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# Supporting Black Mothers at the Transition: A Collaborative Design Prenatal Coparenting Program

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# SUPPORTING BLACK MOTHERS AT THE TRANSITION: A COLLABORATIVE DESIGN PRENATAL COPARENTING PROGRAM

by

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Despite having the highest infant mortality rate of similarly developed nations, infant mortality rates have trended downward in the United States, however, the infant mortality disparity between Black and White infants persists. The causes of the disparity have been traced to social considerations of the mother especially while pregnant. These social situations include racism and discrimination, marital status of the mother, social support and pregnancy intentions, pointing to one commonality: stress. Using Boss and colleagues 2017 Conceptual Model of Family Stress, this study proposes a solution to address some of the social support, or resources, available to the expectant mother; a collaboratively designed prenatal coparenting class. This study explores two questions about this proposed resource. If a prenatal coparenting class was designed to provide the social support and perceived self-efficacy that expectant mothers at increased risk of infant mortality need, what educational content should the resource include and what is the desired delivery format of the resource? Unmarried black expectant mothers and prenatal service providers were surveyed in three Michigan cities to determine unmet educational needs. Expectant mothers also had the option to participate in a focus group or interview to share preferences about the delivery format of a prenatal education class. A recruitment strategy for a purposive sample was tested using prenatal service providers as means of reaching the intended expectant mother population.

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# CHAPTER ONE

## Introduction

Pregnancy is often thought of as a joyous occasion: a time of happiness, preparation, and some limited hesitation. When complications arise, those feelings can quickly shift to fear, anxiety, and stress. Following birth, new parents display even more emotions complicated by the physical and social demands of parenting. When many people think about pregnancy and parenting it is easy to ignore considerations that the devastating loss of an infant is a possibility. Even more devastating is when one group of parents shares that burden of loss more frequently than another group. This burden is the reality of infant mortality in the United States.

Infant mortality among Black babies occurs at a higher rate than among babies of any other race and for very different reasons (Kochanek, et al., 2016; Maternal and Child Health Bureau [MACH], 2006). To understand and impact these deaths, researchers, with focused and intentional studies, must examine the different causes and seek changes in those areas. Black expectant mothers who are unmarried, low-income, and experience discrimination or an unplanned pregnancy, are more likely to have pregnancy complications or deliver babies too early or underweight. Babies who are born underweight or preterm are at increased risk of infant mortality (MACH, 2006). These infants often face several challenges due to lack of physical development and require extended Neonatal Intensive Care Unit (NICU) stays (Secretary's Advisory Committee on Infant Mortality [SACIM], 2013).

To address disparities in infant mortality, one initiative includes introducing a prenatal coparenting program that helps to increase the perceived support and self-efficacy

of parents, reduce stress, and provide valid information on a wide range of prenatal education topics (e.g., Feinberg et al., 2009; Shapiro et al., 2011). However, studies of these programs typically include samples that are predominantly White couples. The purpose of this current study is to determine how a program of this type can reach the intended audience, Black expectant mothers, and provide the needed information in a way that encourages attendance. When the outcome of a successful program can lead to lives saved, it is imperative that thoughtful attention be given to ensure that a program has the highest potential for success.

The purpose of this study was to obtain input from Black expectant mothers and prenatal care providers about two distinct components of a prenatal education program: content and format. Simply, (1) what prenatal education needs remain unmet as a mother and her primary coparent transition into parenthood and (2) what delivery and educator preferences would encourage attendance and participation in prenatal coparenting education.

## CHAPTER TWO

## Literature Review

Infant mortality occurs when a baby, born alive, dies before their first birthday. Common causes of infant mortality are genetic defects, sleep-related deaths, sudden unexplained infant death, or complications that arise from birth or during the prenatal period. The rate of infant death, calculated per 1,000 live births, is often regarded as a metric to evaluate nations because it correlates with factors such as access to medical care and poverty rates. Factors that protect against infant death include receiving prenatal care in the first trimester, daily use of a multivitamin high in folic acid, breastfeeding, adopting safe sleeping practices for the newborn, and consistent healthcare for the mother and baby (MACH, 2006; Harelick et al., 2011).

In the United States, infant mortality rates among Black women are not only significantly higher than other populations, they are also structured differently. Genetic malformations are the most prevalent cause of infant mortality in all ethnic groups except for Black infants who are most likely to die from complications with breathing, feeding, or development due to having a low birthweight and/or being preterm (Centers for Disease Control [CDC], 2016; MACH, 2006).

In 2014, 23,000 infants died in the United States at a rate of six infants per 1,000 live births nationally. This rate is continuously higher than the infant death rate in other developed nations (CDC, 2016). To compare, in 2010 the American national infant mortality rate was six per 1,000 live births compared to the United Kingdom with 4.2, Australia with 4.1, France with 3.6, and Japan with 2.3 infant deaths per 1,000 live births (MacDorman et al., 2014; Central Intelligence Agency [CIA], n.d.). In the state of Michigan,

infant mortality rates are worse. In 2015, 765 babies died in Michigan, a rate of 6.8 per 1,000 of 113,211 live births (Michigan Department of Community Health [MDCH], 2017a). In Michigan, the infant mortality rate for White babies in 2015 was 5.0 per 1,000 while the infant mortality rate for Black babies was 14.3 per 1,000 live births (MDCH, 2017b). The three-year moving averages of infant mortality rates of the three counties included in the study demonstrate similar rates of infant mortality disparity found in the nation and state. Between 2013 and 2015 the White infant mortality rate was 4.9 in Kent County, 4.7 in Kalamazoo County, and 6.4 in Wayne County (MDCH, 2017e) while Black rates in these three Michigan counties during the three-year period were 10.4 in Kent County, 15.3 in Kalamazoo County, and 13.1 in Wayne County (MDCH, 2017c).

The infant mortality rates for Black infants in the United States, Michigan, and the three counties in the study areas are comparable to infant mortality rates in countries such as Malaysia (12.9), Armenia (13.10), Jamaica (13.10), and Saudi Arabia (13.6) (CIA, n.d.). (See table 1 below). These rates are particularly troubling because of the stark differences in available prenatal, postpartum, and maternal care in the United States when compared to the other countries with rates that compare to American Black infant mortality rates. For example, in Armenia, maternal health care providers' scores are substandard on basic health care activities such as proper handwashing and perinatal education about medications (Fort & Voltero, 2004).

**Table 1**

*Births and Infant Mortality Rates for Three Michigan Cities by Race*

| Location | Births[a] | | Infant Mortality Rates[b] | | |
|---|---|---|---|---|---|
| | Black | White | Infants born to Black Women | Infants born to White Women | Disparity |
| Kalamazoo | 370 | 259 | 9.7 | 2.6 | 3.73 |
| Grand Rapids | 1,008 | 1,656 | 11.5 | 5.2 | 2.21 |
| Detroit | 9,065 | 1,493 | 14.5 | 10.4 | 1.39 |

*Note.* 2014

[a] Births to women who age 15-50

[b] Rate of infant death per 1,000 live births

These disparities cannot be explained by genetic or behavioral factors. For example, in Michigan, White women are more likely to have gestational hypertension, gestational diabetes, tobacco use, and in-home tobacco use during pregnancy, which are risk factors for infant mortality, but experience a lower infant mortality rate than Black women (Zimmerman & Larder, 2010). Infants born to Black women are more likely to suffer from complications of low (less than 2,500 grams) or very low (less than 1,500 grams) birthweight than White women. Nationally, low birth weight rates were 6.96% of all births for White infants compared to 13.15% of all births for black infants in 2014 (Hamilton et al., 2015).

To understand this race-based infant mortality disparity and the potential for a prenatal coparenting intervention, the study was designed using a contextual model of family stress (Boss et al., 2017). This model analyzes an initial stressor event, the resources available to the family, perceptions of the stressor, and any internal and external factors that impact the stressor to understand the outcome of the stressor. This theoretical model helps to explain both the complexities of a pregnancy to an unmarried Black woman, which

may lead to crisis for some and not others, and the importance of her perception of the event and available resources in avoiding a crisis. The multi-faceted nature of this model allows for inclusion of family, community, and societal influences which may be sources of stress or resources (Boss et al., 2017). This feature is of importance when studying a diverse population. Despite the sample population being unmarried Black women who are expecting their first child, many factors influence how the situation, the pregnancy, presents stress and how alleviation of the stress can vary with availability of resources.

The model used by Boss and colleagues encompasses the ABC-X model of family stress introduced by Hill (1958) with the addition of internal and external impacts that mediate the situation. In the model, (A) represents the situation or the initial stressor, which in this case is the pregnancy. There are characteristics that offer more context of the initial stressor of pregnancy. In a planned pregnancy these characteristics are internal, normative, clear, and volitional. When a family is experiencing an unplanned pregnancy, these characteristics are non-volitional, acute, and potentially cumulative if combined with problems including accessing medical care, high-risk pregnancy, lack of resources, financial concerns, and family/relationship stress.

The (B) in ABC-X represents the resources available to the family. Resources need not be monetary. Non-monetary resources can include availability of childcare, reliable transportation, adequate housing, and information. These resources are used to process and adapt to the stressor event and vary by family. Resources may be less abundant in lower income and/or unmarried families. It is also possible that the family is unaware of the resources, they are hard to access, or they do not fit the needs of the family or situation.

The (C) in the model refers to the perception of the stressor event, or the way that the pregnancy is perceived. In an unintended pregnancy the expectant mother may experience joy or have reservations but may feel overwhelmed by the expectations of motherhood.

The (X) in the model represents the outcome of the stressor after the resources and perception are applied. In one potential outcome, the family may experience high stress and the inability to manage expectations or secure resources and may have pregnancy complications. Conversely, the family may be able to manage the stressor event and reach an equal or greater level of functioning after the pregnancy.

The Contextual Model of Family Stress (Boss et al., 2017) includes internal and external impacts that affect the process of stress that the family is going through. Internal impacts occur within the family unit. Structural impacts, like who participates in parenting or healthcare decisions, are almost always relevant with a pregnancy because of the change in the family structure. For parents expecting their first child this is called the transition to parenthood. Other structural impacts based on being unmarried may result in different choices about the nature and commitment of the relationship. These impacts may also include other family members, fictive kin, or friends who have valuable input.

Internal impacts also include psychological factors, which can cause or reduce stress. Some psychological factors for this situation include: the family's perception of the pregnancy, family members who are willing to offer childcare, family members who look forward to the family expansion versus family members who insist that the mother must learn to thrive and adapt through trial and error without support, and perception of the intended parents' efficacy.

Philosophical impacts may include opinions about abortion or adoption as a response to an unplanned pregnancy especially as these options coincide or conflict with societal and religious beliefs. Other philosophical impacts could include expectations of the child's father, expectation of support, feelings about government support and medical birth interventions.

External factors impact the family but do not originate within the family. Culture is one type of external impact that may include religious beliefs and doctrine, expectation of childrearing, gendered expectations of parents, distrust of medical authority or process and, seeking higher education. These impacts may increase or reduce the stress experienced by the family during the pregnancy. History is another external impact, which may include factors like heightened racial tensions and police brutality for Black mothers. Economy impacts the stressor as well. Debates over providing a living wage, cost of childcare, and the ability to take time off as needed are considered.

Although development is an individual process, it is influenced by external forces. Despite the biological ability to reproduce (physical development) external forces impose standards of expectation for the timeliness of pregnancy. Some women may be expected to be rearing children while others may be perceived as too young or too old. Heredity is an external impact that can be particularly stress inducing for some. Genetic concerns and disorders affect decisions about the pregnancy and childrearing.

The perception of the initial stressor, pregnancy, is significant in this study because it may influence how the family responds to the stressor and subsequent actions. If the person perceives the pregnancy as unwanted or source of complication, subsequent actions

may create more stress or lead to behaviors that do not facilitate a healthy pregnancy such as delay of prenatal care.

**Defining the Affected Population**

Risk factors that contribute to infant mortality and subsequently the infant mortality disparity can be broadly categorized into two types: social concerns and health concerns. Health concerns such as utilization and duration of breastfeeding, low birthweight, or preterm birth directly affect the wellbeing of infants (MACH, 2006). These health concerns may also have a social component. For example, breastfeeding rates are impacted by breastfeeding education and continued support, length of maternity leave, work schedules, and perceived benefits.

Social concerns are risk factors that present unfavorable conditions for proper growth and development. These types of factors can include poverty, access to medical care, knowledge of and adherence to safe sleep practices, access to nutritious foods, and safe housing (SACIM, 2013; Sanders-Phillips & Davis, 1998). Other social risk factors such as being unmarried, experiencing racism and discrimination in medical care, and experiencing an unwanted pregnancy more often lead to receiving late prenatal care or using alcohol, tobacco or substances that directly lead to health concerns (Hohmann-Marriott, 2009).

Low income and other measures of socioeconomic status are often studied for their impact on health disparities worldwide. Wealth, including income inequalities, and education directly relate to the access and quality of healthcare interventions (Braveman & Gottlieb, 2014). Although important to consider, low income or education alone is not indicative of greater risk of pregnancy complications; Black women who have higher

income and education than Hispanic women still continue to experience greater rates of pregnancy complications such as preterm labor (Harelick et al., 2011; Kim & Saada, 2013).

**Racism and Discrimination**

Black women may be subject to biased treatment that directly impacts the quality of healthcare they receive; race-based assumptions made about health and lifestyle behaviors, marital status, and insurance coverage may lead these women to develop strained or mistrusting relationships with care providers (Ward et al., 2013). When compared to Mexican American women who have similar levels of income and health metrics, Black women experience higher rates of infant mortality (Padilla & Reichman, 2001). There are even differences in the way that Black women are educated regarding prenatal health topics. Black women are less likely to be educated about breastfeeding or smoking and substance use from their healthcare provider(s) (Vonderheid et al., 2003).

**Social Support**

Research on the effects of social support on adverse birth outcomes is inconclusive. Some studies (Nylen et al., 2013; Jackson, 1998) find that low social support correlates to adverse birth outcomes or related precursors and that larger and/or better social support related to fewer adverse birth outcome or related precursors (Eisengart et al., 2003), while other studies demonstrate that the converse is true (Padilla & Reichman, 2001). To understand the effects, it is imperative that both quality and quantity of social support is evaluated.

The amount of partner support perceived by the expectant mother has been shown to moderate the effects of depression on adverse birth outcomes such as preterm delivery, low birthweight, and low APGAR scores (Nylen et al., 2013). Furthermore, not only was depression mediated by the size of the support network but also by the quality; women

who perceived the social support as less satisfying were more likely to experience maternal depression (Nylen et al., 2013). Women studied by Nylen and colleagues (2013) were overwhelmingly White, married, working and most were studied during a planned pregnancy. The effects of an intervention would likely be different, with the potential for greater impact, with the population in this study. One study of a representative sample of parents who were living together when the child was 9 months old found that stronger relationships, those with fewer problems or disagreements about the pregnancy itself, tend to have fewer incidence of low birthweight infants (Hohmann-Marriott, 2009).

**Pregnancy Intentions**

Pregnancy intentions can be classified into two categories, planned and unplanned (Santelli et al., 2003). Unplanned pregnancies can be identified as either mistimed, occurring at an inconvenient time usually earlier than desired, with an unwanted partner, or unwanted, in cases where the person never had intentions of conceiving or parenting (Finer & Zolna, 2011; Hohmann-Marriott, 2009; Santelli et al., 2003). Unintended pregnancies can be problematic because they are more likely to result in behaviors that pose risk to proper infant development including use of substances and receiving late prenatal care (Cheng et al., 2009; Finer & Zolna, 2011; Orr et al., 2008). Unintended pregnancies are most common among the cohabiting relationship status compared to other statuses, especially for mothers under age 25 (Finer & Zolna, 2011). Women who have less than a high school diploma are most likely to experience and continue, rather than terminate, an unintended pregnancy (Finer & Zolna, 2011). Minority women are nearly twice as likely as White women to experience an unintended pregnancy with Black women being the most likely ethnic group (Finer & Zolna, 2011). Unintended pregnancies in

Michigan among women ages 15-44 between 2009 and 2011 account for over 50 percent of all pregnancies (50.5%); of these 247,084 unintended pregnancies, some ended in miscarriage or elected termination, resulting in 144,135 live births (MDCH, 2017f).

**Unmarried/Single Black Mother**

Unmarried women experience higher rates of infant mortality (MACH, 2006; Padilla & Reichman, 2001). In 2017 unmarried mothers experienced an infant mortality rate of 9.9 compared to 4.3 for married mothers in Michigan (MDCH, 2017d). These differences may be due to additional stressors such as financial or resource management, or lack of social support among other factors (D'Angelo et al., 2007). Cohabitation status is a factor, as rates of infant mortality among unmarried, cohabitating women are more like married women than like unpartnered women (Padilla & Reichman, 2001; Teitler, 2001). In fact, stronger commitment to the relationship correlates to lower risk for pregnancy and postpartum complication; similarly, infant mortality rates increase as commitment strength decreases from married to cohabitating to dating to casual partners (Padilla & Reichman, 2001; Teitler, 2001). This effect may impact the timing of prenatal care. Married women and those experiencing an intended pregnancy usually receive care earlier than unmarried women or those with an unintended pregnancy. Furthermore, in unmarried relationships where the mother does not tell the father about the pregnancy, prenatal care is accessed later in the pregnancy (Hohmann-Marriott, 2009). This is significant because inadequate prenatal care is associated with a more than tripled infant mortality rate when compared to those who receive adequate prenatal care (MDCH, 2017d). The father of the baby not being involved during pregnancy correlates with a higher rate of preterm or low

birthweight babies; this effect is more significant for babies born to Black mothers (Alio et al., 2010).

The single Black mother is often studied as a population that experiences high levels of chronic poverty leading to many negative outcomes for the child (Snyder et al., 2006). Oversimplification of relationship status can result in a misunderstanding or mis-categorization of this population. Despite being unmarried, many of these women still have contact with the father of their child during and beyond pregnancy (Johnson, 2001; McLanahan & Beck, 2010; Teitler, 2001). Some partners may be casual, incarcerated or otherwise unavailable, but others cohabit, or are committed (Johnson, 2001). Partners may or may not be the father of any children and often relationships are maintained with both the fathers of children and other romantic partners thus creating a blended family. The complexities of these relationships can be demonstrated by a prenatal coparenting intervention for unmarried Black women and their partners who were expecting their first child together. One-quarter of participants had children from a previous relationship, yet all the fathers attended the birth and signed the birth certificate for the current child (McHale et al., 2015). To understand this population more fully, it is imperative that partner status is not merely categorized as married or unmarried, rather that options include the variety of common relationship configurations.

**Describing the Proposed Solution: Coparenting/Prenatal Couple Education**

Coparenting describes the triadic relationship of two adults and the child or children to whom they provide primary care. These adults need not be married, in a relationship, or related. Coparenting is operationalized by these four factors: supportiveness versus undermining, childrearing disagreement, division of childcare duties

and parental interactions. A coparenting education program lends itself to this population of Black women at increased risk of infant mortality for several reasons. Mothers can benefit from increased social support in the class environment as well as from a coparent, who can be the biological parent, another partner, friend, or relative (Ickovics et al., 2007; Novick et al., 2011).

**Benefits of Coparenting Intervention**

Expectant mothers who participate in prenatal coparenting interventions experience reduced levels of stress hormones and fewer cesarean sections (Feinberg et al., 2015). Expectant father participants exhibit increased parental warmth and lower parental negativity (Feinberg et al., 2009). Similarly, the most important factor to determining if fathers will have a consistent relationship with their child is dependent on the quality of the relationship with the mother of that child (Cowan et al., 2010). Overall, more warmth between parents (Feinberg et al., 2009) contributes to increased parental positivity, less competitiveness and somewhat greater coparent cooperation; in these situations, mothers were more likely to include the father in interaction with the child (Feinberg et al., 2009; Shapiro et al., 2011).

Parent participation in prenatal coparenting programs impacts children who are born after the programs are completed. Children, whose parents participated in prenatal coparenting programs, demonstrate increased self-soothing (Feinberg et al., 2009), lower externalizing behavior and reduced length of hospital stays following birth (Feinberg et al., 2015).

**Existing Programs**

Prenatal coparenting programs have been designed and tested. One such program is Family Foundations developed by Mark Feinberg at Pennsylvania State University. The

program has produced encouraging outcomes. Delivery of the Family Foundations curriculum was associated with reduced levels of cortisol, the stress hormone, which reduced incidence of low birthweight infants and increased gestational age and was associated with a reduced likelihood of cesarean section and shorter hospital stays for the infant (Feinberg et al., 2015). These outcomes demonstrate the potential for a prenatal coparenting program to buffer risk factors for pregnancy complications and thus decreases infant mortality rates (Feinberg et al., 2015). These findings are not generalizable to the current population because the sample had several differing characteristics: 92% White, higher education and income levels, 85% were married and couples were required to be cohabitating (Feinberg et al., 2015).

Another prenatal coparenting program is Figuring It Out for the Child based at the University of South Florida St Petersburg under James McHale (McHale et al., 2015). This program is designed for unmarried Black couples (at least one partner must identify as Black) who do not live together and are expecting their first child together. While this program more closely aligns to the population of this study, there are several significant differences. Despite expecting their first child together, couples in this program may have children from previous relationships. This factor may complicate the experience of parenting with another partner. In addition, participants are eligible to sign up as late as one month prior to the birth of the child. Future research can examine if this is the best timing for prenatal education based on the preferences of potential attendees.

## Intervention Design

### *Prenatal Care vs. Prenatal Education*

Prenatal care is healthcare provided by a health professional such as a nurse, doctor, or midwife (SACIM, 2013; Sanders-Phillips & Davis, 1998). Prenatal care provides essential healthcare to the expectant mother and includes monitoring of health conditions and development of the fetus. During prenatal care appointments, professionals often provide prenatal education by providing pamphlets or brochures, brief conversations and/or referral to other physical or virtual sources for information. This process creates several barriers to the understanding and adherence to the education and may not meet needs of the expectant mothers. People with limited literacy, physical impairments, or learning challenges may not learn well from brochures, furthermore, brochure design and pictures used may not represent family structure or demographics of the recipient.

Prenatal education refers to the scope of information provided to expectant mothers and their support person about issues related to pregnancy, labor and delivery, and postpartum adjustment and concerns (Gilmer et al., 2016). Education is offered in a variety of formats including that from health professionals at regular appointments, group or individual classes offered by hospitals or community health organizations, and via childbirth education classes provided by independent providers. Other sources of education can include information obtained from family, friends, and internet resources. Internet sources can contain either evidence-based information or anecdotal stories, making it difficult for parents in search of information to know what is factual, safe, and proven effective.

**Timing**

Participating in a prenatal coparenting program can positively impact parenting relationships before they decay and take advantage of parents or coparents' desires to do the best for the child (Cowan et al., 2010; McLanahan & Beck, 2010). In some cases, a pregnancy, even unplanned, can have positive effects on the romantic relationship of the parents and often positively impacts parent-child interaction in parenting-focused relationships (Hohmann-Marriott, 2011). The prenatal time period can also take advantage of the involvement of the father as many fathers, even most unmarried fathers, are involved during the pregnancy and birth of their children (Johnson, 2001; McLanahan & Beck, 2010; Teitler, 2001). Relationship quality also tends to decline over the transition to parenthood (Shapiro et al., 2011).

Prenatal interventions can also help start conversations and set expectations for the postpartum period. For examples, fathers who received a prenatal coparenting intervention were less likely to interrupt mother-baby play than fathers who received the intervention post-birth (Shapiro et al., 2011). Additionally, a prenatal intervention could be significantly more convenient than a post-birth intervention when families are more involved in the physical and emotional demands of childcare and are often in a sleep-deprived state (Shapiro et al., 2011).

# CHAPTER THREE

## Methods

The aim of this study was to consult Black expectant mothers and determine what how to develop a prenatal coparenting program that met their needs and encouraged attendance. Two factors were being examined, content and format; what if any, prenatal educational needs remained unmet (content) and what format preferences they would have for a program designed to meet those educational needs. This study was guided by three questions:

How can a prenatal coparenting education program be an effective intervention for unmarried Black mothers at increased risk of infant mortality in three Michigan cities?

Are there areas of prenatal education that are introduced by prenatal care providers but about which women at increased risk of infant mortality feel under informed?

What factors contribute to a prenatal coparenting program that encourages attendance by participants at greatest risk of infant mortality disparity?

### Design

This study used a mixed-method design. A separate survey was developed for expectant mothers and the prenatal providers, and focus groups or interviews were planned for expectant mothers. Due to a low response rate, no focus groups were conducted with mothers. This study was approved by the Human Subjects Institutional Review Board at Western Michigan University.

The research questions were explored by conducting web-based investigator-developed surveys. Professional participants' answers were used to gauge an understanding of the extent of prenatal and postpartum education offered. Expectant mothers' answers gauged perceived knowledge of prenatal education topics. Additionally,

in-person focus groups or interviews were offered for expectant mother participants to understand program preferences. In this study, survey data from expectant mothers and prenatal service providers was designed to test the relationship of prenatal education administered with the perceived knowledge acquired. The focus group data from expectant mother participants would have explored the intervention design preferences of a prenatal coparenting program that would promote attendance by the intended recipient audience. The rationale for collecting both quantitative and qualitative data was to develop a program that addresses unmet educational needs in a format that appeals to the intended audience. Quantitative data was sought to describe the population and their coparenting plans in greater detail. Survey questions aimed to ascertain who and how many people would l be coparenting, the intended tasks for coparents, and demographics of the expectant women. Qualitative data aimed to learn more about the characteristics of a prenatal coparenting program that would increase attendance. Focus group questions were designed to gather information about time, delivery format, and facilitator characteristics that are important to the expectant women. For these questions, qualitative methods are better suited to capture both the preferences and the context of those preferences from the participants (Creswell, 2013). A quantitative approach to collecting information about these preferences might force participants to choose from a predefined set of characteristics but could omit options or relevance of characteristics.

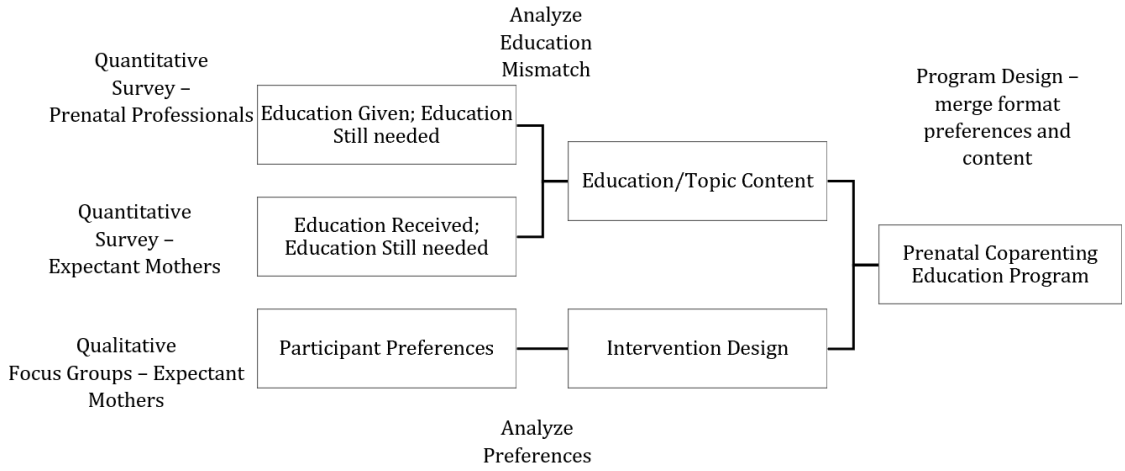


**Figure 1** *Planned Study Design*

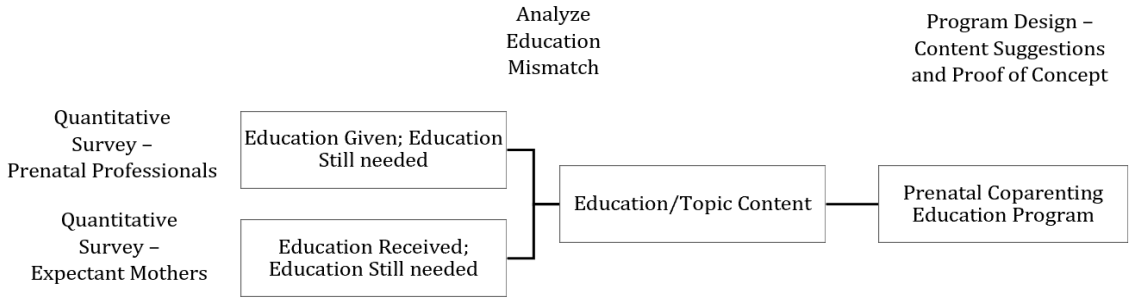


**Figure 2** *Actual Study Design*

## Data Collection

Professional and expectant mother participants completed online surveys approved by the WMU Human Subjects Institutional Review Board (HSIRB). Expectant mother participants were invited to participate in a focus group held in their metro area.

Candidates read a consent document and indicated agreement by clicking "continue" on the Qualtrics form before proceeding. Prenatal providers were directed to the survey. Expectant mothers were directed to a qualifier to ensure that study criteria were met (see Appendices A-D for the online consent documents and HSIRB approval). Before participating in the focus group or interview option, expectant mother participants would have been reminded of the consent procedures and given a hard copy of consent forms.

**Surveys**

Surveys that were administered to professional participants (Appendix E) gathered details of their prenatal care practice, demographics of clients, and the type and duration of prenatal and postpartum education given. Surveys that were administered to the expectant mother participants (Appendix F) captured data about relationship status especially to the father of the baby, prenatal education received, perceived mastery of education, areas of desired further education, and a list of people, by relationship to the infant, who were anticipated to be helping with infant care and frequency. Prior to completing the online survey expectant mothers were required to complete an online qualifier (Appendix G) that captured marital status, age, number of living children to determine fit for the target population of the study.

**Focus Groups**

Focus groups would have been offered in a non-residential public building in each city. Each focus group would have been scheduled to accommodate four to seven participants and would have lasted a maximum of 90 minutes. Prior to the beginning of the focus group, participants would have received physical copies of the consent agreement that they viewed online. They would also have learned about the purpose and structure of

the focus groups including the use of the audio recording device and note taking. Focus group protocol is in Appendix H and focus group questions are in Appendix I.

In the event of a limited pool of participants in any given city, participants would have been asked to complete an in-person interview instead of a focus group.

**Procedures**

Mothers were recruited via social media and prenatal service providers in each metro area. The study was mentioned several times on social media in 2018, the active recruitment period was from January through September 2019. To aid recruitment efforts, expectant mothers were incentivized to complete both the online survey and in-person focus group with a gift card and being entered in a drawing for an additional gift card.

Facebook was used for social media engagement for expectant mothers. The primary researcher posted the flyers publicly from their personal page and reached out to prenatal providers to inquire about sharing the flyer on their Facebook page, in their offices, or when meeting with clients who may qualify to participate. Additionally, the flyers were posted in local groups for Black people or mothers, and in large public groups for expectant and current parents.

Professional participants were recruited via social media, Fetal and Infant Mortality Review Boards in each respective county, local prenatal service organizations, and health care or hospital systems. Over 50 prenatal providers were contacted, many of whom worked with other prenatal professionals who would also have been eligible to participate. (See Table 2 below).

**Table 2**

*List of Organizations Contacted about Study Participation*

| Organization | Communication Method | Location |
|---|---|---|
| Black Mothers Breast Feeding Association | Email | Detroit |
| Bump to Birth Doula | In Person/email | Grand Rapids |
| Cradle Kalamazoo | In Person/email | Kalamazoo |
| Detroit Health Department | In Person/email | Detroit |
| Healthy Kent | In Person/email | Grand Rapids |
| Michigan Infant Health Improvement Plan | In Person | Grand Rapids |
| Moms Bloom | Email | Grand Rapids |
| Mothering Justice | In Person/Email/Telephone | Various |
| Rootead | In Person/Email | Kalamazoo |
| SisterSong | In Person/Email | Various |
| Social Media Marketing - Facebook | Social Media | Various |
| Spectrum Health | In Person/Email/Telephone | Grand Rapids |
| Strong Beginnings | In Person/Email | Grand Rapids |
| University of Michigan - Metro Health | In Person/Email | Grand Rapids |
| Urban Democracy Feast | In Person | Kalamazoo |
| Wayne County Fetal and Infant Mortality Review | Email | Detroit |
| WISH Home Visitors | Email | Kalamazoo |
| Fox 17 News | Mass Media | Grand Rapids |
| WMU - Three Minute Thesis Competition | In Person | Kalamazoo |

## Participants

This study consisted of a nonprobability purposive sample to target a specific population of women at increased risk of infant mortality and prenatal service providers in their area. Participants were from two groups. Expectant mother participants (n = 2) were women who self-identify as Black or African American, were expecting their first child, and were unmarried with a primary residence in one of three metropolitan Michigan cities (Grand Rapids, Kalamazoo, or Detroit).

Professional participants (n = 3) consisted of healthcare and prenatal care professionals who work primarily or exclusively with expectant women in Grand Rapids, Kalamazoo, or Detroit metro areas. Two providers identified as Black and were 25-34 years old and provided labor and birth related services, one provider identified as White and was

45-54 years old and provided a service that was categorized as “other” without further explanation.

**Analysis**

Had there been more participants in each survey, data analysis would have included descriptive statistics such as mean, median, range, standard deviation, standard error, and inferential statistics such as Pearson’s correlations, as applicable. Since the response rate was low, frequencies were reported for both expectant mothers and professionals. Frequencies were calculated by using the report feature in Qualtrics. No qualitative data was obtained and therefore, the qualitative analysis plan of transcribing focus group question responses and coding for emergent themes was not enacted.

# CHAPTER FOUR

## Results

### Expectant Mother Participants

In order to gain access to the survey, expectant mothers responded to the qualifier to ensure they met the criteria for inclusion in the study. The qualifier was attempted 14 times, and 4 people went on to complete the survey after meeting the inclusion criteria of the study. The sample is two participants (n = 2) after data from two participants was omitted due to survey completion time of less than 90 seconds each and the appearance that multiple attempts at the qualifier were made to participate in the survey. None of the candidates submitted contact information to participate in the focus group or interview option.

One expectant mother completed the full survey of 22 questions. This participant indicated increased level of stress from before pregnancy to during pregnancy. The participant indicated several anticipated coparents, including participant's mother, aunt, and sister and the father of the baby. The father of the baby was identified as the primary coparent and was expected to help with childcare related tasks daily. Other coparents were expected to help 2-3 or 4-6 days per week. Indicated stressors were financial, time off work, healthcare, and neighborhood safety. The participant indicated that the pregnancy was unplanned, the father of the baby suggested an abortion, and the participant would have preferred to get pregnant at another time. The participant indicated knowledge of prenatal education topics was derived from the internet, books, friends and family, Ob/GYN and RN, yet self-reported being only slight knowledgeable or moderately knowledgeable on

most prenatal care education topics. For the topics of community resources and postpartum care for mother, the participant self-reported not being knowledgeable at all.

One expectant mother participant completed the survey through question number four. This second participant answered that the father of the baby would be the primary coparent and was expected to help with childcare related tasks daily. This participant did not go on to complete any information related to prenatal education topics, stress levels, or status of the relationship with the father of the baby.

**Professional Participants**

There were 3 professional participants who completed the 24-question survey (n = 3). The demographics of the participants and the clients whom they served varied. Two participants identified as Black themselves and saw more Black clients than any other race; one participant identified as White and saw more White clients than any other race. Income level varied for the clients of the participants. The provider who identified as having mostly White clients estimated income level at $50-$59,000 while participants with mostly Black clients estimated their client income levels to be $10-$19,000 and $20-$29,000 annually.

Despite the variances in prenatal provider and client demographics, all participants indicated that their clients definitely needed more prenatal education. Professional participants ranked their clients' knowledge of prenatal education and postpartum adjustment topics: two providers serving mostly Black clients answered that clients were slightly knowledgeable, and one provider serving mostly White clients answered their clients were moderately knowledgeable. Only one of the three respondents, the prenatal provider who saw mostly white clients, reported talking about stress management with

their clients, for a time period of 16-30 minutes out of an estimated 4-6 hours of meeting time.

The two prenatal providers who mostly see Black clients indicated that clients usually attended sessions with a support person, but they responded “maybe” to having educational materials available specifically for the coparent. The prenatal provider that mostly sees White clients indicated having educational materials specifically for the father of the baby or another support person despite clients usually attending prenatal sessions alone.

# CHAPTER FIVE

## Discussion

This study was designed to obtain data, educational content and participant preferences for format, to aid in the creation of a prenatal coparenting program for Black women at increased risk of infant mortality. Responses of two expectant mothers and three prenatal providers offer initial information on the usefulness of survey items and guidance on what to include in a co-parenting program.

While this study did not produce the response rate desired, it did provide an opportunity to  try recruitment of Black expectant mothers through social media and referrals through prenatal providers and recruitment of health care and prenatal practitioners through presentations at local meetings targeting health improvements and health disparity reductions for Black expectant mothers. To better understand the possible reasons for a low response rate and implications for future research, additional literature was read and community and research experts working in three key areas were consulted.

Data from this study suggests that the population could benefit from additional prenatal education and that attention should be given to education on stress management and resources. Additionally, the data identifies the presence of one of more coparents from each expectant mother participant. Suggestions for future research are also included.

### The Case for Prenatal Education

Survey results suggest a need for more prenatal education for expectant mothers. The three prenatal care providers strongly agreed that their clients would benefit from more prenatal education. This point should also be tempered with the potential for bias that service providers can have of their clients, especially of Black women. A perception of

ineptitude or inferiority of Black mothers could also produce that response. Provider bias can lead to an assessment that Black families need resources and education in order to adequately care for their children compared to the provider's standards (Infant Mortality Program Director, personal communication, October 8, 2019).

Results suggest a need for increased prenatal education. Expectant mother data also suggested a limited level of mastery of prenatal education topics. The participant did not report being very knowledgeable or extremely knowledgeable on any of the prenatal education topics. When the expectant mother's responses are combined with the opinions of the prenatal providers, there is a demonstrable need. Additionally, many topics of prenatal education that the expectant mother had been introduced to contained both reliable (Doctor and Nurse) sources and potentially unreliable (family and friends, the internet) sources. It is vital that education is offered that can address any misconceptions that might be created due to these unreliable sources.

**Stress Management**

One topic that should be considered for inclusion in prenatal educational offerings is stress management. There are several reasons why this topic deserves more time and attention. The potential effect of stress on the pregnancy and birth outcome, the stress level increase identified by the expectant mother participant, being identified by the expectant mother as a topic where she had "no knowledge at all," and only one of three prenatal service providers surveyed identifying stress management as a topic of education that they provide exemplify why this topic deserves more attention. Furthermore, only one provider reported including education about social support for a time period of less than 15 minutes.

Stress increases during pregnancy may not directly relate to a topic that the prenatal provider can fix such as concerns about fetal development. The expectant mother participant cited that her increased stress was due to financial concerns, worrying about getting time off work, healthcare, and the safety of her neighborhood. While it is not possible to address all these concerns, prenatal providers should have community resources available to their clients and be able to talk about stress management techniques. The only other topic that the expectant mother regarded as having "no knowledge at all" was in reference to community resources. Resources and the perception of their quality and utility are important factors in determining the outcome (X) of a situation (Boss, et al., 2017).

**Coparenting Education**

Both expectant mother participants expected the father of the baby to be present daily to help with childcare related tasks. One expectant mother also expected three other people to help with tasks multiple times per week, and that same participant answered that the pregnancy was unplanned (mistimed) and the Father of the baby suggested an abortion. Despite these obvious challenges, she still expects the Father to be the primary coparent and answered neutrally about whether they will be living together after the baby arrives. The complexities of this relationship demonstrate that coparenting education is applicable and could be beneficial.

The prenatal service provider who sees mostly White clients answered that they offer materials for the father of the baby or other coparent despite clients usually attending sessions alone, and the two providers who see mostly Black clients answered that they may have the materials available. Furthermore, these two professionals who see mostly Black

clients answered that their client is usually with at least one other person during their interactions. The lack of clarity of the availability of coparenting education materials demonstrates an opportunity to empower coparents with self-efficacy and pertinent information related to pregnancy, labor and birth, and postpartum adjustment. The mismatch in the availability versus utility for these materials suggests a missed opportunity for those who present the greatest need. This mismatch could relate to provider bias, or type and context of prenatal education but elimination of the mismatch could contribute to resources and stress reduction for expectant families.

**Coparenting Education Content**

One section of questions on the expectant mother survey focused on aspects of the coparenting relationship that could require further education by prompting the participants to think of which areas of coparenting the expectant mother perceived there to be future challenges. From the data gathered, those topics do not seem to be very robust to add to a prenatal coparenting program. Most of the topics were answered as slightly challenging (finances, setting schedules and quality time/affection), while the respondent answered that the topic of discipline was not challenging at all. The most challenging topic was splitting chores, which was rated as “moderately challenging”.

It is possible that with more participants these topics could have produced more robust ideas for coparenting program content; however, this question demonstrates the possibility of missing the needs of potential participants in a coparenting program. Future studies should add more topics to determine the needs of potential program participants.

## Other Findings

It should be noted that there were differences in types of prenatal education provided by the provider who is White, and has mostly White clients compared to the providers who are Black and have mostly Black clients. There is also a disparity in the income of these clients and session length and frequency with the prenatal provider. This difference in time spent may correlate to the type of prenatal provider: a midwife may have longer or more frequent interactions than a labor and delivery nurse. With a larger sample, it would be important to look closely at these factors to determine if there is evidence of a disparity in time spent on prenatal education that supersedes income and professional type.

The providers responded that they provide education on a variety of topics and estimated how much time they spend on each topic. This education could be considered a resource which is "B" in the ABC-X Conceptual Model of Family Stress. In future research, it would be beneficial to find out the perception of the quality of the education. This education may not be considered a resource if the perception (C) of the resource is poor.

Additionally, it would contribute to the value and quality of the resource to understand the method of delivery for the education. If physical materials are used, clients may be expected to read and understand those materials, which may present barriers for some clients or clients may not remember to read the materials. Alternatively, if education is only provided verbally, clients may misremember important information.

## Barriers to Participation

Some of the barriers that impacted participation were intrinsic to study design, and others were unforeseen. One intrinsic barrier was the narrow population of expectant

mothers. The purposive sampling strategy was used to understand the preferences of the specific cross-section of expectant mothers who had several of the risk factors for infant mortality. This cross-section of unmarried black adult women who were primiparous in three Michigan cities, may have been too narrow of a population to efficiently target with the means of this study.

Means of translating recruitment efforts into participation could have also been more efficient. With the use of internet-ready tablets, interested candidates, expectant mothers and prenatal providers could have completed the online survey in-person at various recruiting presentations. Instead, candidates who learned about the study, its relevance, and implications needed to sustain their motivation long enough to complete the surveys on their own devices or at another time. Conversely, it is also possible that the prenatal providers remained unclear on the goals of the study or lacked interest in participating or referring it to their clients.

Other barriers relate to the healthcare nature of the study. Many health-related companies have policies that limit or prevent access to the intended populations. Organizational policies limited the ability to recruit via sharing on social media, distributing or posting fliers, and providing access to patients or clients; Federal Health Information Portability and Accountability Act (HIPAA) also limits access to clients in healthcare settings.

**Hard to Reach Populations**

Recruitment may not follow a linear process as outlined by researchers (Mammen & Sano, 2012). What may seem like an evident method of reaching a population, through professionals who they interact with, may contain several barriers that were not foreseen.

Such barriers might include: lack of interest, understanding or motivation to recruit from the professionals, distrust of the study from professionals or expectant mothers, and expectant mothers could distrust the confidentiality of participation in a study that is presented by a health or prenatal professional (Bonevski, 2014).

Barriers to participation in research are noted especially for Black candidates. Distrust in institutions like government systems and universities make it difficult to drive interest in participation; therefore, community ties are more important than the characteristics of the researcher (Yancey, 2006). Pregnant black women are not opposed to participating in research, but certain criteria need to be met. They want to understand the relevance of the research, its contribution to the body of knowledge, and potential reduction of adverse birth outcomes, additionally candidates may express less desire to participate in surveys than more tangible forms of research like contributing specimen (Gatny, 2012). It may be more important that expectant mother candidates are able to interact directly with researchers, rather than being referred from other sources. In order to drive participation and to explain the study, more effective recruitment strategies would include use of text and video messages for online recruitment (Mammen & Sano, 2012; Wilkerson, 2014).

Participatory action research is of value to both researchers and the community, but there are struggles in adequately executing the research to achieve empowerment for the community (Etowa, 2007). It is possible to conduct this research, but researchers need to have both the contacts to reach within the communities and the resources to effectively execute the research (Etowa, 2007). Community-based participatory research is an excellent method to minimize the gap between research and implementation. It can

provide the data that is specific to a population in a way that is both accessible and appropriate. A prenatal education program could be a valuable instrument to help reduce infant mortality rates in communities that experience disparities. Despite the efforts to outline more completely what this program could look like via a community-based participatory lens, this study was not designed in that method (Edmonds et al., 2015).

To achieve genuine participation, especially among populations that are hard to reach or have other barriers to research participation, it may be vital to the success of that project, that the population is central to the entire process: understanding the literature, finding value in the data collection, advocating for the research, investing in recruitment, and analyzing the data. Despite whoever presents the research opportunity, true buy-in may only occur when the idea or support originates within the community (Yancey et al., 2006).

**Limitations**

The study was limited by several factors. The most prominent barriers were relationships and funding. With more connected relationships, it can be easier to reach the intended populations. Similarly, additional funding could have allowed for better materials for data collection and could have compensated others to aid in recruitment, data collection and analysis. Additional funding also could have been useful for incentivizing both portions of the study separately for expectant mothers. Expectant mother participants could have received a gift card for participation in the online survey and an additional gift card for an in-person focus group or interview.

**Suggestions for Future Studies**

Due to the limited collection of participant data, phone consultations with four community and research experts were organized with the goal of understanding the low participation rate. The professionals represent three categories: 1) professionals whose work focuses on reducing infant mortality disparities, 2) professionals who work with hard-to-reach populations, and 3) professionals who work with families in the study's target areas.

Unmarried pregnant Black women may be reluctant to participate in a research study for multiple reasons. Candidates could have a distrust of the institution. Universities are institutions and many people of color have a developed a distrust of these institutions, it is important that they feel a commonality with Black researchers (C. Bryant, personal communication, October 10, 2019). This distrust is emphasized using academic language. Candidates would likely be more responsive to a "conversation with other expectant mothers," than a "focus group" and to "building a village" than to a "coparenting program" which has a heteronormative connotation that may not be applicable to their situation (Infant Mortality Program Director, personal communication, October 8, 2019). Conversely, candidates may not understand their contribution to the study or the study relevance to their life. For example, a coparenting program could be perceived as a need for parenting classes which insinuates a deficit in ability; candidates could be defensive about their ability to parent and adverse to needing coaching or education (Infant Mortality Program Director, personal communication, October 8, 2019).

Effective ways to overcome distrust and to demonstrate relevance will rely on the researcher's ability to facilitate connections with the community. Candidates need to feel a

sense of security with the study that can be achieved in part through working with trusted community members and religious leaders, making multiple contacts with candidates, and including a picture of the researcher on recruitment materials. Conversations with these experts followed a similar trajectory; all of them asked about connections and community partnerships. They inquired who the primary researcher was connected to, what university partnerships were leveraged, if named community stakeholders were aware or involved with the project, and what the recruitment strategy was upon inception of the study. The professionals also offered connections of their own and committed to making introductions to various stakeholders to help further research efforts.

Finally, these professionals remarked on the significance of this study, topic, and necessary investment of healthcare and academic institutions that serve the population. (L. Traylor, personal communication, October 18, 2019). They emphasized the importance of gaining community support and continuing to bring awareness and action to infant and maternal mortality disparities and suggested to hold multiple focus groups and public speaking engagements to foster community engagement (C. Bryant, personal communication, October 10, 2019; L. Traylor, personal communication, October 18, 2019).

## Conclusion

There is potential for a prenatal coparenting program to be helpful in addressing the infant mortality disparity. More education about prenatal topics could be very useful during the transition to parenthood. Additionally, addressing the increase in stress during the prenatal time period by adding resources can help to change the outcome of the situation. Further study is needed to determine more specific program requirements. In

order to effectively attain that specific data, researchers need to allot for additional time, community relationship building, and thorough explanation of study aims to candidates.

**Implications**

Findings from this study suggest that a prenatal coparenting program could be useful in addressing unmet educational needs and fostering healthy and supportive coparenting relationships across the transition to parenthood for Black mothers at increased risk of infant mortality; the content and format of such programs requires further research. The creation of such programs may be most effective if there is significant community investment in the process. Community stakeholders including healthcare providers, minority health activists, and programs designed to reduce disparities can partner to present this opportunity to the intended recipient policy. A collaborative design to creating this program may help to significantly reduce efforts required to gain participants and reduce attrition.

Prenatal care providers who offer prenatal education to their clients should evaluate and update, if necessary, their offering to reflect the diverse needs of their clients. Coparents who attend educational sessions should have materials that address how they can best offer support. The type and applicability of materials available should also be understood. If resources can help to eliminate this racial and social disparity, expectant mothers and their infants deserve resources that are engaging, informative, easy to comprehend, and reflect their situation.

Finally, universities and institutions should consider their investment into research within communities who experience these disparities. Careful analysis of educational offerings, provider bias, and diversity of research could greatly benefit communities who

demonstrate great need, especially if prior research has focused on community insufficiencies rather than systemic problems. If community-based participatory research is a way to address problems that cannot be adequately understood or ameliorated by other methods, procedures for conducting this type of research should be adopted and expanded. Understanding the problem from those who are at risk can provide solutions that others cannot fathom; therefore, time and money must be invested to conduct the type of research that leads to the greatest and most effective impacts.

## REFERENCES


Alio, A. P., Kornosky, J. L., Mbah, A. K., Marty, P. J., & Salihu, H. M. (2010). The impact of paternal involvement on feto-infant morbidity among Whites, Blacks and Hispanics. *Maternal and Child Health Journal*, *14*(5), 735–741. doi:10.1007/s10995-009-0482-1

Boss, P., Bryant, C. M., & Mancini, J. A. (2017). Family stress management: A contextual approach, 24–52. doi:10.4135/9781506352206.n2

Braveman, P., & Gottlieb, L. (2014). The social determinants of health: It's time to consider the causes of the causes. *Public Health Reports*, *129*(1_suppl2), 19–31. doi:10.1177/00333549141291s206

Centers for Disease Control. (2016, November 10). Preterm birth. Retrieved from Reproductive Health: https://www.cdc.gov/reproductivehealth/maternalinfanthealth/pretermbirth.htm

Central Intelligence Agency. (n.d.). Country comparison: Infant mortality rate. Retrieved from The World Factbook: https://www.cia.gov/library/publications/the-world-factbook/rankorder/2091rank.html

Cheng, D., Schwarz, E. B., Douglas, E., & Horon, I. (2009). Unintended pregnancy and associated maternal preconception, prenatal and postpartum behaviors. *Contraception*, *79*(3), 194-198. doi:10.1016/j.contraception.2008.09.009

Cowan, P. A., Cowan, C., & Knox, V. (2010). Marriage and fatherhood programs. *The Future of Children*, *20*(2), 205–230. doi:10.1353/foc.2010.0000

Creswell, J. W. (2013). *Research design: qualitative, quantitative, and mixed methods approaches* (4th ed.). Los Angeles, CA: SAGE.

D'Angelo, D., Williams, L., Morrow, B., Cox, S., Harris, N., Harrison, L., … for and (CDC), C. (2007). Preconception and interconception health status of women who recently gave birth to a live-born infant--Pregnancy Risk Assessment Monitoring System (PRAMS), United States, 26 reporting areas, 2004. *Morbidity and Mortality Weekly Report. Surveillance Summaries (Washington, D.C.: 2002)*, *56*(10), 1–35.

Edmonds, B., Mogul, M., & Shea, J. A. (2015). understanding low-income African American women's expectations, preferences, and priorities in prenatal care. *Family & Community Health*, 38(2), 149–157. doi:10.1097/fch.0000000000000066

Eisengart, S. P., Singer, L. T., Fulton, S., & Baley, J. E. (2003). Coping and psychological distress in mothers of very low birth weight young children. *Parenting*, *3*(1), 49–72. doi:10.1207/s15327922par0301_03

Feinberg, M. E., Kan, M. L., & Goslin, M. C. (2009). Enhancing coparenting, parenting, and child self-regulation: Effects of family foundations 1 year after birth. *Prevention Science*, *10*(3), 276– 285. doi:10.1007/s11121-009-0130-4

Feinberg, M. E., Roettger, M. E., Jones, D. E., Paul, I. M., & Kan, M. L. (2015). Effects of a psychosocial couple-based prevention program on adverse birth outcomes. *Maternal and Child Health Journal*, *19*(1), 102–111. doi:10.1007/s10995-014-1500-5

Finer, L. B., & Zolna, M. R. (2011). Unintended pregnancy in the United States: Incidence and disparities, 2006. *Contraception*, *84*(5), 478–485. doi:10.1016/j.contraception.2011.07.013

Fort, A. L., & Voltero, L. (2004). Factors affecting the performance of maternal health care providers in Armenia. *Human Resources for Health*, *2*(1), 8. doi:10.1186/1478-4491-2-8

Gatny, H. H., & Axinn, W. G. (2012). Willingness to participate in research during pregnancy. *Field Methods*, *24*(2), 135–154. doi:10.1177/1525822x11419819

Gilmer, C., Buchan, J. L., Letourneau, N., Bennett, C. T., Shanker, S. G., Fenwick, A., & Smith-Chant, B. (2016). Parent education interventions designed to support the transition to parenthood: A realist review. *International Journal of Nursing Studies*, *59*, 118–133. doi:10.1016/j.ijnurstu.2016.03.015

Hamilton, B. E., Martin, J. A., Osterman, M. J., Curtin, S. C., & Matthews, T. (2015). Births: Final data for 2014. *National Vital Statistics Reports: From the Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System*, *64*(12), 1–64.

Harelick, L., Viola, D., & Tahara, D. (2011). Preconception health of low socioeconomic status women: Assessing knowledge and behaviors. *Women's Health Issues*, *21*(4), 272–276. doi:10.1016/j.whi.2011.03.006

Hohmann-Marriott, B. (2009). The couple context of pregnancy and its effects on prenatal care and birth outcomes. *Maternal and Child Health Journal*, *13*(6), 745. doi:10.1007/s10995-009-0467-0

Hohmann-Marriott, B. (2011). Coparenting and father involvement in married and unmarried coresident couples. *Journal of Marriage and Family*, *73*(1), 296–309. doi:10.1111/j.1741- 3737.2010.00805.x

Ickovics, J. R., Kershaw, T. S., Westdahl, C., Magriples, U., Massey, Z., Reynolds, H., & Rising, S. (2007). Group prenatal care and perinatal outcomes. *Obstetrics & Gynecology*, *110*(2, Part 1), 330–339. doi:10.1097/01.aog.0000275284.24298.23

Jackson, A. P. (1998). The role of social support in parenting for low-income, single, Black mothers. *Social Service Review*, *72*(3), 365–378. doi:10.1086/515763

Johnson, W. E. (2001). Paternal involvement among unwed fathers. *Children and Youth Services Review*, *23*(6–7), 513–536. doi:10.1016/s0190-7409(01)00146-3

Kim, D., & Saada, A. (2013). The social determinants of infant mortality and birth outcomes in western developed nations: A cross-country systematic review. *International Journal of Environmental Research and Public Health*, *10*(6), 2296–2335. doi:10.3390/ijerph10062296

Kochanek, K. D., Murphy, S. L., Xu, J., & Tejada-Vera, B. (2016). Deaths: Final data for 2014. *National Vital Statistics Reports: From the Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System*, 65(4), 1–122.

MacDorman, M. F., Matthews, T., Mohangoo, A. D., & Zeitlin, J. (2014). International comparisons of infant mortality and related factors: United States and Europe, 2010. *National Vital Statistics Reports: From the Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System*, *63*(5), 1–6.

Mammen, S., & Sano, Y. (2012). Gaining access to economically marginalized rural populations: Lessons learned from nonprobability sampling. *Rural Sociology*, *77*(3), 462–482. doi:10.1111/j.1549-0831.2012.00083.x

Maternal and Child Health Bureau. (2006). Evidence of trends, risk factors, and intervention strategies. *United States Department of Health and Human Services*.

McHale, J. P., Salman-Engin, S., & Coovert, M. D. (2015). Improvements in unmarried African American parents' rapport, communication, and problem-solving following a prenatal coparenting intervention. *Family Process*, *54*(4), 619–629. doi:10.1111/famp.12147

McLanahan, S., & Beck, A. N. (2010). Parental relationships in fragile families. *The Future of Children*, *20*(2), 17–37. doi:10.1353/foc.2010.0007

Michigan Department of Community Health. (2017a). [Data Set]. Summary of 2015 infant death statistics. Retrieved from http://www.mdch.state.mi.us/pha/osr/InDxMain/InfSum05.asp

Michigan Department of Community Health. (2017b). [Data Set]. Chart of infant death by race. Retrieved from number of infant deaths, live births and infant death rate for Michigan residents, 1970-2015: http://www.mdch.state.mi.us/pha/osr/InDxMain/Tab2.asp

Michigan Department of Community Health. (2017c). Table 15-C. [Data Set]. Retrieved from Black three-year moving average infant death rates by county Michigan residents, 2004-2015: http://www.mdch.state.mi.us/pha/osr/InDxMain/BckCoTbl.asp

Michigan Department of Community Health. (2017d). Table 6. [Data Set]. Retrieved from Number of infant deaths, live births and infant death rates by selected characteristics of newborn and of mother for Michigan residents, 2015: http://www.mdch.state.mi.us/pha/osr/InDxMain/Tab6.asp

Michigan Department of Community Health. (2017e). Table 15-B. [Data Set]. Retrieved from White three-year moving average infant death rates by county Michigan residents, 2004-2015: http://www.mdch.state.mi.us/pha/osr/InDxMain/WtCoTbl.asp

Michigan Department of Community Health. (2017f). [Data Set]. Unintended estimates. Retrieved from Pregnancies, abortions and estimated unintended pregnancies females age 15-44 Michigan residents, 2001-2011: http://www.mdch.state.mi.us/osr/Abortion/unintendestimates.asp

Novick, G., Sadler, L. S., Kennedy, H., Cohen, S. S., Groce, N. E., & Knafl, K. A. (2011). Women's experience of group prenatal care. *Qualitative Health Research*, *21*(1), 97–116. doi:10.1177/1049732310378655

Nylen, K. J., O'Hara, M. W., & Engeldinger, J. (2013). Perceived social support interacts with prenatal depression to predict birth outcomes. *Journal of Behavioral Medicine*, *36*(4), 427–440. doi:10.1007/s10865-012-9436-y

Orr, S. T., James, S. A., & Reiter, J. P. (2008). Unintended pregnancy and prenatal behaviors among urban, Black women in Baltimore, Maryland: The Baltimore preterm birth study. *Annals of Epidemiology*, *18*(7), 545–551. doi:10.1016/j.annepidem.2008.03.005

Padilla, Y. C., & Reichman, N. E. (2001). Low birthweight: Do unwed fathers help? *Children and Youth Services Review*, *23*(4–5), 427–452. doi:10.1016/s0190-7409(01)00136-0

Sanders-Phillips, K., & Davis, S. (1998). Improving prenatal care services for low-income African American women and infants. *Journal of Health Care for the Poor and Underserved*, *9*(1), 14–29. doi:10.1353/hpu.2010.0364

Santelli, J., Rochat, R., Hatfield-Timajchy, K., Gilbert, B., Curtis, K., Cabral, R., Hirsch, J. S., Schieve, L. and Unintended Pregnancy Working Group. (2003). The measurement and meaning of unintended pregnancy. *Perspectives on Sexual and Reproductive Health*, *35*(2), 94–101. doi:10.1363/3509403

Secretary Advisory Committee on Infant Mortality. (2013). Recommendations for HHS action and framework for a national strategy. *Department of Health and Human Services*.

Shapiro, A. F., Nahm, E., Gottman, J. M., & Content, K. (2011). Bringing Baby Home Together: examining the impact of a couple-focused intervention on the dynamics within family play. *American Journal of Orthopsychiatry*, *81*(3), 337–350. doi:10.1111/j.1939-0025.2011.01102.x

Snyder, A. R., McLaughlin, D. K., & Findeis, J. (2006). Household composition and poverty among female-headed households with children: Differences by race and residence. *Rural Sociology*, *71*(4), 597–624. doi:10.1526/003601106781262007

Teitler, J. O. (2001). Father involvement, child health and maternal health behavior. *Children and Youth Services Review*, *23*(4–5), 403–425. doi:10.1016/s0190-7409(01)00137-2

United States Census Bureau. (2016a). Women 15 to 50 years who had a birth in the past 12 months by marital status (Black or African American alone). [Data Set]. Retrieved from American Fact Finder: https://factfinder.census.gov/bkmk/table/1.0/en/ACS/14_1YR/B13002B/1600000US2622000

United States Census Bureau. (2016b). *Women 15 to 50 years who had a birth in the past 12 months by marital status (Black or African American alone)*. [Data Set]. Retrieved from American Fact Finder: https://factfinder.census.gov/bkmk/table/1.0/en/ACS/14_1YR/B13002B/1600000US2634000

United States Census Bureau. (2016c). *Women 15 to 50 years who had a birth in the past 12 months by marital status (Black OR African American alone)*. [Data Set]. Retrieved from American Fact Finder: https://factfinder.census.gov/bkmk/table/1.0/en/ACS/14_1YR/B13002B/1600000US2642160

United States Census Bureau. (2016d). *Women 15 to 50 years who had a birth in the past 12 months by marital status (White alone)*. [Data Set]. Retrieved from American Fact Finder: https://factfinder.census.gov/bkmk/table/1.0/en/ACS/14_1YR/B13002A/0400000US26|1600000US2622000

United States Census Bureau. (2016e). *Women 15 to 50 years who had a birth in the past 12 months by marital status (White alone)*. [Data Set]. Retrieved from American Fact Finder:

https://factfinder.census.gov/bkmk/table/1.0/en/ACS/14_1YR/B13002A/0400000US26|1600000US2634000

United States Census Bureau. (2016F). *Women 15 to 50 years who had a birth in the past 12 months by marital status (White alone)*. [Data Set]. Retrieved from American Fact Finder: https://factfinder.census.gov/bkmk/table/1.0/en/ACS/14_1YR/B13002A/0400000US26|1600000US2642160

Vonderheid, S. C., Montgomery, K. S., & Norr, K. F. (2003). Ethnicity and prenatal health promotion content. *Western Journal of Nursing Research*, *25*(4), 388–404. doi:10.1177/0193945903025004005

Ward, T. C., Mazul, M., Ngui, E. M., Bridgewater, F. D., & Harley, A. E. (2013). "You learn to go last": Perceptions of prenatal care experiences among African-American women with limited incomes. *Maternal and Child Health Journal*, *17*(10), 1753–1759. doi:10.1007/s10995-012-1194-5

Wilkerson, M. J., Iantaffi, A., Grey, J. A., Bockting, W. O., & Rosser, S. B. (2014). Recommendations for internet-based qualitative health research with hard-to-reach populations. *Qualitative Health Research*, *24*(4), 561–574. doi:10.1177/1049732314524635

Yancey, A. K., Ortega, A. N., & Kumanyika, S. K. (2006). Effective recruitment and retention of minority research participants. *Annual Review of Public Health*, *27*(1), 1–28. doi:10.1146/annurev.publhealth.27.021405.102113

Zimmerman, N., & Larder, C. M. (2010). Michigan Pregnancy Risk Assessment Monitoring System (PRAMS) 2010 Preliminary Data Tables.

# APPENDICES

## APPENDIX A - HSIRB APPROVAL

WESTERN MICHIGAN UNIVERSITY

Human Subjects Institutional Review Board

Date: October 11, 2017

To: Kimberly Doudna, Principal Investigator
Jordan Ebanaya, Student Investigator for Thesis

From: Amy Naugle, Ph.D., Chair

Re: HSIRB Project Number 17-08-11

This letter will serve as confirmation that your research project titled "Supporting Black Mothers at the Transition: A Collaborative Design Prenatal Coparenting Program" has been **approved** under the **expedited** category of review by the Human Subjects Institutional Review Board. The conditions and duration of this approval are specified in the Policies of Western Michigan University. You may now begin to implement the research as described in the application.

Please note: This research may **only** be conducted exactly in the form it was approved. You must seek specific board approval for any changes in this project (e.g., ***you must request a post approval change to enroll subjects beyond the number stated in your application under "Number of subjects you want to complete the study***)." Failure to obtain approval for changes will result in a protocol deviation. In addition, if there are any unanticipated adverse reactions or unanticipated events associated with the conduct of this research, you should immediately suspend the project and contact the Chair of the HSIRB for consultation.

**Reapproval of the project is required if it extends beyond the termination date stated below.**

The Board wishes you success in the pursuit of your research goals.

**Approval Termination:** **October 10, 2018**

1903 W. Michigan Ave., Kalamazoo, MI 49008-5456
PHONE: (269) 387-8293 FAX: (269) 387-8276
CAMPUS SITE: 251 W. Walwood Hall

## APPENDIX B – PROFESSIONAL PARTICIPANT ONLINE CONSENT FORM

**Family and Consumer Sciences**

**Principal Investigator:** Kimberly Doudna, Ph. D.
**Student Investigator:** Jordan Ebanaya
**Title of Study:** Supporting Black Mothers at the Transition: A collaborative design prenatal coparenting program

You are invited to participate in a research project titled "Supporting Black Mothers at the Transition: A collaborative design prenatal coparenting program" This project will serve as Jordan Ebanaya's thesis for the requirements of the Master's degree. This consent document will explain the purpose of this research project and will go over all of the time commitments, the procedures used in the study, and the risks and benefits of participating in this research project. Please read this consent form carefully and completely and please ask any questions if you need more clarification.

**What are we trying to find out in this study?**
Research shows that prenatal coparenting programs can be helpful for new moms and dads as they adjust to parenthood. We want to know what content would be helpful for new parents to learn.

**Who can participate in this study?**
Pregnancy service providers such as doctors, midwives, doulas, lactation consultants, home visitors, social workers, etc. who see expectant mothers and their support persons as a regular aspect of their business.

**Where will this study take place?**
Surveys will take place online.

**What is the time commitment for participating in this study?**
The survey will take approximately 10-15 minutes.

**What will you be asked to do if you choose to participate in this study?**
If you choose to participate in this study, you will be asked to complete an online survey.

**What information is being measured during the study?**
We are measuring topics for a prenatal coparenting program that would be helpful for new parents to learn in a group educational setting.

**What are the risks of participating in this study and how will these risks be minimized?**
There are no risks for participating in this study.

**What are the benefits of participating in this study?**

Benefits of this study include the following:
- You may feel a sense of accomplishment by lending your expertise to this study
- You may feel a sense of pride in knowing that your expertise is valued by Western Michigan University
- You may increase your interest in learning about coparenting
- You may be able to offer more information about education or prenatal coparenting to your clients

**Are there any costs associated with participating in this study?**
There are no costs to you for participating in this study.

**Is there any compensation for participating in this study?**
There is no compensation for your participation in the study.

**Who will have access to the information collected during this study?**
All data will be collected anonymously. Only the principal investigator and student investigator will have direct access to the data. After the data is summarized it will be presented to organizations who are interested in reducing infant mortality rates.

**What if you want to stop participating in this study?**
You can choose to stop participating in the study at anytime for any reason. You will not suffer any penalty by your decision to stop your participation. You will experience NO consequences if you choose to withdraw from this study.

The investigator can also decide to stop your participation in the study without your consent.

Should you have any questions prior to or during the study, you can contact the primary investigator, Kimberly Doudna at 269-387-3702 or Kimberly.Doudna@wmich.edu. You may also contact the Chair, Human Subjects Institutional Review Board at 269-387-8293 or the Vice President for Research at 269-387-8298 if questions arise during the course of the study.

This consent has been approved by the Western Michigan University Human Subjects Institutional Review Board (HSIRB) on October 11, 2018 Do not participate after October 10, 2019

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I have read this informed consent document. The risks and benefits have been explained to me. I agree to take part in this study.

Please click "continue" Below if you agree to take part in this study, If you do not agree you may simply close your browser window.

## APPENDIX C – EXPECTANT MOTHER PARTICIPANTS ONLINE CONSENT FORM

Family and Consumer Sciences

Principal Investigator: Kimberly Doudna, Ph. D.
Student Investigator: Jordan Ebanaya
Title of Study: Supporting Black Mothers at the Transition: A collaborative design prenatal coparenting program
You are invited to participate in a research project titled "Supporting Black Mothers at the Transition: A collaborative design prenatal coparenting program" This project will serve as Jordan Ebanaya's thesis research for the in partial fulfillment of the Master's degree. This consent document will explain the purpose of this research project and will go over all of the time commitments, the procedures used in the study, and the risks and benefits of participating in this research project. Please read this consent form carefully and completely and please ask any questions if you need more clarification.

**What are we trying to find out in this study?**
Research shows that prenatal coparenting programs can be helpful for new moms and dads as they adjust to parenthood. We want to know what would be helpful to learn and what would encourage you to attend a prenatal coparenting program with your primary coparent.

**Who can participate in this study?**
Women who identify as Black (or African American), are over age 18, are not married, are expecting their first child and who live in the Grand Rapids, Kalamazoo or Detroit metro areas are eligible to participate.

**Where will this study take place?**
Surveys will be completed online.

**What is the time commitment for participating in this study?**
The survey will take approximately 10-15 minutes.

**What will you be asked to do if you choose to participate in this study?**
If you choose to participate in this study, you will be asked to complete an online survey.

**What information is being measured during the study?**
We are measuring topics of education that would be helpful to learn in a prenatal coparenting program.

**What are the risks of participating in this study and how will these risks be minimized?**
The risks for participating in this study are limited. Your participation in the survey is completely anonymous.

**What are the benefits of participating in this study?**
Benefits of this study include the following:
- You may feel a sense of accomplishment by lending your expertise to this study
- You may feel a sense of pride in knowing that your expertise is valued by Western Michigan University
- You may increase your interest in learning about coparenting

**Are there any costs associated with participating in this study?**
There are no costs to you for participating in this study.

**Is there any compensation for participating in this study?**
As a thank you for completing both the online survey and in-person focus group or interview you will receive a $20 gift card and be entered into a drawing for a $100 gift card.

**Who will have access to the information collected during this study?**
Only the principal investigator and student investigator will have direct access to the data. After the data is summarized (without any identifying information or names) it will be presented to organizations who are interested in reducing infant mortality rates. As stated, all names, or other identifying information will be removed from data before it is shared.

**What if you want to stop participating in this study?**
You can choose to stop participating in the study at any time for any reason. You will not suffer any penalty by your decision to stop your participation. You will experience NO consequences if you choose to withdraw from this study.

The investigator can also decide to stop your participation in the study without your consent.

Should you have any questions prior to or during the study, you can contact the primary investigator, Kimberly Doudna at 269-387-3702 or Kimberly.Doudna@wmich.edu. You may also contact the Chair, Human Subjects Institutional Review Board at 269-387-8293 or the Vice President for Research at 269-387-8298 if questions arise during the course of the study.

This consent has been approved by the Western Michigan University Human Subjects Institutional Review Board (HSIRB) on October 11, 2018 Do not participate after October 10, 2019.

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I have read this informed consent document. The risks and benefits have been explained to me. I agree to take part in this study.

Please click **"continue"** Below if you agree to take part in this study, If you do not agree you may simply close your browser window.

## APPENDIX D – FOCUS GROUP ONLINE CONSENT FORM

**Family and Consumer Sciences**

**Principal Investigator:** Kimberly Doudna, Ph. D.
**Student Investigator:** Jordan Ebanaya
**Title of Study:** Supporting Black Mothers at the Transition: A collaborative design prenatal coparenting program
You are invited to participate in a research project titled "Supporting Black Mothers at the Transition: A collaborative design prenatal coparenting program" This project will serve as Jordan Ebanaya's thesis for the requirements of the Master's degree. This consent document will explain the purpose of this research project and will go over all of the time commitments, the procedures used in the study, and the risks and benefits of participating in this research project. Please read this consent form carefully and completely and please ask any questions if you need more clarification.

**What are we trying to find out in this study?**
Research shows that prenatal coparenting programs can be helpful for new moms and dads as they adjust to parenthood. We want to know what would be helpful to learn and what would encourage you to attend a prenatal coparenting program with your primary coparent.

**Who can participate in this study?**
Women who identify as Black (or African American), are over age 18, are not married, are expecting their first child and who live in the Grand Rapids, Kalamazoo or Detroit metro areas are eligible to participate.

**Where will this study take place?**
Focus Groups or interviews will happen at:

Planned Parenthood Kalamazoo Health Center
4201 W Michigan Ave Kalamazoo, MI 49006

Planned Parenthood Irwin/Martin Health Center
425 Cherry St. SE Grand Rapids, MI 49503

Planned Parenthood Detroit Health Center
4229 Cass Ave. Detroit, MI 48201

**What is the time commitment for participating in this study?**
The focus group or interview will take approximately 90 minutes.

**What will you be asked to do if you choose to participate in this study?**

If you choose to participate in this study, you will be asked to attend an in-person focus group or interview.

**What information is being measured during the study?**
We are measuring criteria for a prenatal coparenting program that would encourage you to attend. These criteria can relate to time, characteristics of the instructor, program length and duration, and content delivery.

**What are the risks of participating in this study and how will these risks be minimized?**
The risks for participating in this study are limited. The focus group or interview will take place in a private room at a public building during regular business hours, there is a chance that you may see someone that you know and they may know that you are participating in this research study. All data collected by the study will have names and identifying information removed.

**What are the benefits of participating in this study?**
Benefits of this study include the following:
- You may feel a sense of accomplishment by lending your expertise to this study
- You may feel a sense of pride in knowing that your expertise is valued by Western Michigan University
- You may increase your interest in learning about coparenting

**Are there any costs associated with participating in this study?**
There are no costs to you for participating in this study.

**Is there any compensation for participating in this study?**
As a thank you for completing the both the online survey and in-person focus group or interview you will receive a $20 gift card and be entered into a drawing for a $100 gift card.

**Who will have access to the information collected during this study?**
Only the principal investigator and student investigator will have direct access to the data. After the data is summarized (without any identifying information or names) it will be presented to organizations who are interested in reducing infant mortality rates. As stated, all names, or other identifying information will be removed from data before it is shared.

**What if you want to stop participating in this study?**
You can choose to stop participating in the study at anytime for any reason. You will not suffer any penalty by your decision to stop your participation. You will experience NO consequences if you choose to withdraw from this study.

The investigator can also decide to stop your participation in the study without your consent.

Should you have any questions prior to or during the study, you can contact the primary investigator, Kimberly Doudna at 269-387-3702 or Kimberly.Doudna@wmich.edu. You

may also contact the Chair, Human Subjects Institutional Review Board at 269-387-8293 or the Vice President for Research at 269-387-8298 if questions arise during the course of the study.

This consent has been approved by the Western Michigan University Human Subjects Institutional Review Board (HSIRB) on October 11, 2018 Do not participate after October 10, 2019

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I have read this informed consent document. The risks and benefits have been explained to me. I agree to take part in this study.

Please click "continue" Below if you agree to take part in this study, If you do not agree you may simply close your browser window.

## APPENDIX E – PROFESSIONAL PARTICIPANT SURVEY

Professional Participants - Survey

Tell me about yourself and your practice.

How do you identify... (check all that apply)?
Black or African American
Hispanic, Latin or Spanish Origin
American Indian or Alaska Native
Asian
Native Hawaiian or Pacific Islander
White
Other _____

Please indicate your age
Under 18
18 - 24
25 - 34
35 - 44
45 - 54
55 - 64
65 - 74
75 - 84
85 or older

What type of service do you provide (select the best choice)?
Medical
Labor/Birth Services
Education
Social Work
Home Visiting
Other _____

Do you accept Insurance?
Yes
No

Display This Question:
If Do you accept Insurance? Yes, Is Selected
Please Indicate the types of insurance that you accept
Private
Medicaid

What is the most common payment method for your services?

cash
care credit
Medicaid
private insurance
other _____

Tell me about your clients.

Carry Forward All Choices - Displayed & Hidden from "How do you identify... (check all that apply)"
Rank the race of your clients from most common (1) to least common (6)

_____ Black or African American
_____ Hispanic, Latin or Spanish Origin
_____ American Indian or Alaska Native
_____ Asian
_____ Native Hawaiian or Pacific Islander
_____ White
_____ Other

Indicate the average income level of your clients.
Less than $10,000
$10,000 - $19,999
$20,000 - $29,999
$30,000 - $39,999
$40,000 - $49,999
$50,000 - $59,999
$60,000 - $69,999
$70,000 - $79,999
$80,000 - $89,999
$90,000 - $99,999
$100,000 - $149,999
More than $150,000

Indicate the average level of education for your clients.
Less than high school
High school graduate
Some college
2-year degree
4-year degree
Professional degree
Doctorate

How many total sessions do you usually have with each client?
1 - 3
4-6

7 - 10
11 - 15
16 - 20
more than 20

How long does a typical session last?
0 - 15 minutes
16 - 30 minutes
31 - 45 minutes
46 - 60 minutes
over 1 hour
over 2 hours

Which of the following prenatal and postpartum education topics do you usually cover with each client? (select all that apply)
Breastfeeding
Nutrition/Weight Management
Stress Management
Social Support
Labor/Birth
Safe Sleep
Attachment
Postpartum Depression
Postpartum care for mother
Postpartum care for baby
None of the Above
Other _____

Carry Forward Selected Choices from "Which of the following prenatal and postpartum education topics do you usually cover with each client? (select all that apply)"
How much time on average do you spend on each educational topic?

| | 0 - 15 minutes | 16 - 30 minutes | 31 - 45 minutes | 45 - 60 minutes | over 1 hour |
|---|---|---|---|---|---|
| Breastfeeding | | | | | |
| Nutrition/Weight Management | | | | | |
| Stress Management | | | | | |
| Social Support | | | | | |
| Labor/Birth | | | | | |
| Safe Sleep | | | | | |
| Attachment | | | | | |
| Postpartum Depression | | | | | |
| Postpartum care for mother | | | | | |
| Postpartum care for baby | | | | | |
| None of the Above | | | | | |
| Other | | | | | |

Carry Forward All Choices - Displayed & Hidden from "Which of the following prenatal and postpartum education topics do you usually cover with each client? (select all that apply)" Please indicate any areas of education where your clients would benefit from more resources or increased education.
Breastfeeding
Nutrition/Weight Management
Stress Management
Social Support
Labor/Birth
Safe Sleep
Attachment
Postpartum Depression
Postpartum care for mother
Postpartum care for baby
None of the Above
Other _____

Do you provide referral or information about community resources?
Yes, only if asked
Yes, as needed
Yes, to all clients
No

How knowledgeable do you think your clients are about prenatal education topics?

Extremely knowledgeable
Very knowledgeable
Moderately knowledgeable
Slightly knowledgeable
Not knowledgeable at all

How knowledgeable do you think your clients are about labor/birthing? 
Extremely knowledgeable
Very knowledgeable
Moderately knowledgeable
Slightly knowledgeable
Not knowledgeable at all

How knowledgeable do you think your clients are about postpartum expectations and adjustment?
Extremely knowledgeable
Very knowledgeable
Moderately knowledgeable
Slightly knowledgeable
Not knowledgeable at all

Do you think that your clients would benefit from additional prenatal and postpartum education?
Definitely yes
Probably yes
Might or might not
Probably not
Definitely not

Display This Question:
If Do you think that your clients would benefit from additional prenatal and postpartum education? Definitely yes Is Selected
And Do you think that your clients would benefit from additional prenatal and postpartum education? Probably yes Is Selected
And Do you think that your clients would benefit from additional prenatal and postpartum education? Might or might not Is Selected
Please Identify any topics that your clients would benefit from in terms of the provision of additional education.

Most of your clients usually attend sessions...
Always Alone
Usually Alone
Usually with a family member/support person
Always with a family member/support person

Do you have any educational materials that are designed for the support person/Father of the Baby/Coparent?
Yes
Maybe
No

**APPENDIX F – EXPECTANT MOTHER QUALIFIER**

Expectant Mother Participants – Qualifier

Biological Sex...
Female
Male

How do you identify?
Female
Male
Transgender
Neither Male/Female/Nor Transgender
None of these suits me: (fill in) _____

Please identify your ethnicity (check all that apply).
Black or African American
Hispanic, Latin or Spanish Origin
American Indian or Alaska Native
Asian
Native Hawaiian or Pacific Islander
White
Other _____

Do you have living children?
Yes
No

Which choice best describes your relationship status?
Married
Widowed
Divorced
Separated
Committed Relationship
Dating
Single/ No Partner

Are you currently pregnant?
Yes
Maybe
No

Display This Question:
If Are you currently pregnant? Yes Is Selected
How many weeks pregnant are you?

Display This Question:
If Are you currently pregnant? Yes Is Selected
Are you expecting
One (1) baby
Twins/Multiples

Please identify your highest level of education completed.
Less than high school
High school graduate
Some college
2-year degree
4-year degree
Professional degree
Doctorate

Please identify your age.
Under 18
18 - 24
25 - 34
35 - 44
45 - 54
55 - 64
65 - 74
75 - 84
85 or older

What is your household income level?
Less than $10,000
$10,000 - $19,999
$20,000 - $29,999
$30,000 - $39,999
$40,000 - $49,999
$50,000 - $59,999
$60,000 - $69,999
$70,000 - $79,999
$80,000 - $89,999
$90,000 - $99,999
$100,000 - $149,999
More than $150,000

**APPENDIX G – EXPECTANT MOTHER SURVEY**

How many people will be helping you with bathing, feeding, and dressing the baby?
0 -1
2 - 4
5+

Who will be helping you with bathing, feeding, and dressing the baby? (check all that apply)
Father of the Baby (FoB)
Partner (not father of the baby)
your mother
your father
your grandmother
your grandfather
your aunt
your cousin
FoB's Mother
FoB's Father
FoB's grandmother
FoB's grandfather
Friend/Non-relative who you live with
Friend/Non-relative who you do not live with
Other _____

Carry Forward Selected Choices from "Who will be helping you with bathing, feeding, and dressing the baby? (check all that apply)"
How often do you expect each person to help with bathing, feeding, and dressing the baby?

| | Daily | 4-6 times a week | 2-3 times a week | Once a week | 2-3 Times a month | Monthly | Occasionally | Rarely |
|---|---|---|---|---|---|---|---|---|
| Father of the Baby (FoB) | | | | | | | | |
| Partner (not father of the baby) | | | | | | | | |
| your mother | | | | | | | | |
| your father | | | | | | | | |
| your grandmother | | | | | | | | |
| your grandfather | | | | | | | | |
| your aunt | | | | | | | | |
| your cousin | | | | | | | | |
| FoB's Mother | | | | | | | | |
| FoB's Father | | | | | | | | |
| FoB's grandmother | | | | | | | | |
| FoB's grandfather | | | | | | | | |
| Friend/Non-relative who you live with | | | | | | | | |
| Friend/Non-relative who you do not live with | | | | | | | | |
| Other | | | | | | | | |

During this pregnancy please identify all types of professionals you have seen.
OB/GYN
Registered Nurse (RN)
Maternal and Fetal Medicine Specialist
Lactation Consultant
Social Worker
Midwife
Nurse Practitioner
Case Manager
Doula
Home Visiting Nurse
Other _____

Carry Forward Selected Choices from "During this pregnancy please identify all types of professionals you have seen."

Where have you receive prenatal education? (Select All that Apply)

| | | | Stress Management | Nutrition | Family/Friends Support | Labor/Birth | Attachment | Community Resources | Post Partum Depression | Post Partum Mom/Baby Care | Bonding |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Internet | | | | | | | | | | | |
| Books | | | | | | | | | | | |
| Friends/Family | | | | | | | | | | | |
| OB/GYN | | | | | | | | | | | |
| Registered Nurse (RN) | | | | | | | | | | | |
| Maternal and Fetal Medicine Specialist | | | | | | | | | | | |
| Lactation Consultant | | | | | | | | | | | |
| Social Worker | | | | | | | | | | | |
| Midwife | | | | | | | | | | | |
| Nurse Practitioner | | | | | | | | | | | |
| Case Manager | | | | | | | | | | | |
| Doula | | | | | | | | | | | |
| Home Visiting Nurse | | | | | | | | | | | |
| Other | | | | | | | | | | | |

How knowledgeable do you feel about each topic?

| | Extremely knowledgeable | Very knowledgeable | Moderately knowledgeable | Slightly knowledgeable | Not knowledgeable at all |
|---|---|---|---|---|---|
| Safe Sleep | | | | | |
| Breastfeeding | | | | | |
| Stress Management | | | | | |
| Attachment | | | | | |
| Nutrition | | | | | |
| Labor/Birth | | | | | |
| Community Resources | | | | | |
| Support | | | | | |
| Postpartum Depression | | | | | |
| Postpartum Care for Mom | | | | | |
| Postpartum Care for Baby | | | | | |

Are there any topics that you wish you would have learned more about from your healthcare providers?

What word best describes your relationship with the father of the baby?
Committed
Dating
Friendly
Non-Friendly
Disconnected
Unavailable
Unknown

Was this pregnancy planned or unplanned?
Planned
Unplanned
Prefer not to answer

Display This Question:
If Was this pregnancy planned or unplanned? Unplanned Is Selected
Which of the following best describe this pregnancy?
I wanted to have a baby at another time
I wanted to have a baby with a different partner
I did not want to have a baby

Did the father of the baby suggest an abortion?
Yes
No
He does not know/Unavailable

Tell me about the person who will be your primary parenting partner.

Carry Forward All Choices - Displayed & Hidden from "Who will be helping you with bathing, feeding, and dressing the baby? (check all that apply)"
Who will be your primary parenting partner (coparent)?
Father of the Baby (FoB)
Partner (not father of the baby)
your mother
your father
your grandmother
your grandfather
your aunt
your cousin
FoB's Mother
FoB's Father
FoB's grandmother

FoB's grandfather
Friend/Non-relative who you live with
Friend/Non-relative who you do not live with
Other _____

When the baby is born, will you live with your primary parenting partner (coparent)?
Definitely yes
Probably yes
Might or might not
Probably not
Definitely not

How comfortable do you feel that you will be making parenting decisions with your primary parenting partner on each of the following topics?

| | Extremely challenging | Very challenging | Moderately challenging | Slightly challenging | Not challenging at all |
|---|---|---|---|---|---|
| Discipline | | | | | |
| Splitting chores | | | | | |
| Finances | | | | | |
| Quality Time/Affection | | | | | |
| Setting Schedules | | | | | |

How would you rate your stress level BEFORE this pregnancy?
A great deal of stress
A lot of stress
A moderate amount of stress
A little stress
No stress at all

How would you rate your stress SINCE you found out you were pregnant?
A great deal of stress
A lot of stress
A moderate amount of stress
A little stress
No stress at all

Which of the following contribute to your current stress level?
finances
housing challenges
family problems

problems with partner/FoB
healthcare/insurance
other _____

Describe your current stress level.

Do you have any areas of concern about caring for your child?
Finances
Healthcare/Insurance
Safe Housing
Food/Nutrition
Time off work
Babysitter/Daycare
Breastfeeding
Emotional Support
Other _____

What areas do you need more support in?

## APPENDIX H – FOCUS GROUP PROTOCOL

*First, I want to thank all of you for coming out today. I appreciate you being here. My name is Jordan, I am a student at Western Michigan University. Before we get started there are a few things that I want to share with you about the study. The reason that I have invited each of you here today is because I want to know your thoughts about a program that I would like to create for Black women who are expecting. I am interested in hearing your thoughts, opinions, and experiences. During our session today, there will be an audio recorder here as well as my assistant (Name of Assistant) taking notes.*
To make sure that we have a safe a productive meeting today there are a few rules of respect that we want to keep in mind.

We want to respect you.
Please tell us what name you would like to be called; this can be anything you are comfortable with
Please only share information that you are comfortable sharing
We want you to respect each other.
Please do not share anyone's story outside of this room
Allow everyone to participate by not interrupting others. Speak up if you have something to say and allow others time to speak as well.
We want you to respect the process.
Please only share information that is a true experience.
Please do not share anyone else's story.

## APPENDIX I – FOCUS GROUP QUESTIONS

*If there are no questions, let's begin!*
Ice Breaker: Tell us a name or nickname that you would like to be called and one thing that you would love to receive as a gift for your baby.
There is a lot of information about pregnancy. Where do you find the most valuable information?
How can a loved one support you best as you become a mother?
The following five questions will explore the program preferences of the participants.
If a program was offered that you could attend with the person who will be primarily helping with childcare, what topics and skills would be important to cover?
What would make you want to attend a program like this?
What format of content delivery would be most convenient and effective?
What do you like most about the prenatal education you have received thus far? What would you change? What concerns do you have that were not addressed?
What types of things matter about the person who is leading this class? (race, gender, parent status, education)

Finally, participants will be asked to share any ideas that they did not have the chance to share before.
Is there anything else that you would add to a prenatal coparenting program?