experience issues related to substance use. Of primary concern, of course, is the effect of substance use to both the mother and her baby developing in utero.

We look forward to the results of this research project. We are eager to learn if there are even more effective ways to provide service to our client population. Surely, we continue to work with our Addiction Service counterparts to support our youth in reducing and stopping substance use. We also support the knowledge transfer activities related to this project to ensure the findings reach the broader community working with these women.

**Appendix G: Recruitment Poster for Community Site One**

# ARE YOU PREGNANT?



I am doing a study looking at how women who use substances such as alcohol or drugs develop a relationship with their baby while pregnant

- Are you more than 12 weeks pregnant?
- Are you currently receiving services with XXXXX for your substance use?

If you are interested in being interviewed for this study, please speak with your counselor at XXXXX, contact Michelle Foulkes, Primary Researcher for the study at XXXXXXXX

This study is affiliated with the University of Ottawa

**Appendix H: Recruitment Poster for Community Sites Two, Three, and Four**

# ARE YOU PREGNANT?



I am doing a study looking at how women who use substances such as alcohol or drugs develop a relationship with their baby while pregnant

- Are you more than 12 weeks pregnant?
- Are you currently receiving services at XXXX to help you with your substance use?

If you are interested in being a part of this study and are willing to be interviewed, please speak with your nurse or doctor at the community health centre or Michelle Foulkes, Primary Researcher for the study at XXXXXXXX

This study is affiliated with the University of Ottawa

## Appendix I: Recruitment Poster for Community Site 5

# ARE YOU PREGNANT?



I am doing a study looking at how women who use substances such as alcohol or drugs develop a relationship with their baby while pregnant

- Are you more than 12 weeks pregnant?
- Are you currently receiving services through XXXXX to help you with your substance use?

If you are interested in being a part of this study and are willing to be interviewed, please speak with your counselor or Michelle Foulkes, Primary Researcher for the study at XXXXX

This study is affiliated with the University of Ottawa

## Appendix J: Information Letter for Site One Participants

Dear Interested Study Participant,

I am a registered nurse and a graduate student at the School of Nursing, University of Ottawa. I am doing a study with women who are pregnant and use substances such as alcohol and/or drugs. The results of this study will help improve the support for pregnant women who are use substances. You may be part of this study if you:

- are more than 12 weeks pregnant;
- have used drugs or alcohol during your pregnancy; and
- are receiving supportive services from XXXXX for your substance use and/or health care.

If you agree to be in this study:

- I will interview you twice.
- The interviews will be done at XXXXX
- During the interviews, I will ask you questions about your experience of being pregnant, how you feel about your baby, and how you think different life experiences may impact your relationship with your baby.
- Each interview will last about one hour and will be tape-recorded
- You can refuse to be tape recorded or to answer any question during the interview.

Your name will not be attached to the tapes or any papers that may result from this study. If you are interested in participating please:

- Let your counsellor at XXXXX know that it is OK for me to telephone you to tell you more about the study;

OR

- Phone me directly. Michelle Foulkes at XXXXX

Thank you for taking the time to think about being a part of this study.

Sincerely,

Michelle Foulkes, RN

Contact at the University of Ottawa: Wendy Peterson, RN Email: [wendy.peterson@uottawa.ca](mailto:wendy.peterson@uottawa.ca)

Phone: (613) 562-5800 Ext. 8207

## Appendix K: Information Letter for Sites Two, Three and Four for Participants

Dear Interested Study Participant,

I am a registered nurse and a graduate student at the School of Nursing, University of Ottawa. I am doing a study with women who are pregnant and use substances such as alcohol and/or drugs. The results of this study will help improve the support for pregnant women who are use substances. You may be part of this study if you:

- are more than 12 weeks pregnant;
- have used drugs or alcohol during your pregnancy; and
- are receiving supportive services **at XXXXX** for your substance use and/or health care.

If you agree to be in this study:

- I will interview you twice.
- During the interviews, I will ask you questions about your experience of being pregnant, how you feel about your baby, and how you think different life experiences may impact your relationship with your baby.
- Each interview will last about one hour and will be tape-recorded
- You can refuse to be tape recorded or to answer any question during the interview.

Your name will not be attached to the tapes or any papers that may result from this study. If you are interested in participating please:

- Let your nurse, doctor or counsellor know that it is OK for me to telephone you to tell you more about the study;

OR

- Phone me directly. Michelle Foulkes at XXXXX

Thank you for taking the time to think about being a part of this study.

Sincerely,

Michelle Foulkes, RN

Contact at the University of Ottawa: Wendy Peterson, RN, Email:

[wendy.peterson@uottawa.ca](mailto:wendy.peterson@uottawa.ca) Phone: (613) 562-5800 Ext. 8207

### **Appendix L: Information letter for Site 5 Participants**

Dear Interested Study Participant,

I am a registered nurse and a graduate student at the School of Nursing, University of Ottawa. I am doing a study with women who are pregnant and use substances such as alcohol and/or drugs. The results of this study will help improve the support for pregnant women who are use substances. You may be part of this study if you:

- are more than 12 weeks pregnant;
- have used drugs or alcohol during your pregnancy; and are receiving supportive services at XXXXX

If you agree to be in this study:

- I will interview you twice.
- During the interviews, I will ask you questions about your experience of being pregnant, how you feel about your baby, and how you think different life experiences may impact your relationship with your baby.
- Each interview will last about one hour and will be tape-recorded
- You can refuse to be tape recorded or to answer any question during the interview.

Your name will not be attached to the tapes or any papers that may result from this study. If you are interested in participating please:

- Let your nurse or counsellor at XXXXX know that it is OK for me to telephone you to tell you more about the study;

OR

- Phone me directly. Michelle Foulkes at XXXXX

Thank you for taking the time to think about being a part of this study.

Sincerely,

Michelle Foulkes, RN

Contact at the University of Ottawa: Wendy Peterson, RN Email: [wendy.peterson@uottawa.ca](mailto:wendy.peterson@uottawa.ca)

Phone: (613) 562-5800 Ext. 8207



**Université d'Ottawa**

Faculté des sciences  
De la santé  
École des sciences  
infirmières

**Appendix M: Women Participant Consent Forms**

**Name of the study:** Development of the maternal-fetal relationship in women who use substances

**Researcher:** Michelle Foulkes, RN, MScN

**University of Ottawa**

Faculty of Health  
Sciences  
School of Nursing

**Contact at the University of Ottawa:** Wendy Peterson, RN, PhD, School of Nursing,

**Phone:** (613) 562-5800 Ext. 8207 **Email :** [wendy.peterson@uottawa.ca](mailto:wendy.peterson@uottawa.ca)

**I am being invited to participate in an interview for this study because:**

- I am more than 12 weeks pregnant
- I am currently receiving services at a community health provider to help me with my substance use and/or health issues related to my pregnancy

**The purpose of this study** is to explore how a woman develops a relationship with her baby when pregnant and using substances such as alcohol and/or drugs. We are interested in finding out what things women may have found were helpful or difficult while developing a relationship with babies.

**My participation in this study will mean that:**

- I will be interviewed once by the researcher (Michelle Foulkes, RN)
- Each interview will take about 1 hour.
- During the interviews, I will be asked to talk about:
  - My experience of being pregnant and how I feel about my baby
  - My experience of being pregnant and using substances
  - My experience with receiving services around my substance use
  - My opinion about how we can better help women who are pregnant and use substances
- The interviews will take place at a community health centre where I am receiving health or social/counselling services
  - The interview will be audio-recorded and transcribed into written documents for research purposes

613-562-5800 ext: 7671  
613-562-5443

451 Smyth  
Ottawa ON K1H 8M5

[www.uOttawa.ca](http://www.uOttawa.ca)

- I may be contacted by telephone or email by Michelle Foulkes up to one year following my interview and invited to comment or help clarify the findings of this study.

**Risks:**

- I understand that by participating in this study I will be asked to give some personal information. I may feel uncomfortable or upset when talking about my experiences. If this happens, the interviewer will help organize extra support for me with my counsellor where I receive services to talk about my feelings. I understand that I can decline to answer any question(s).

**Benefits:**

- I may benefit from having an open discussion about the relationship I have with my baby during pregnancy while using substances. Another benefit is that the results from the study may help women in the future who are pregnant and living with substance use so that we can develop better services for women and their babies.

**Confidentiality:**

- I understand that the information that I share will be kept confidential
- My name will not be written on the transcripts of the interview. Instead, the researchers will use a number to identify the transcript.
- I understand that the interviewers are obliged by law to report serious concerns about the safety of a child. In this situation confidentiality cannot be maintained.
- I understand that if I am feeling unsafe that the interviewers will need to speak with my counselor to ensure I get appropriate help and therefore confidentiality cannot be maintained.
- I understand that the contents of the interviews will be used only to increase our understanding of how women who use substances develop a relationship with their babies during pregnancy.

**Anonymity:**

- Reports of this study may include quotes of what I have said. However, the researchers will use a fake name instead of my real name in any reports or presentations about this study.
- The interviewer will not tell staff where I receive my health or substance use services if I have agreed or declined to participate in this study unless it is necessary that additional support for me needs to be arranged.

**Conservation of data:** The data collected (both electronically and paper copies) will be kept in a secure manner. Data will be stored in a locked office at the University of Ottawa. The information (recordings, transcripts, and electronic files) will be kept for 5 years and then destroyed.

**Compensation:** After the interview, the interviewer will give me a \$50 (fifty-dollar) gift card as a thank-you for my time. After the second interview, I will receive a second \$50 (fifty-dollar) gift card as a thank-you for my time.

**Voluntary Participation:** I am under no obligation to participate and if I choose to participate, I can withdraw from the study at any time and/or refuse to answer any questions, without suffering any negative consequence. If I choose to withdraw, all data gathered until the time of withdrawal will be managed according to my wishes. If I choose to have the information I have provided up until the time of withdrawal included in the study findings, it will be treated with the same confidentiality as all other data. If I choose to withdraw from the study entirely, all data from my interviews will be destroyed.

**Acceptance:** I, \_\_\_\_\_ agree to participate in the above research study conducted by Michelle Foulkes of the School of Nursing, Faculty of Health Sciences, under the supervision of Wendy Peterson.

If I have any questions about the study, I may contact the researcher or her supervisor.

If I have any questions regarding the ethical conduct of this study, I may contact the Protocol Officer for Ethics in Research, University of Ottawa, Tabaret Hall, 550 Cumberland Street, Room 154, Ottawa, ON K1N 6N5

Tel.: (613) 562-5387

Email: ethics@uottawa.ca

There are two copies of this three page consent form, one of which is mine to keep.

Participant's name (printed) \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Researcher's name (printed) \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

### Appendix N: Demographic Information

| DEMOGRAPHIC VARIABLE  | RESPONSE   |
|---|--|
| STUDY CODE: _____   |  |
| DO YOU SELF-IDENTIFY AS FIRT NATIONS, INUIT OR ME'TIS                                 | <input type="checkbox"/> Yes <input type="checkbox"/> No<br>If yes<br><input type="checkbox"/> First Nations <input type="checkbox"/> Inuit<br><input type="checkbox"/> Métis  |
| MATERNAL AGE  |  |
| MARITAL/PARTNER STATUS  | <input type="checkbox"/> SINGLE (WITHOUT PARTNER SUPPORT)<br><input type="checkbox"/> SINGLE (WITH PARTNER SUPPORT)<br><input type="checkbox"/> MARRIED  |
| FIRST LANGUAGE  | <input type="checkbox"/> ENGLISH <input type="checkbox"/><br>FRENCH _____<br><input type="checkbox"/> OTHER <input type="checkbox"/><br>SPECIFY _____  |
| HIGHEST LEVEL OF EDUCATION COMPLETED  | <input type="checkbox"/> Elementary School <input type="checkbox"/><br>Some High School <input type="checkbox"/> High School<br><input type="checkbox"/> Some College or University <input type="checkbox"/> College or University |
| CURRENT EMPLOYMENT STATUS   | <input type="checkbox"/> EMPLOYED (including on maternity leave)<br><input type="checkbox"/> NOT EMPLOYED  |
| NUMBER OF WEEKS PREGNANT AT TIME OF THE INTERVIEW                                     | Current gestational age in weeks _____   |
| TOTAL NUMBER OF PREGNANCIES   |  |
| TOTAL NUMBER OF CHILDREN YOU HAVE GIVEN BIRTH TO                                      |  |
| HOW MANY CHILDREN LIVE AT HOME WITH YOU?  |  |
| IS THE CHILDREN'S AID SOCIETY (CAS) CURRENTLY INVOLVED WITH YOU DURING THIS PREGNANCY | <input type="checkbox"/> YES <input type="checkbox"/> NO   |

|  |   |
|--|---|
| HAS CAS BEEN INVOLVED IN ANY PREVIOUS PREGNANCIES OR WITH ANY OF YOUR CHILDREN?    | <input type="checkbox"/> YES <input type="checkbox"/> NO  |
| WAS CAS INVOLVED WHEN YOU WERE A CHILD?  | <input type="checkbox"/> YES <input type="checkbox"/> NO  |
| WHICH SUBSTANCES HAVE YOU USED AT ANY TIME DURING YOUR PREGNANCY?<br>_____         | <input type="checkbox"/> Tobacco <input type="checkbox"/> Alcohol <input type="checkbox"/> Prescription Drugs (not prescribed by a physician) <input type="checkbox"/> Marijuana <input type="checkbox"/> Other Street Drugs (please list the names of primary substances used) |
| WHICH SUBSTANCES ARE YOU CONTINUING TO USE DURING YOUR PREGNANCY?<br>_____         | <input type="checkbox"/> Tobacco <input type="checkbox"/> Alcohol <input type="checkbox"/> Prescription Drugs (not prescribed by a physician) <input type="checkbox"/> Marijuana <input type="checkbox"/> Other Street Drugs (please list the names of primary substances used) |
| HOW MANY WEEKS PREGNANT WERE YOU WHEN YOU FIRST RECEIVED PRENATAL CARE?            |   |
| WHAT KINDS OF PROGRAMS ARE YOU CURRENTLY INVOLVED IN TO REDUCE YOUR SUBSTANCE USE? | <input type="checkbox"/> Individual Counselling only<br><input type="checkbox"/> Day Treatment Program<br><input type="checkbox"/> Residential Treatment Program <input type="checkbox"/> Alcoholics anonymous<br><input type="checkbox"/> Narcotics anonymous                  |

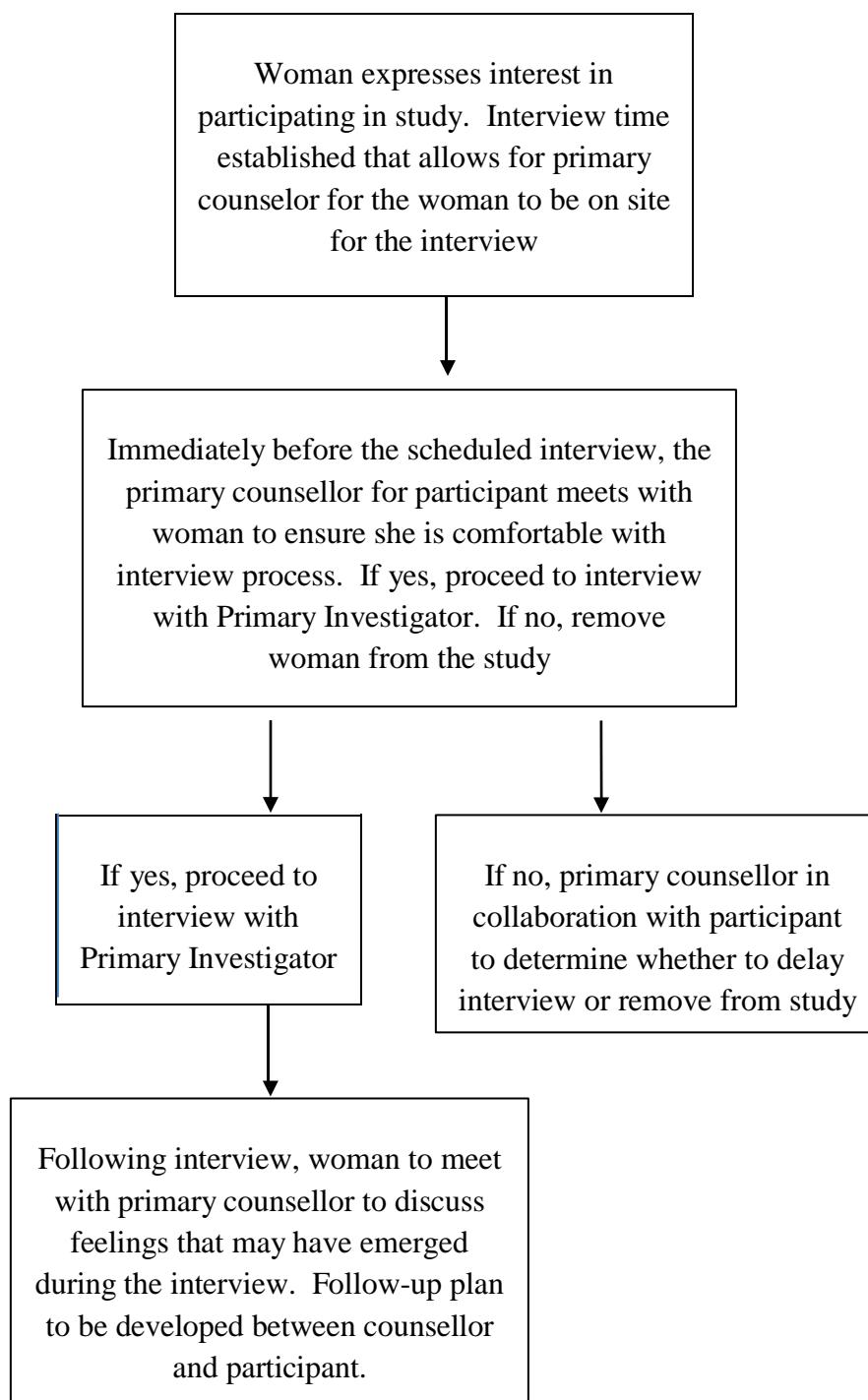
## **Appendix O: Women Participant Interview Guide**

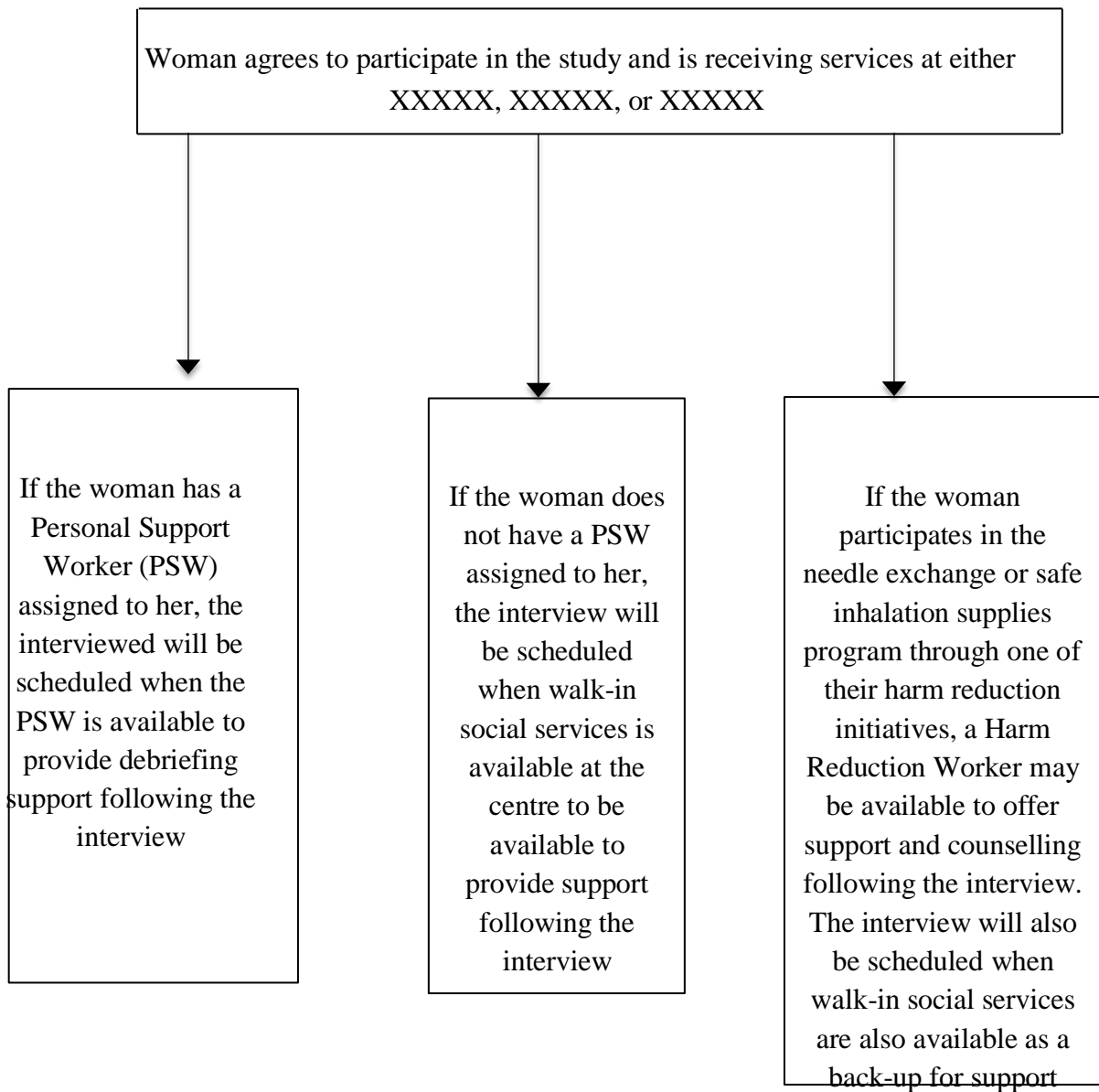
Objective #1: To identify factors that influence the process of prenatal attachment for women who use substances during pregnancy in developing a relationship with their unborn babies and their internal representations of their fetuses and themselves as mothers-to-be.

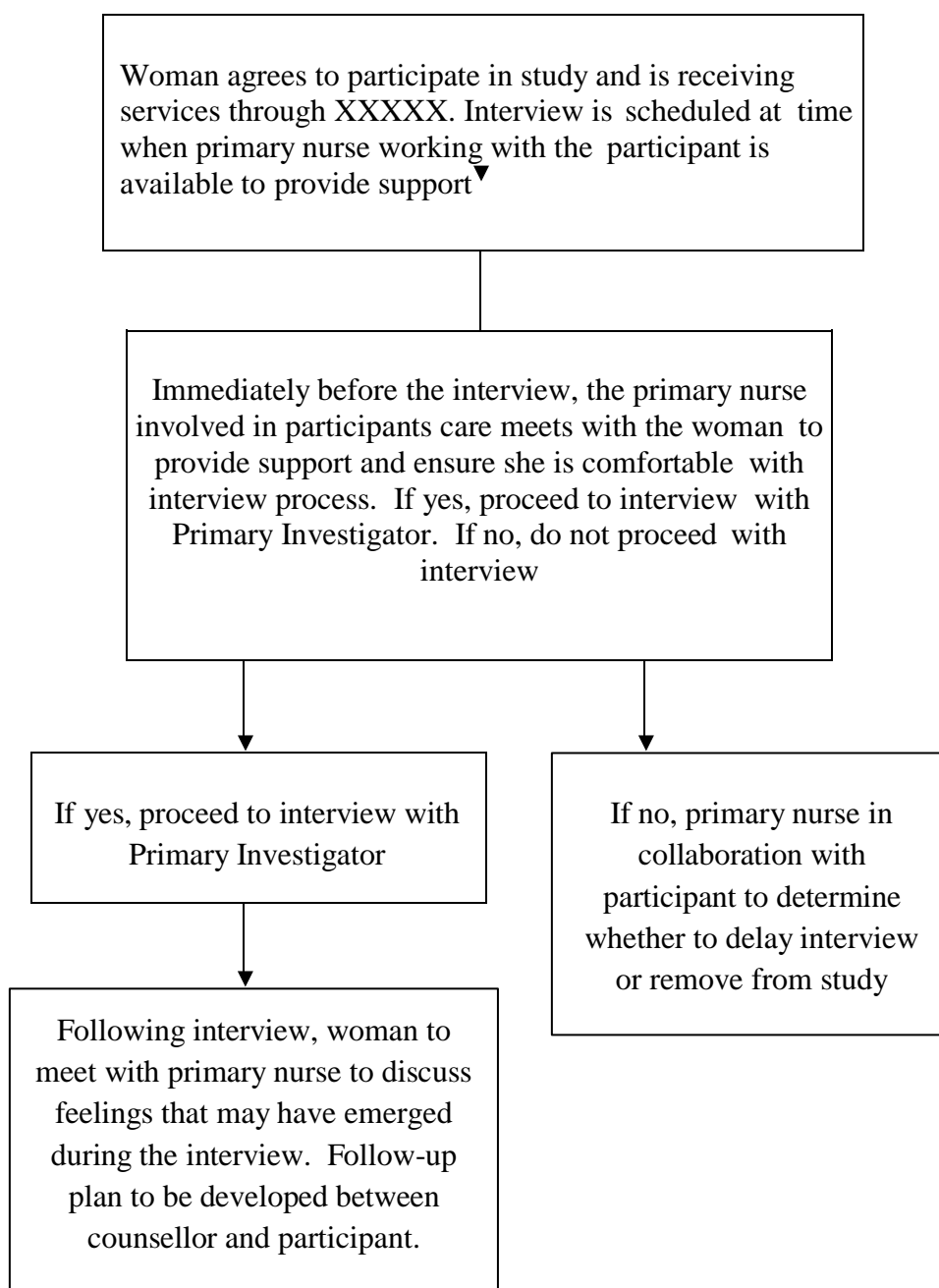
1. Can you tell me about your pregnancy?
1. What does being a mother mean to you?
2. How do you imagine your baby?
3. How do you remember your own relationship with your mother?
4. What was your childhood like?
5. If you had a magic wand, how would your childhood be different?

Objective #2: To explore the perceived supportive factors (both internal and external) which may enhance RF and encourage women to engage in harm reduction behaviours to improve the physical, psychological and social outcomes for themselves and their infants.

6. What is it like having a baby inside you?
7. What does your relationship to your baby feel like?
8. Are there things about your baby that make you angry?
9. Are there things about your baby that make you happy?
10. What things have made being pregnant easier?
11. Are there things that have made your pregnancy more difficult?
12. Has being pregnant changed your substance use habits?
13. What would it look like if you were to describe the most helpful environment to be pregnant and managing your addiction?
14. How have those around you been helpful in managing your substance-use?
15. What things have made managing your substance-use while pregnant the most difficult?

**Appendix P: Plan of Support for Women Recruited Through Community Site One**

**Appendix Q: Plan for Women Participants at Community Sites Two, Three and Four**

**Appendix R: Plan for Women Recruited Through Community Site Five**



**Université d’Ottawa**

Faculté des sciences  
De la santé  
École des sciences  
infirmières

**Appendix S: Service Providers Consent Form**

**Name of the study:** Development of the maternal-fetal relationship in women who use substances

**Researcher:** Michelle Foulkes, RN, MScN

**University of Ottawa**

Faculty of Health  
Sciences  
School of Nursing

**Contact at the University of Ottawa:** Wendy Peterson, RN, PhD, School of Nursing,

**Phone:** (613) 562-5800 Ext. 8207 **Email :** [wendy.peterson@uottawa.ca](mailto:wendy.peterson@uottawa.ca)

**I am being invited to participate in an interview for this study because:**

- I provide health and/or social support services to women who use substances during pregnancy

**The purpose of this study** is to explore how a woman develops a relationship with her baby when pregnant and using substances such as alcohol and/or drugs. We are interested in finding out what things women may have found were helpful or difficult while developing a relationship with babies.

**My participation in this study will mean that:**

- I will be interviewed once by the researcher (Michelle Foulkes, RN)
- Each interview will take about 1 hour.
- During the interviews, I will be asked to talk about:
  - My experience of working with women who use substances during pregnancy
  - My experience of what gaps or barriers in services to support women who use substances during pregnancy may exist in the community where I work
  - My experience with services or resources in the community that exist that may enhance or support women who use substances during pregnancy
  - My opinion about how we can better help women who are pregnant and use substances

613-562-5800 ext: 7671  
613-562-5443

451 Smyth  
Ottawa ON K1H 8M5

[www.uOttawa.ca](http://www.uOttawa.ca)

- The interviews will take place at Centretown Community Health Centre, Ottawa Inner City Health, or Amethyst Women’s Addiction Centre

where I provide health or social/counselling services to women who use substances during pregnancy.

- Interviews will be done at a time that is convenient for me so as not to take away from my service responsibilities.
- The interview will be audio-recorded and transcribed into written documents for research purposes
- I may be contacted by telephone or email by Michelle Foulkes up to one year following my interview and invited to comment or help clarify the findings of this study.

**Risks:**

- I understand that by participating in this study I will be asked to give my professional opinions around working with women who use substances during pregnancy. I may feel uncomfortable about talking about my experiences of working with this vulnerable population. I understand that I can decline to answer any question(s).

**Benefits:**

- I may benefit from having an open discussion about my experience of working with women who use substances during pregnancy and providing my professional views around my perceived barriers and enablers to providing services to the women. Another benefit is that the results from the study may help women in the future who are pregnant and living with substance use so that we can develop better services for women and their babies.

**Confidentiality:**

- I understand that the information that I share will be kept confidential
- My name will not be written on the transcripts of the interview. Instead, the researchers will use a number to identify the transcript.
- I understand that the interviewers are obliged by law to report serious concerns about the safety of a child. In this situation confidentiality cannot be maintained.

**Anonymity:**

- Reports of this study may include quotes of what I have said. However, the researchers will use a fake name instead of my real name in any reports or presentations about this study.
- Names of clients that I may mention will also be replaced with fake names in any reports or presentations about this study.
- Amethyst Women's Addiction Centre, Centretown Community Health Centre, and Ottawa Inner City Health may be identified in the reports.

**Conservation of data:** The data collected (both electronically and paper copies) will be kept in a secure manner. Data will be stored in a locked office at the University of Ottawa. The information (recordings, transcripts, and electronic files) will be kept for 5 years and then destroyed.

**Compensation:** There is no monetary compensation associated with agreeing to participate in this interview.

**Voluntary Participation:** I am under no obligation to participate and if I choose to participate, I can withdraw from the study at any time and/or refuse to answer any questions, without suffering any negative consequence. If I choose to withdraw, all data gathered until the time of withdrawal will be managed according to my wishes. If I choose to have the information I have provided up until the time of withdrawal included in the study findings, it will be treated with the same confidentiality as all other data. If I choose to withdraw from the study entirely, all data from my interviews will be destroyed.

**Acceptance:** I, \_\_\_\_\_ agree to participate in the above research study conducted by Michelle Foulkes of the School of Nursing, Faculty of Health Sciences, under the supervision of Wendy Peterson.

If I have any questions about the study, I may contact the researcher or her supervisor.

If I have any questions regarding the ethical conduct of this study, I may contact the Protocol Officer for Ethics in Research, University of Ottawa, Tabaret Hall, 550 Cumberland Street, Room 154, Ottawa, ON K1N 6N5  
Tel.: (613) 562-5387  
Email: ethics@uottawa.ca

There are two copies of this three page consent form, one of which is mine to keep.

Participant's name (printed) \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Researcher's name (printed) \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

### **Appendix T: Interview Guide for Health Care Providers**

1. How long have you worked with women who are pregnant and substance involved?
2. How well do the services available to women in this community address their needs related to their health during pregnancy?
3. What do you think are some of the barriers that women may experience when accessing health and social services while pregnant and substance involved?
4. What do you think some of the enablers are that may help women to access appropriate health and social services while pregnant and substance involved?
5. What do you think would be an ideal model to meet the complex health and social needs of this population?
6. Do you think that pregnancy can be a motivating factor for women who use substances to seek health and social services?
7. Based on your experience, tell me about the ways that you find most helpful to engage with this population
8. Based on your experience, do you think that mothers who use substances during pregnancy develop an attachment relationship with their fetus? (Probe: Is this different from the maternal-fetal relationship that non-using women develop?)
9. In your experience, do you think that women who you perceive to have an attachment relationship with their fetuses may be more willing to engage in harm reduction behaviours?
10. How can health and social service providers help facilitate the attachment relationship between women and their fetuses?



### Appendix V: Quality Enhancement Strategies for Qualitative Research

(Adapted from Guba & Lincoln, 2005)

| STRATEGY                               | DEPENDABILITY | CONFIRMABILITY | TRANSFERABILITY | CREDIBILITY | AUTHENTICITY |
|--|---------------|----------------|-----------------|-------------|--------------|
| Throughout the inquiry                 |               |                |                 |             |              |
| Reflexivity/reflective journaling      |               |                |                 |             | X            |
| Careful documentation/decision trail   |               | X              |                 |             |              |
| Data Generation                        |               |                |                 |             |              |
| Prolonged engagement                   |               |                |                 |             | X            |
| Comprehensive field notes              |               |                |                 |             |              |
| Audiotaping and verbatim transcription |               |                |                 |             | X            |
| Triangulation (data, method)           |               |                |                 |             |              |
| Saturation of data                     |               |                |                 |             |              |
| Member checking                        |               |                |                 |             |              |
| Data Coding/Analysis                   |               |                |                 |             |              |
| Transcription rigour                   |               |                |                 |             |              |
| Intercoder checks                      |               | X              |                 |             |              |

| STRATEGY  | DEPENDABILITY | CONFIRMABILITY | TRANSFERABILITY | CREDIBILITY | AUTHENTICITY |
|---|---------------|----------------|-----------------|-------------|--------------|
| Triangulation (theory, analysis)                    |               | X              |                 |             |              |
| Peer review/<br>debriefing                          |               | X              |                 |             |              |
| Audit trail   |               | X              |                 |             |              |
| Presentation of Findings                            |               |                |                 |             |              |
| Documentation of quality enhancement efforts        |               |                |                 |             |              |
| Thick, vivid descriptions                           |               |                |                 |             | X            |
| Impactful, evocative writing                        |               |                |                 |             | X            |
| Documentation of researcher credentials, background |               |                |                 |             |              |
| Documentation of reflexivity                        |               |                |                 |             |              |