

# POSTPARTUM LACTATION SUPPORT

Postpartum Breastfeeding Support for African American Women:

A Clinical Inquiry

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**Abstract**

African American women have the lowest breastfeeding initiation and continuation rates than any other race in the United States. They also have the highest maternal and infant mortality rates related to systemic racism and other issues. Studies have shown a positive correlation between lactation support programs and increased initiation and continuation rates, improving overall health outcomes. However, there is limited research specifically targeting African Americans. A mixed-method clinical inquiry was implemented to examine a postpartum lactation support intervention created for African-American families to increase initiation and continuation rates in the first six weeks of life. The theoretical frameworks used to guide this clinical inquiry were The Self-Efficacy Breastfeeding Theory and Logic Model. The findings included the following: 1) Enrollment by the target population was minimal, even with robust promotion. 2) Virtual visits were the preferred method of visits, 3) Breastfeeding education on pumping laws was a very pertinent part of the program, 4) The postpartum lactation did increase self-efficacy and confidence with breastfeeding and supported exclusive breastfeeding for the first six weeks of life. The participant experienced challenges that are not always overt experiences in systemic racism but oppressive in reaching breastfeeding goals. There is a need for more research to identify specific barriers to the target population to continue the work and increase these rates overall.

Key words: Breastfeeding support, self-efficacy, African American

### **Dedication**

My DNP is dedicated to my beautiful children, McKenzie, and Braxton. Everything I do is for you two. McKenzie, you have been on this journey with me since day one with my first degree. I love you both and hope I can serve as an example that you can do anything you put your mind to. Also, to my mother, Kimberly, who only had the opportunity to see me cross my first educational finish line of many. I hope you are proud of everything I have and plan to accomplish. Without you, I would not be the Woman I am today.

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Lactation support during the prenatal and postpartum periods strengthens breastfeeding outcomes in mothers and infants (CDC,2018). The Centers for Disease Control and Prevention (CDC) recommends that infants breastfeed exclusively for the first six months, as breastmilk contains the nutrients and water needed, then continue with complimentary food until age one or greater (CDC, 2018). Complimentary foods include iron-fortified cereals, oatmeal, yogurts,

pureed fruits, vegetables, and meats. According to the American Nurses Association (ANA), breastmilk has been a known medical intervention that is lifesaving (American Nurses Association, 2018). Parents continuously express how breastfeeding decreases the occurrence of their infants getting sick and contributes to their children's development and intelligence. Some parents swear by breastmilk to treat skin disorders such as eczema, psoriasis, pink eye, and other infections. Lactation is successful when an infant has a proper latch, gains adequate weight, and the mother is free of breast pain or complications (Jouanne et al., 2021).

### **Background and Significance**

Multiple factors affect breastfeeding success, including historical, cultural, social, economic, political, and psychosocial factors (Jones et al., 2015). These barriers impact African American and Hispanic women at higher rates. As a result, African American women are at an increased risk of adverse health outcomes, resulting in much higher maternal morbidity and mortality than white women (McKenzie-Sampson et al., 2021). Their infants are at greater risk for preterm birth, small weight for gestation age, and death (McKenzie-Sampson et al., 2021). Additionally, African American infants are three times more likely to die from complications related to low birth weight and have the highest mortality and morbidity rates connected to racial discrimination in American society (Manager et al., 2017).

Breastmilk is the healthiest food for infants and young children, benefiting both mother and child, especially in minorities (American Nurses Association, 2018). It reduces the chance of depression, ovarian, breast cancer, and other diseases for postpartum women (American Nurses Association, 2018). Minority women are more at risk for diabetes, cardiovascular disease, hyperlipidemia, hypertension, and obesity. Exclusive breastfeeding has been shown to reduce these issues through weight loss (Jones et al., 2015). For infants, breastfeeding reduces the risk

of sudden infant death syndrome, asthma, diabetes, obesity, childhood infections such as otitis media, and cancers like leukemia and lymphoma (Morris, Lee, & Williams, 2019).

In the United States, four out of five women of all races initiate breastfeeding after birth, with little over half continuing at six months, and thirty-five percent for the first year of life (CDC, 2018). Although the initiation rates are high, the rates of women who exclusively breastfeed for the first three months are less than fifty percent, with twenty-five percent discontinuing exclusive breastfeeding by three months of age (CDC, 2018). The Healthy People 2030 goals for breastfeeding include increasing the number of infants who exclusively breastfeed until six months to forty-two percent, and until age one to fifty-four percent (Health People, n.d.). African American women have a greater chance of not breastfeeding than white women, within the first two days of life, African American women are thirty-two percent more likely than any other minority group to supplement formula (Jones et al., 2015). Many factors contribute to these numbers, including but not limited to inequalities and systemic racism in the healthcare system, socioeconomic status, access to lactation resources, lack of lactation knowledge, discomfort/pain, employment, inconvenience, difficulty latching, inadequate milk production, and social support (Jones et al., 2015).

Working with low-income, predominantly black women in Flint, Michigan, during their pregnancy until their child turned two years of age in a home-based program shed light on breastfeeding gaps. Many women who voiced interest in breastfeeding during pregnancy were provided lactation education and support via Certified Lactation Counselors (CLC) and Registered Nurses (RN). The education and support were administered virtually and in person at multiple points during the prenatal and postpartum periods. Despite this, the initiation rates of breastfeeding for many clients were consistently higher than the continuation rates.



According to the Michigan Breastfeeding Network, Genesee County breastfeeding initiation rates are only fifty percent, while the state of Michigan is eighty-seven percent (Michigan Breastfeeding Network, n.d.). In addition, the continuation rates at two months for Michigan have decreased to sixty-six percent, while Genesee County rates are significantly lower at twenty percent (Michigan Breastfeeding Network, n.d.). More than half of this community is African American (fifty-four percent) and is greatly affected by issues such as access to clean water, high poverty (forty-one percent), and crime rates (United States Census Bureau, 2021).

Although breastfeeding is known to be beneficial to mother and baby, with it being the healthiest option for infants (American Nurses Association, 2018), African-American women still have the lowest breastfeeding rates than any other race (Jones et al., 2015). According to Jones et al. (2015), social support from providers, family members, employers, and access to lactation support both prenatally and postpartum play a factor in breastfeeding success. In addition, literacy, knowledge, socioeconomic status, and systemic racism within the healthcare system also contribute (Jones et al., 2015).

Personal observations in both the city of Flint and Genesee County reveal an increasing amount of African American women who plan to breastfeed but discontinue anywhere from the first week to the first month of life, many discontinuing within the first week. Mothers who do not have lactation support in the hospital or directly after discharge are more likely to stop breastfeeding or supplement with formula (CDC, 2013). During the hospital stay after birth, lactation assistance can sometimes be limited or non-existent, depending on staffing and the patient census. Even when hospital lactation services have contact with mothers, this may not be enough, and concerns sometimes occur after that visit and discharge. Issues arise about latching and breastfeeding adequacy, which may make mothers fear their infant is not getting enough

milk or is losing too much weight. Pain or discomfort due to improper latch also causes concerns. As a result, mothers may turn to supplementation or stop breastfeeding altogether, especially if staff mentions this during or after their hospital stay. African American women are also offered formula during hospitalization at higher rates than white women. Research reveals that African American women are thirty-two percent more likely to supplement within the first two days of life because of these factors, supporting the need for skilled lactation support to manage complex breastfeeding issues within the first two weeks of life (Francis et al., 2021; Jones et al., 2015).

### **Problem Statement**

African American infants and mothers are disproportionately impacted, with the highest maternal and infant morbidity and mortality rates. It is imperative to address the barriers to breastfeeding that have been shown to improve outcomes. Increasing breastfeeding initiation and continuation rates in African-American populations early within the postpartum period could assist in improving health outcomes for African-American infants and mothers.

### **Clinical Question**

In African American Women and Infants in Flint, Michigan, what is the effect of a postpartum lactation support program on the initiation and continuation of breastfeeding within six weeks?

### **Literature Review**

Key terms were used when researching articles related to this topic, including breastfeeding, breastfeeding support, lactation, lactation support groups, breastfeeding promotion, post-discharge, aftercare, home care, black maternal, and infant mortality. PubMed

and CINAHL Complete were the databases used. The exclusion criteria included articles written in a language other than English, non-human study articles, and articles older than ten years. As a result, four themes within the literature review related to postpartum/In-home lactation support emerged. These included (a) Food Insecurity, (b) Self-Efficacy, (c) Perceived Insufficient milk, and (d) Settings for breastfeeding support.

### **Food Insecurity**

Breastfeeding is very demanding; not only does a mother need proper nutrition to produce an adequate supply to feed their infant. They also need sufficient food and hydration to have the energy to care for their infant and themselves. Food insecurity and desserts can create external barriers preventing a mother from breastfeeding. These issues can lead to early breastfeeding cessation or formula supplementation.

Many individuals need more food on a day-to-day basis. This can be due to many reasons, including lack of funds, homelessness, illnesses such as mental health issues, etc. According to the Centers for Disease Control and Prevention (2022), millions of Americans lack food or access to healthy food options, which creates many health disparities. Women facing food inadequacies have shorter exclusive breastfeeding rates, although low-income women have high initiation and continuation rates. (Francis et al., 2021). The stress associated with a lack of food or insufficient food can affect the milk supply and raise mothers' concerns regarding the quality and amount of milk they produce (Francis et al., 2021). In return, this can cause supplementation of formula or solids, decreasing exclusive breastfeeding or discontinuing breastfeeding altogether.

### **Perceived Insufficient Milk and Self-efficacy**

Often, within practice, it is identified that mothers believe they need to make adequate milk to breastfeed their infant successfully. Many factors contribute to this, including the

mothers not seeing milk flow from their breasts during the first few days of life when they produce colostrum. The mothers associate infants crying with them receiving enough milk; family members insinuate their infants are not getting enough milk, or the mothers feel like their breasts are not producing enough milk based on fullness and pumping volume. Mothers often are encouraged by positive reinforcement. Boosting their self-confidence, ensuring they are doing a great job, and adequately feeding their infant can increase breastfeeding outcomes. Also, offering support and reinsurance when doubt arises regarding their ability to adequately breastfeed.

A person's perception of how they are doing with completing a task is, if not more important than completing it (Dennis, 1999). Some people become easily discouraged if they cannot complete a task. Many factors contribute to increased or decreased confidence. Postpartum lactation support interventions address challenges related to breastfeeding and self-efficacy, which interchangeably affect health outcomes (Francis et al., 2021; Wood et al., 2017). Perceived milk insufficiency (PIM) is the leading cause of breastfeeding cessation globally, even if a mother has an adequate milk supply (Wood et al., 2017). According to Wood et al. (2017), "Prior research focused on better understanding insufficient milk (IM) has shown that mothers with high self-confidence in their breastfeeding ability are significantly less likely to experience PIM" (Pg.473). This decreases discontinuation rates at lesser rates than women who do not (Wood et al., 2017).

Although the two studies show a relationship between increased self-confidence and breastfeeding outcomes, such as decreasing the likelihood of PIM, one study suggests that increasing self-efficacy alone is insufficient (Wood et al., 2017). The positive change was seen after educating mothers on interpreting their infant's behavior and working on self-confidence simultaneously (Wood et al., 2017). Although self-efficacy is vital in positive breastfeeding outcomes, other factors must be considered when supporting and educating mothers.

### **Settings for Breastfeeding Support**

The postpartum period is a very vulnerable time for both mother and baby. This transition period comes with many new experiences and challenges and is different for every woman. Factors influencing the postpartum period include postpartum or infant education and knowledge, family and friend support, additional children within the household, and living conditions, etc. (Cavalcanti et al., 2019).

Studies show that Community-based, postpartum lactation support, no matter the setting, such as In-Home or Pediatrician offices, positively influence lactation outcomes (Nassar et al., 2022; Jerin et al., 2020; Cavalcanti et al., 2019). The literature suggests that early initiated support increases the chances of positive breastfeeding outcomes, with some interventions starting during the hospital stay. Community follow-up, utilizing pediatrics offices, social media platforms, and mobile devices post-delivery, increase access to lactation support to participants (Nassar et al., 2022; Jerin et al., 2020; Cavalcanti et al., 2019). These studies offered easily accessible options for continued support and contact with lactation professionals, which helped resolve concerns participants had with breastfeeding, strengthening breastfeeding practices (Cavalcanti et al., 2019). Closing accessibility gaps and barriers to some participants can increase health outcomes.

Social media and mobile phone devices are very low-cost interventions. The use of mobile devices for phone follow-ups post-delivery with EBF and behavior change results are like those with face-to-face-based interventions (Cavalcanti et al., 2019). It further supported that the intervention's contact method is less crucial than the overall support.

### **Summary**

The review of the literature supports postpartum breastfeeding education as having a positive impact on breastfeeding initiation and continuation. Breastfeeding programs aimed to

educate mothers during the hospital period and postpartum, as well as offer food supplementation, positively impact maternal and infant health. Self-efficacy with breastfeeding increases mothers' breastfeeding duration; however, socioeconomic factors, healthcare professional recommendations to supplement, and psychological pressure negatively impact breastfeeding continuation (Huang, 2020).

Self-efficacy and its impact on breastfeeding outcomes were important themes. It encompassed mothers' beliefs about breastfeeding, their perceptions of how well they were breastfeeding, and whether their infant received enough milk (Cavalcanti et al., 2019). Another theme identified was the settings for breastfeeding support, including home, hospital (before discharge), pediatrician offices, and online sources such as Facebook and mobile phones.

### **Organizational Assessment**

The organization where this clinical inquiry was conducted was the No Mom Left Behind Lactation Clinic (NMLB). Many stakeholders are involved in the lactation clinic, including the clients and community. Healthcare professionals at the two hospitals in Flint and primary care offices include pediatricians, nurses, certified lactation counselors and consultants, occupation therapists, and other professionals who support the clinic's work. As well as other healthcare professionals serving women through the Hurley Certified Nurse Midwifery clinic, Genesee County Health Department, and local WIC offices. In addition, agencies and organizations that provided funding for the clinic include The Community Foundation of Greater Flint and the Michigan Breastfeeding Network, both significant stakeholders.

### **Strengths**

There are many strengths to the No Mother Left Behind (NMLB) clinic. This lactation clinic is the only of this type in Flint, providing prenatal and lactation support to mothers. The

clinic empowers and educates mothers about prenatal and postpartum complications, including postpartum depression. With this program, support groups offer additional encouragement.

Staff includes a certified lactation counselor, nurse practitioner/midwife, occupational therapist, and certified lactation consultant, all available to assist with lactation concerns. The budget allows hiring a Nurse Practitioner/Midwife to educate patients on topics to augment the consultant's expertise, including high-risk pregnancy and expected infant growth and development.

Services include infant weight checks, in-home lactation visits, and family treatment plans. The NMLB clinic is near the bus line, making it accessible for individuals using public transportation. The CEO is a lactation consultant/doula dedicated to the mission and vision of the clinic, with work in the community that supports the clinic's goals. She is implementing this program intending to reach as many individuals in the community as possible, employing key stakeholder's input during the formulation of this project. The clinic has been awarded over \$115,000 worth of grants from different organizations.

### **Weaknesses**

The program is only available to Flint and Genesee County residents. Although the need is highest in Flint, surrounding cities have individuals with needs that would benefit from the clinic's services. The clinic is also new, so knowledge of the clinic is dependent on marketing and advertising support. Because the CEO is a lactation support employee at the local hospital, it is a conflict of interest to openly advertise the clinic at the hospital, which may prevent mothers in need from getting additional assistance once discharged.

### **Opportunities**

Because the CEO already owns a lactation business and has been awarded other grants, her name and reputation are well known, and she is highly regarded with many connections in

the Flint area. If this clinic is successful, it could expand to more communities to provide prenatal and postpartum support and education on many topics.

With this project's creation and implementation, the cost factors were a minimal due to the participants being covered under the grant funding the clinic. The project's sustainability is low cost but dependent on continued grant funding. The American Academy of Pediatrics released a policy recommendation supporting breastfeeding mothers to exclusively breastfeed their infant until six months of life, then introducing complementary nutritious solids in combination with breastmilk (Black, 2022). Social and systematic changes were discussed in supporting mothers who decide to breastfeed (Black, 2022). The updates included supporting parents who decide to breastfeed their infant to two years of age or greater, with evidence supporting the benefits of breastfeeding to both mother and infant. Continued healthcare provider and workplace support for breastfeeding mothers past one year of age. As well as Healthcare facilities such as hospitals and birth centers creating maternal care practices that support breastfeeding initiation, continuation, and exclusivity. Overall, this policy update and recommendations support the need to implement postpartum lactation support to increase breastfeeding rates, which will improve maternal and infant outcomes.

### **Threats**

The initial grant is only for one year, so it will be vital to apply for more funding, demonstrate the program's need, and sustain the clinic in the community. Lack of participation was also identified as a threat to the program. To requalify and continue to receive grants, there must be a need that can be clearly shown and proof that funds were used to meet those needs. Although this clinical inquiry fell under the grant and will not affect funding, this must be considered when moving forward with continuing implementation.

### **Project Purpose**



There is supporting literature on the effects of postpartum lactation support on breastfeeding initiation and continuation. However, there is limited research regarding African American mothers and the impact of such support. This clinical inquiry aimed to create a postpartum lactation support program for African American women, increasing initiation and continuation of breastfeeding within the first six weeks of life.

### **Project Goals and Objectives**

The following project and objectives goals were based on the philosophy and mission of the No Mom Left Behind Clinic:

- **Goal 1:** Increase the number of African American women participants exclusively breastfeeding for the first six weeks of life.
- **Goal 2:** Increase breastfeeding self-efficacy in participants, measured by using the short breastfeeding self-efficacy survey by the end of the clinical inquiry.
  - **Objective 2a:** Administer a short breastfeeding self-efficacy survey to measure mothers' self-confidence in breastfeeding pre- and post-intervention.
  - **Objective 2b:** Create a private Facebook group for mothers, lactation experts, and peer support moms for participants to communicate with each other and ask lactation-related questions during and after the program's implementation.
- **Goal 3:** Increase breastfeeding continuation rates in African American mothers and their infants.
  - **Objective 3a:** Educate mothers weekly on lactation-related topics such as (proper latch, what to do about nipple pain, engorgement, pumping, and sufficient milk supply)
- **Goal 4:** Support equitable access to skilled postpartum lactation support to address disparities in maternal/infant breastfeeding rates.

- **Objective 4a:** Provide a 24-hour lactation text/hotline for lactation emergencies or concerns, with video calls during work hours if needed.

**Objective 4b:** Provide community resources and referrals when needed for continued lactation support (Lactation clinic (Lactation consultant, occupational therapist, Pediatrician))

### **Theoretical Framework**

The Breastfeeding Self efficacy theory is the theoretical framework that guided this phenomenon. This theory was created by Dr. Cindy-Lee Dennis (1999) and evolved from Bandura's social learning theory. Dennis (1999) states, "self-efficacy is a cognitive process of individuals' confidence in their perceived ability to regulate their motivation, thought processes, emotional states, and social environment in performing a specific behavior." (P.196) Increased self-efficacy has been known to improve health outcomes in various studies. However, it can be altered based on the individual's perceived belief on whether they can carry out the specific behavior, not only their actual ability (Dennis, 1999).

Within the Breastfeeding self-efficacy theory, four weighted sources of information influence a mother's choosing, performing, and maintaining breastfeeding (Dennis, 1999). Dennis states that "these sources include Performance accomplishments, vicarious experiences, verbal persuasion, and inferences made from one's physiologic and affective state" (Pg.196).

Performance accomplishments are known to be the most potent influence on efficacy. Personal experiences significantly increase a mother's self-efficacy when positive, such as previous successful breastfeeding. Conversely, negative experiences such as latch issues or insufficient milk supply can deplete self-efficacy. In addition, conditional factors can negatively or positively impact perceived self-efficacy, including the complexity of the task, support needed, and other conditions that may facilitate or impair performance (Dennis, 1999).

Vicarious experience is multiple types of observational learning, including live, video, recorded, or printed information related to breastfeeding skills and abilities. This type of learning and information can increase women's perceived self-efficacy even if they lack previous experience with breastfeeding. If a woman has a family member or friend who successfully breastfed, they will be more likely to attempt breastfeeding and succeed. Contingently, observational learning impacts on breastfeeding are most influential when the effective role models are like the target population as they relate to demographics and psychosocial factors and are competent with breastfeeding (Dennis,1999).

According to Dennis (1999), "Individuals often accept the appraisals of others as valid assessments of their abilities, and this can impact the level of self-efficacy" (p.196). Professional evaluations from lactation consultants, peer counselors, or other healthcare professionals' verbal praises have the most impactful potential to affect a mother's perceived self-efficacy. Other individuals, such as friends, parents, and other family members, impact perceived self-efficacy. Self-efficacy can be raised by praising a mother for their successful attempts at breastfeeding and acknowledging new and pre-existing skills.

People create conclusions about the capability to complete a task based on emotional arousal and other physiologic cues they undergo while enacting or anticipating a behavior. Positive breastfeeding arousal is related to satisfaction and increased self-efficacy, while negative feelings such as nipple pain, anxiety, and stress negatively impact and decrease self-efficacy. Emotional or physiological involvement with milk let-down reflex can negatively impact breastfeeding. Stress, anxiety, and pain can inhibit oxytocin and lead to insufficient milk syndrome (Dennis, 1999).

The impact of self-efficacy on changing or predicting behavior is that the behavior is chosen or maintained as a function of outcome and efficacy expectations. Outcome expectations

involve the person carrying out the behavior, and efficacy expectations involve the person being able to engage and master the behavior. Self-efficacy influences four broader processes relating to thoughts and actions, including a choice of behaviors, effort expenditure, persistence, thought patterns, and emotional reactions. A woman's thoughts and beliefs on whether they can initiate and successfully breastfeed influence self-efficacy. Self-efficacy plays a role in a mother's behavior and influences their breastfeeding attempts and goals. To master a new behavior, effort, motivation, and support are needed; this increases self-efficacy and the effort and persistence needed to master breastfeeding. Thought patterns can contribute to an increase or decrease in self-efficacy, with higher self-efficacy having higher rates of successful breastfeeding. Lastly, emotional reactions to breastfeeding influence self-efficacy, as a woman with high self-efficacy may find breastfeeding challenging yet rewarding. However, a woman with low self-efficacy may only look at the negative aspects associated with breastfeeding, such as self-doubt or anxiety, and are more likely to discontinue (Dennis,1999).

With the Self-efficacy breastfeeding framework, healthcare providers can positively increase mothers' self-efficacy, increasing breastfeeding and continuation rates. For this project, this theory assisted with creating assessments, education, and evaluation guidelines since high levels of self-efficacy propose that a mother choose to perform and maintain breastfeeding (Dennis,1999). The breastfeeding self-efficacy short survey created as a part of this framework assessed the participants' breastfeeding confidence and assisted with interventions to increase it (Dennis, 1999). Strengths in confidence and self-efficacy were praised and reinforced, while weaknesses were addressed. The program interventions were tailored to meet the mother's needs. This survey also measured if the interventions implemented during the program positively impacted the participants' self-efficacy, resulting in continued breastfeeding. The participants'

questions, concerns, and negative feelings were addressed with continued breastfeeding education and encouragement.

### **Program Framework**

The Logic Model guided program development, planning, implementation, and evaluation (APPENDIX A). The inputs included the investigator/DNP student, breastfeeding education materials, time, funding, program materials, and technology. The output activities included the six weeks of home and virtual visits, postpartum lactation support, breastfeeding education, after-hour hotline, and Facebook peer group support. Participation included African American clients and the public. The short-term outcomes were increasing breastfeeding initiation, continuation, self-efficacy, and positive experiences. The medium outcomes included insightful feedback to improve future outcomes, interest from stakeholders to invest in future program implementation, and increasing knowledge of the program and clinic to stakeholders and community members. The long-term outcomes included increased breastfeeding initiation and continuation rates past six months for African-American women and infants in Genesee County. As well as reducing mortality rates for African-American women and infants. Assumptions included the clinical inquiry participant completing the program and bringing awareness to the community for future implementation. As well as the community being interested and supportive of work and the need for knowledge in the community of lactation resources. In addition, there is a continued need for partners and organizations assistance in reaching community members. External factors included continued funding, continued lactation services, and the availability of lactation staff to do the work.

### **Methodology**

#### **Project Design**

The project design was identified as a clinical inquiry implementing a postpartum breastfeeding support program. It was evaluated using multiple methods to determine the effectiveness and practicability of providing postpartum lactation education and support on self-efficacy and breastfeeding rates in the No Mom Left Behind Lactation Clinic.

### **Setting**

The site for this intervention was the No Mom Left Behind lactation clinic in Flint, Michigan. The city of Flint is in Genesee County. Genesee County estimated population is 80,628, with 51.5% being female (United States Census Bureau, 2021). According to census.gov (2021), 54% of the residents are African American, with 85.3 % being high school graduates or holding a higher degree, ages 25 years or older. The overall poverty level of the city is 37.3 %.

The No Mom Left Behind clinic is a newly established non-profit led by a health educator/lactation consultant. The clinic's mission focuses on supporting and educating families throughout Genesee County, emphasizing African Americans' birth and breastfeeding goals. The clinic's vision is "That all families in Genesee County, regardless of economic status, will have access to birth and skilled lactation services that are culturally competent and empower them to reach their birth and breastfeeding goals" (Terhune, n.d.). Clients are referred to this clinic by local providers of obstetric and midwifery care, as well as by word of mouth and other community-centered programs.

**Participant**

The participant was a client in the No Mom Left Behind clinic who met the criteria for inclusion, which included the intention to breastfeed, African American, age 18-40, and in the second or third trimester of pregnancy at the initial contact point. She was multiparous, with a previous breastfeeding history, spoke English, and could read. She consented to 6 in-home and virtual visits and required a phone for text/calls. Her infant had to be discharged with her to continue in the program.

The clinic's lactation consultant identified possible participants during intake and provided them with information about the program. These mothers were referred to this clinic for prenatal, birth, and lactation education prenatally and postpartum. Digital flyers were posted by the investigator and lactation consultant on social media platforms, and hard copies were sent via email to many community resources. The participant's information was shared with the investigator if they expressed interest or wanted more information about the study.

**Ethical Considerations**

The lactation education provided by the clinic was voluntary and at the participant's discretion. Once participants were identified as meeting inclusion criteria, an informed consent was signed. There was minimal risk to the human participants. None of the participants' tools and data were self-identifiable and collected via an online survey.

Collected surveys were anonymous, and the pre-post survey utilized a number code to compare pre-post intervention results. Institutional Review Board (IRB) approval was obtained through the University of Detroit Mercy and the No Mom Left Behind clinic.

### **Intervention**

The program included goal setting, lactation education sessions, weekly check-ins, and communication with the lactation counselor/investigator to address additional concerns. The participant received weekly visits starting 3-5 days after delivery up through six weeks. Mothers had access to lactation professionals to answer any questions during the prenatal stage. The investigator contacted participants once weekly for the last four weeks of pregnancy to check the mother's status and determine whether they had given birth. The participants were reminded to follow up after giving birth.

The first virtual visit was within 3-5 days after delivery, which allowed reinforcement of lactation education and assessment of the infant and mother's overall health, perceived challenges, and thoughts toward breastfeeding. Breastfeeding education occurred throughout the entire program. Resources included websites and documents from accredited databases such as the CDC, American Pregnancy Association, Global Health media videos, Medela, and Healthy Children (APPENDIX F & G).

Virtual and home visits alternated throughout the program. Visits included positive reinforcement for the mother and encouraging the mother with self-doubt or breastfeeding complications. The investigator was available for questions during or after the visit, with continued online and hotline support between visits. The participant had access to the private Facebook group that included peer-support and lactation professionals to answer questions. Satisfaction and post-intervention goals surveys were given during the final in-home visit.

### **Surveys and Tools**



Patient demographics collected were age, relationship status, employment status, income, level of education, number of children, and experience with breastfeeding. Breastfeeding goals were identified using goal-guided questions in (APPENDIX B & APPENDIX C) and were collected pre-and post-intervention. Personal feedback and program satisfaction were collected, including the benefits, feasibility, and satisfaction. The Breastfeeding Self-Efficacy Short Form (BSSF) measured the patient's self-efficacy. Permission to use this survey was approved by the author Dr. Cindy Dennis. The BSSF has demonstrated robust validity with a .94 total Cronbach alpha, supporting strong reliability (Tuthill et al., 2016). This tool has demonstrated that one week of postpartum exclusive breastfeeding predicts behavior at four and eight weeks.

(APPENDIX D).

The program evaluation also included the level of participant use of the hotline or social media platform, completion of the 6-week program, and breastfeeding continuation at the end of the program. Program satisfaction and feedback survey created by the investigator utilized a Likert scale (1-5) rating was collected.

### **Data Collection Process**

Data was collected via online survey after informed consent was obtained:

- A. Demographics.
- B. Breastfeeding Self-Efficacy Short Form tool pre-and post-intervention.
- C. Personal goals established and revisited post-intervention.
- D. Program satisfaction.
- E. Exclusive or supplemented breastfeeding for the duration of the program.

### **Data Analysis**

Self-efficacy was measured using the Breastfeeding self-efficacy short form with a 5-point Likert scale pre-and post-intervention. Goal attainment and program satisfaction were measured using a Likert scale.

### **Results**

The participant demographics included the following. The age range was 25-34 in Flint, Michigan. The participant did receive WIC but did not receive food stamps. Their household income was between \$30,000-\$40,000. The participant was married and on Medicaid with five kids in total. This was not the participant's first-time breastfeeding; she was unemployed, looking for work, with the highest level of education completed as a high school diploma.

The participant stated she could meet her breastfeeding goals by requesting accommodations with Human Resources (HR). The amount of time planned to breastfeed stayed the same from the program's start to the end date, and the goal was still for the first year of life. The participant was still exclusively breastfeeding at the program's end, utilizing pumping to meet her goal.

### **Self-Efficacy Short Form**

Throughout the case study, the participant's self-efficacy increased and confidence to breastfeed her child adequately. The following were the improvements in the Self-Efficacy form given pre- and post-implementation.

#### **Sometimes confident to very confident:**

- Being able to determine if her baby was getting enough milk.
- Always being able to manage to keep up with her baby's breastfeeding demands.
- Always being able to tell when her baby had finished breastfeeding.
- Managing the breastfeeding situation to her satisfaction

- Being able to manage breastfeeding even if the baby was crying and always wanting to keep wanting to breastfeed.

**Not very confident to very confident:**

- The ability to not supplement with formula.
- Ensuring that the baby was properly latched on for the entire feeding.

**Not confident at all to very confident:**

- The ability to always be satisfied with her breastfeeding experience.

**Confident to very confident:**

- Dealing with the fact that breastfeeding can be time-consuming.
- They could always finish feeding their baby on one breast before switching to the other.
- Always successfully coping with breastfeeding
- Always continuing to breastfeed her baby for every feeding.

The comfortability with breastfeeding with her family members present stayed the same at sometimes confident.

**Breastfeeding Program Satisfaction Survey**

The results of the Breastfeeding support satisfaction survey were as follows. The participant found the printed material, CDC breastfeeding website, virtual visits, and home visits very helpful. The global health videos, Facebook support group, and hotline were somewhat helpful. She was very likely to recommend the breastfeeding support program to a friend or colleague and thought the duration of the program was long enough as per her expectations. She was very satisfied with the teaching material used during the program. The preferred method of the meeting was virtual. She believes her needs were met after the completion of the program and would enroll in another program. The support benefitted the participant the most from the program, and she felt nothing was unnecessary.

**Positive Outcomes**

The program improved self-efficacy among the participant and improved breastfeeding outcomes while supporting both mother and baby. It was identified the infant had a tongue and lip tie, causing an improper latch. The infant was referred to a pediatric dentist for the release, which improved the latch.

Additional assistance included guiding communication with her employer regarding the federal requirements to provide pumping accommodations, which was especially challenging in a predominantly male workplace (United States Department of Labor, 2022). After discussing her needs with human resources, she was given badge access to a private room to express milk. The investigator also followed up with the participant after learning she could only pump once throughout her twelve-hour shift.

The investigator educated the participant about her rights under the “PUMP ACT” to take breaks at work to express milk (United States Department of Labor, 2022). Under the Fair Labor Standards, it is the right of a protected nursing mother to have reasonable break time and a location that is private to pump when and as often as needed for the first year of life (United States Department of Labor, 2022). This is specific to each mother and child, and the needs of that dyad, things like time pumping, location, and steps necessary must be considered (United States Department of Labor, 2022). This information and related video gave the participant confidence to contact the supervisor for a resolution.

The investigator also assisted the participant with identifying mastitis and educating her on treatment, comfort measures, and warning signs. There was assistance with identifying thrush and providing pumping hacks and a back-to-work plan for a successful transition. The participant utilized the hotline nine times to get answers to questions and address uncertainties. The participant reports the fast response and easy access benefitted the participant between visits. The

gift bag included items to help with the successful transition back to work and included eight pumping and storage bottles, a cooler, and an ice pack.

### **Lessons Learned**

The target population, "African American Women," was the toughest to recruit for the study. Recruitment was done over four months and yielded very few participants. There were multiple avenues used to recruit individuals, including Facebook posters, family and friends sharing the flyers, Flyers sent to many community partners such as WIC, the health department, Hurley Nurse Midwives group, Private Obstetricians at Hurley Medical Center, Maternal Infant Health Program (MIHP) at Hurley Medical Center, REVIVE community health center, Private Practices, Flint alumnae Delta sigma theta chapter, sister supporting sister Facebook page, as well as 98.9 and 92.7 radio stations. Many individuals expressed interest in the program, but when the time came for enrollment, they became nonresponsive or decided they no longer wanted to join it for personal reasons that were not expressed. Two additional participants joined the program, showed great enthusiasm, and finished all the pre-intervention documentation but only followed through once their infants were born. They notified the investigator when they had their infant; the Lactation consultant even saw one. When following up with one of the participants, she discussed how the transition after birth and returning home was overwhelming.

The Lactation Consultant/Project Mentor mentioned participation barriers with this population during her years of community work. For reasons not completely understood, African American women are the least likely to sign up for these assistive, free programs, even when acknowledging the benefits of it. The Project Mentor identified a significant breastfeeding barrier she has witnessed: a lack of partner/spousal support. Other influencing factors may include a lack of incentives for breastfeeding, providers not emphasizing the benefits of prenatal classes, and a need for more marketing and community awareness.

The literature identifies a need for such intervention programs in the target population and those specific to low-income populations. There is a positive correlation between the need for more support from healthcare providers and other entities in the community and less engagement in programs. However, detailed studies that take a deeper dive into this population and these barriers still need to be included. Future research is needed to determine factors contributing to the hesitancy of African-American women in joining educational programs to discover possible solutions.

### **Future Program Recommendations**

Implementation of the postpartum breastfeeding support program will continue past this clinical inquiry. Valuable data was collected during the project that will enhance participation and implementation in the future.

During the recruitment phase, people were interested in the program but needed to meet the inclusion requirements because they were not African American or had already given birth. One recommendation will be opening the program to any mother seeking support. This could additionally create more knowledge of the program by word of mouth, which could gain trust in the community, increasing the recruitment of the original “target population.” Some mothers do not anticipate issues and realize they need lactation support when problems arise. In the future, prenatal or postpartum mothers will be invited to join the program at any breastfeeding phase, with or without the prerequisite required for the clinical inquiry.

The participant in the clinical inquiry mentioned that the virtual visits were more convenient than home visits. The recommendation is to work with mothers to determine which type of visit is preferred. While home visits afford many benefits in supporting breastfeeding, they will not be mandatory but an option for those who prefer them. The Facebook group was less interactive than planned. The investigator intends to engage more with participants using this

platform and add to the page more frequently. It will also be recommended to ask what social media platforms are preferred.

Continuation of this program through engaging the key stakeholders, identifying, and overcoming barriers to participation, and implementing the above-mentioned improvements will support the growth of the postpartum breastfeeding support program in Genesee County. Community members will be invited to these discussions to provide more insight into the potential barriers preventing individuals from enrolling and peer focus groups will be conducted. Improving breastfeeding initiation and continuation rates will positively impact overall health. Stakeholders should include participation from the community to assist with development of the program.

### **Implications for Practice**

The findings from this clinical inquiry have the potential to influence health organizations and grant funders to create, support, and recommend breastfeeding support programs. Supporting self-efficacy enhances positive breastfeeding outcomes. Individual sessions support breastfeeding continuation and early identification of issues. Enhancing the knowledge of breastfeeding policies and laws is vital for those who choose to return to work. Understanding and overcoming the unique barriers of African American mothers to improve breastfeeding rates can lead to improved health outcomes overall.

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POSTPARTUM LACTATION SUPPORT

APPENDIX A

Logic Model

**Situation: Postpartum lactation support for African American women and infants**

**Priorities: Increase AA women breastfeeding initiation and continuation rates, Provide continued lactation support to families.**

Inputs	Outputs		Outcomes -- Impact		
	Activities	Participation	Short	Medium	Long
<ul style="list-style-type: none"> <li>- Researcher/D NP Student (FNP/CLC)</li> <li>- Shonte LC</li> <li>- Breastfeeding Education Materials</li> <li>- Time</li> <li>- Funding</li> <li>- Program Materials: Infant scales, breast pumps, Surveys and scales</li> <li>- Technology: phones/texting, computer, Facebook group</li> </ul>	<ul style="list-style-type: none"> <li>- 6 weekly visits (Home/Virtual)</li> <li>- Conduct Breastfeeding Education</li> <li>- Provide Postpartum Lactation support</li> <li>- Provide FB peer group support and after hour support.</li> </ul>	<ul style="list-style-type: none"> <li>- African American Clients</li> </ul>	<ul style="list-style-type: none"> <li>- Increase Breastfeeding initiation.</li> <li>- Increase Breastfeeding continuation.</li> <li>- Increase participants self-efficacy.</li> <li>- Positive experiences from participants</li> </ul>	<ul style="list-style-type: none"> <li>- Insightful feedback to improve future outcomes.</li> <li>- Interest from stakeholders to invest in future program implementation</li> <li>- Increase knowledge of program and clinic to both stakeholders and community members</li> </ul>	<ul style="list-style-type: none"> <li>- Increased breastfeeding initiation rates for AA women in Genesee County</li> <li>- Increased continuation rates past 6 months for AA women in Infants in Genesee County</li> <li>- Reduced Maternal Mortality rates for AA women.</li> <li>- Reduced Infant Mortality rates for AA Infants</li> </ul>

**APPENDIX A Cont....**

**Assumptions**

1. Clinical Inquiry will be small group of participants, but completion of program will bring awareness to the community for future implementation.
2. Community is interested and supportive of this work.
3. There is a lack of knowledge in the Community on lactation resources.
4. Partners and organizations need help to reach community members.

**External Factors**

1. Continuation of funding to continue lactation services.
2. Availability of lactation staff to do the work



**End of Program Breastfeeding Goals Survey**

1. Were you meet your goals for breastfeeding that you made for yourself at the beginning of the program.
  
  
  
  
  
  
  
  
  
  
2. How did you meet your goals?
  
  
  
  
  
  
  
  
  
  
3. How long would you like to breastfeed for? (Skip If no longer breastfeeding)
  
  
  
  
  
  
  
  
  
  
4. Did the amount of time you chose to breastfeed change since the start of the program?  
Yes or No
  
  
  
  
  
  
  
  
  
  
5. (Suggested question) Did or are you pumping to meet your breastfeeding goals?  
Yes or No
  
  
  
  
  
  
  
  
  
  
6. Are you still exclusively breastfeeding? (If o skip to #7)

Yes or No

7. Are you still breastfeeding and supplementing with formula?

Yes or No

8. (Suggested Questioned) How are you currently feeding you baby?

- a. Only breastmilk
- b. Both breastmilk and formula
- c. Only formula



**Breastfeeding Self-Efficacy Scale**

*Dennis, C.L.*

2003. The Breastfeeding Self-Efficacy Scale: Psychometric Assessment of the Short Form. *Journal of Obstetric, Gynecologic & Neonatal Nursing*

Using 1 to mean "Not at all Confident" and 5 to mean "Always Confident"; how would you respond to the following statements?	Circle One				
1. I think I can determine that my baby is getting enough milk.	1	2	3	4	5
2. I think I can successfully cope with breastfeeding like I have with other challenging tasks.	1	2	3	4	5
3. I think I can breastfeed my baby without using formula as a supplement.	1	2	3	4	5
4. I think I can ensure that my baby is properly latched on for the whole feeding.	1	2	3	4	5
5. I think I can manage the breastfeeding situation to my satisfaction.	1	2	3	4	5
6. I think I can manage to breastfeed even if my baby is crying.	1	2	3	4	5
7. I think I can keep wanting to breastfeed.	1	2	3	4	5
8. I think I can comfortably breastfeed with my family members present.	1	2	3	4	5
9. I think I can be satisfied with my breastfeeding experience.	1	2	3	4	5
10. I think I can deal with the fact that breastfeeding can be time consuming.	1	2	3	4	5
11. I think I can finish feeding my baby on one breast before switching to the other breast.	1	2	3	4	5
12. I think I can continue to breastfeed my baby for every feeding.	1	2	3	4	5
13. I think I can manage to keep up with my baby's breastfeeding demands.	1	2	3	4	5
14. I think I can tell when my baby is finished breastfeeding.	1	2	3	4	5

\*Note: If most responses are <3, spend time addressing client's concerns. If most responses are >3 praise client for her commitment and dedication to her baby's health

This was developed by Cindy Dennis and permission has been granted to use it in this study.

**APPENDIX E****Program Satisfaction Survey (Likert Scale)**

1. Please rate the following (Very helpful, somewhat helpful, somewhat unhelpful, very unhelpful, did not use)
  - a. The printed material
  - b. CDC breastfeeding website
  - c. Global Health Videos
  - d. Facebook support group
  - e. Virtual visit
  - f. Home visits
  - g. Hotline
  
2. How likely would you be to recommend the breastfeeding support program to a friend or colleague?
  - a. Very likely
  - b. Somewhat likely
  - c. Neither likely nor unlikely
  - d. Somewhat unlikely
  - e. Very unlikely
  
3. Do you think the duration of the program was long enough as per your expectations?
  - a. Yes
  - b. No
  
4. How satisfied were you with the teaching material during the program?
  - a. Very satisfied
  - b. Satisfied
  - c. Neither satisfied nor dissatisfied
  - d. Unsatisfied
  - e. Very unsatisfied
  
5. Which was your preferred method of meeting?
  - a. In-person
  - b. Virtual
  
6. Was your needs satisfied after the completion of the program?

- a. Yes
  - b. No
7. Would you be interested in enrolling in another program with us?
- a. Yes
  - b. No
8. Please state what benefitted you the most from the program?
9. Please state anything that you felt were unnecessary in the program?
10. Do you have any suggestions/comments that will help us make the program better?

**APPENDIX F**

**Program Weekly Schedule**

## Consent Meet up (In home or virtual)

- Everything will be explained, consent obtained.
- CDC Milk storage
- CDC: What to expect while breastfeeding.
- Quick video about latching baby to breast (Global health media)
- Self-Efficacy survey, Goals, SMART Goal sheet

## Week 1 (Day 3-5 PP)

- Initial meet after baby (Video)
- Answering any questions
- Encourage use of Hotline and social media group
- Healthy children: How much should infant eat
- Answering any concerns about latching, Going over infant feeding habits. (Is your baby getting enough milk video)
- \* If HV needed one will be scheduled

## Week 2 (In- Home)

- Answering any questions
- Video about what do with nipple pain, education will be provided to support visit (American pregnancy association and global health media)
- Assess infant latching if possible
- Encourage use of Hotline and social media group

## Week 3 (Video)

- Check in
- Answer any questions and provide support
- Encourage use of Hotline and social media group
- \* If HV needed one will be scheduled

## Week 4 (In Home)

- Assess Infant feeding if possible
- Answer any questions
- Talk about returning to work and pumping/ Video for pumping (Medela video and CDC education)
- Encourage use of Hotline and social media group

## Week 5 (Video)

- Check in
- Answer any questions
- Encourage use of Hotline and social media group

- \* If HV needed one will be scheduled

Week 6 (In home)

- Check in
- Answer any questions and provide support
- Encourage use even after the program of support group
- Assess infant latching if possible
- Surveys: Self-efficacy, goal, utilization of support group and hotline, satisfaction, possible infant feeding
- Leave information with clinic number as well as ways to continue being successful with breastfeeding

**APPENDIX G**

**Educational Information and Documents Links**

## **Consent Weeks**

### **Attaching baby at the breast video:**

<https://globalhealthmedia.org/videos/attaching-your-baby-at-the-breast/>

### **Storing milk**

[https://www.cdc.gov/breastfeeding/recommendations/handling\\_breastmilk.htm](https://www.cdc.gov/breastfeeding/recommendations/handling_breastmilk.htm)

### **CDC What to expect while breastfeeding**

<https://www.cdc.gov/nutrition/InfantandToddlerNutrition/breastfeeding/what-to-expect.html>

## **Week 1**

### **How much should infants eat:**

<https://www.healthychildren.org/English/ages-stages/baby/feeding-nutrition/Pages/How-Often-and-How-Much-Should-Your-Baby-Eat.aspx>

### **Is your baby getting enough milk:**

<https://globalhealthmedia.org/videos/is-your-baby-getting-enough-milk/>

## **Week 2**

### **What to do about nipple pain:**

<https://globalhealthmedia.org/videos/what-to-do-about-nipple-pain/>

### **American Pregnancy Association:**

<https://americanpregnancy.org/healthy-pregnancy/breastfeeding/nipple-pain-remedies/>

## **Week 4**

### **Medela Pumping video**

<https://www.youtube.com/watch?v=8kfEushsjTo>

### **CDC returning to work**

<https://www.cdc.gov/nutrition/infantandtoddlernutrition/breastfeeding/workplace-breastfeeding.html>

**APPENDIX H**

<b>Project Phase</b>	<b>Milestones</b>	<b>Est. Month of Completion</b>						
		<b>Jan</b>	<b>Feb</b>	<b>Mar</b>	<b>Apr</b>	<b>May</b>	<b>June</b>	<b>July</b>

Planning	Receive approval for use of self-efficacy tool	X							
	Meet with Mentor/Site CEO for planning of program		X						
	Completion of developing Supporting breastfeeding tools		X						
	Team Meeting and Completion of Team minutes		X	X					
	IRB Submission		X						
	IRB Approval			X					
Implementation	Participant recruitment			X	X	X	X		
	Pilot Begins: First round of participants given informed consent, goals, pre-self-efficacy survey)			X					
	Weekly Staff check-ins with participants who are in the last four weeks of pregnancy				X	X	X		
	Staff begin in-person visits with participants who deliver their infants				X	X	X		
Monitoring	Mid project evaluation and meeting with Team member/Mentor Shonte and chair					X			
Closing	Collect remainder of surveys of participants completing the program							X	
	Project completion meeting							X	
	Data Analysis and write up completed								X

**Timeline of Proposal (Estimated)**

**APPENDIX I**

<b>S</b>	<p><b>Specific</b></p> <p>What am I going to do? Why is this important to me?</p>
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<b>M</b>	<b>Measurable</b> How will I measure my success? How will I know when I have achieved my goal?
<b>A</b>	<b>Attainable</b> What will I do to achieve this goal? How will I accomplish this goal?
<b>R</b>	<b>Relevant</b> Is this goal worthwhile? How will achieving it help me? Does this goal fit my values?
<b>T</b>	<b>Time-Bound</b> When will I accomplish my goal? How long will I give myself?

**SMART Goals**

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**APPENDIX J**

**Demographics**

1. How old are you?
  - a. 18-24

- b. 25-34
  - c. 35-44
  - d. Greater than 44
2. What city do you live in?
3. Do you receive WIC?
  - a. Yes
  - b. No
4. Do you receive EBT?
  - a. Yes
  - b. No
5. What is your household income?
  - a. Below \$5,000
  - b. \$5,000- \$10,000
  - c. \$10,000- \$15, 000
  - d. \$15,000-\$20,000
  - e. \$20,000-\$30,000
  - f. \$30,000-\$40,000
  - g. \$40,000-\$50,000
  - h. \$50,000 or Greater
6. What kind of insurance do you have?
  - a. Private
  - b. Medicaid
7. What is your marital status?
  - a. Single (Never married)
  - b. Married
  - c. Divorced
  - d. Widowed
  - e. Separated
  - f. Domestic Spouse
8. Are you working?
  - a. Employed full tie (40+ hours a week)
  - b. Employed part-time (less than 40 hours a week)
  - c. Unemployed (Currently looking for work)
  - d. Unemployed (Not currently looking for work)
  - e. Student

9. What's your highest level of education completed?
  - a. Less than a high school diploma
  - b. High school degree or equivalent
  - c. Bachelor's Degree
  - d. Master's Degree
  - e. Doctorate Degree
  - f. Certificate or Trade
  
10. Do you have other children? (If yes please answer #12)
  - a. Yes
  - b. No
  
11. How many other children do you have?
  - a. One
  - b. Two
  - c. Three
  - d. Four
  - e. Five
  - f. Six or greater
  
12. Have you ever breastfed before?
  - A. Yes
  - B. No