PERCEPTIONS OF THE FACILITATORS AND BARRIERS OF BREASTFEEDING INITIATION: INCREASING INITIATION THROUGH A TAILORED, MULTI-LEVEL INTERVENTION APPROACH FOR AFRICAN-AMERICAN MOTHERS AND THE COMMUNITY

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A dissertation submitted to the faculty at the University of North Carolina at Chapel Hill in partial fulfillment of the requirements for the degree of Doctor of Public Health in the Department of Health Policy and Management in the Gillings School of Global Public Health.

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ABSTRACT

Tyonne D. Hinson: Perceptions of the Facilitators and Barriers of Breastfeeding Initiation: Increasing Initiation Through a Tailored, Multi-Level Intervention Approach for African-American Mothers and the Community
(Under the direction of Asheley Skinner)

The rate of breastfeeding initiation among women in the U.S. is approximately 81.1%.[1] While this rate falls below industrialized nations around the globe, U.S. breastfeeding initiation has continued to improve since 1972. Improvements in breastfeeding initiation rates, however, have not been achieved equally across all racial/ethnic groups. Rates of breastfeeding initiation among African-American mothers continue to be significantly lower than White and Hispanic mothers (66.3% vs. 84.3% and 83.0%), respectively.[1]

Breastmilk is identified as the optimal form of nutrition for infants during their first year of life. Despite the known benefits of breastmilk, critically low rates of breastfeeding initiation among African-American mothers have left African-American infants at highest risk for developing diseases and chronic health conditions. Decreases in mortality and morbidity may be realized within the African-American infant population if improvements could be made in breastfeeding initiation rates among African-American mothers.

This reality of persistently low breastfeeding initiation rates among African-American mothers indicates the need for additional research and action. While some research has indicated that the state of breastfeeding initiation in African-American mothers is a result of prevalent factors such as socio-economic inequalities, education, and marital status, this only explains some of the African-American vs. White/Hispanic disparity. Quality research and program

evaluation in the modifiable domains of cultural and social environment are essential to fully understanding breastfeeding initiation rates in African-American mothers.

This dissertation will expand the level of knowledge and understanding concerning the barriers and facilitators influencing breastfeeding initiation among African-American mothers within the U.S. Using qualitative methodology, this research will facilitate steps toward addressing gaps in the research and translating breastfeeding initiation among this cultural group. This dissertation concludes with a causal loop diagram interpreting the relationships of multiple variables within the system influencing breastfeeding initiation and *Plan for Change*. The *Plan for Change* offers a four-pronged strategy designed to address the barriers experienced by African-American mothers on multiple levels. Ultimately, the goal of this *Plan for Change* and dissertation is to transform the state of breastfeeding for African-American mothers through normalizing breastfeeding, improving breastfeeding initiation rates, and increasing the number of women sustaining breastfeeding for years to come.

In memory and honor of those who have come before me and taught me that nothing is impossible-

William Andrew, Barbara Hall, & Barbara Ann

Mom, Aunt Betty, Aunt Joann, Uncle William, & Aunt Kim

I will be forever grateful for your constant sacrifice, unwavering support, and unconditional love.

And to those that will follow and continue our legacy,

Justin, Michel'le, Cierra, Pashence, Taylor, Surayyah, Caleb, Khayri, Ariyonna, Jeweliana, & Asia

I wish you wisdom, happiness, and success on your life's journey.

Remember, the sky is the limit …. "Proceed as if success is inevitable".

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GLOSSARY OF KEY TERMS

Breastfeeding

Method of providing breastmilk to an infant directly from the mother's breast or provision of breastmilk through expression.

Breastfeeding Initiation

Provision of breastmilk to infant soon after birth (ideally within one hour after delivery). This time may vary widely between research studies and clinical practice. Initiation only means that an infant has gone to the breast at least one time since birth.

Breastfeeding Duration

Total length of time an infant has breastfed or received breastmilk from the initial stage of exclusive breastfeeding to any period of complementary breastfeeding until weaning.

Breastfeeding Exclusivity

Infant diet consisting of no other food or drink, not even water, except breastmilk (including milk expressed from a wet nurse) for six months of life. Infant may receive drops and syrups (vitamins, minerals, and medicines) but must abstain from any additional supplementation until 6 months, when other complementary solids may be introduced. Diet is 100% breastmilk, whether expressed breastmilk or direct breastfeeding.

African-American

Citizen or resident of the United States of total or partial ancestry from native population of Sub-Saharan Africa. May also be referred to as Black, non-Hispanic, negro, colored, Afro-American, or Afro-Usonian.

CHAPTER 1- INTRODUCTION

Statement of the Issue

Breastfeeding initiation rates in the United States (U.S.) are alarming. As a nation, the U.S. ranks 36th of 36 in breastfeeding initiation among developed nations around the globe.[2] Developed nation peers, such as Norway and Sweden, report the highest rates of breastfeeding initiation at 99% and 98%; while our neighboring country, Canada, reports average rates of breastfeeding initiation at 90%.[2] In 2016, the Centers for Disease Control and Prevention reported the rate of breastfeeding initiation among the U.S. population as approximately 81.1%.[1]

While this rate falls below international peer outcomes in rates of initiation, this rate has continued to improve since 1972 when only 22% of U.S. women breastfed.[3] Significant efforts by professional organizations, such as the La Leche League and International Lactation Consultant Association (ILCA), have led the way in supporting this initiation rate increase nationally. Improvements in breastfeeding initiation rates, however, have not been achieved equally across all racial/ethnic groups.[4] Within the U.S., African-American mothers demonstrate a striking disparity in breastfeeding initiation rates and are least likely to engage in breastfeeding compared to other ethnicities in the U.S.[5,6] As a result, African-American infants are at highest risk to experience infant mortality, SIDs, childhood morbidities, and chronic health conditions that lead to poor health outcomes.[5]

While some research has indicated that the state of breastfeeding initiation in African-American mothers is a result of prevalent factors (i.e. socio-economic inequalities, work requirements, maternal education, and marital status), this may only explain some of the

disparity among black-white/latino variation in breastfeeding initiation.[6-8] As shared by the Surgeon General's Call to Action to Support Breastfeeding, "The reasons for the persistently low rates of breastfeeding among African-American women are not well understood…..".[9] This highlights the need for more inquiry regarding the influencers of breastfeeding initiation in African-American women. Studies suggest that lack of knowledge, barriers related to health services, inadequate time, lack of professional education, and lack of community support have also served as barriers to breastfeeding initiation within this population.[9-14] It is evident that we must further explore beliefs and perceptions within this population to understand how to best implement practice and policy interventions to support breastfeeding initiation. The goal is to significantly decrease the disparity within the African-American maternal community by increasing the overall rates of initiation and the number of mothers choosing to sustain breastfeeding behavior.

Background

The American Academy of Pediatrics (AAP) and the World Health Organization (WHO) recommend exclusive breastfeeding for infants during the first six months of life, followed by continued breastfeeding with introduction of foods for a year or more.[8,10] Breastmilk is identified as the optimal form of nutrition for infants during their first year of life.[15] Its immunologic, anti-inflammatory, and neuro-developmental qualities have demonstrated unprecedented defense against a number of health risks and premature death.[9,10,16,17]

Breastmilk has established short and long-term nutritional, anti-inflammatory, and immunologic benefits with positive health impacts that last through adulthood. For infants, breastmilk has demonstrated a reduction of mortality secondary to complications of prematurity and infectious disease. [10,17-19] Studies have also demonstrated the benefits of breastmilk by a reduction in infant morbidities and conditions, decreasing lower respiratory tract infections

(72%), asthma (40%), otitis media (23%), gastrointestinal infections (64%), and necrotizing enterocolitis (58%).[4,6,10,17] A 36% reduction of SIDS is also associated with breastfed infants. Long-term implications for childhood and adulthood include reduction in obesity (by 15-30%) and type I diabetes mellitus (up to 30%).[6,10] Breastfeeding also reduces the risk of high blood pressure and is associated with lower cholesterol levels late in life.[10,17,19] For breastfeeding mothers, incidences of reduced premenopausal breast and ovarian cancer have also been documented.[10,17] Mothers with breastfeeding duration longer than 12 months decrease their risk of breast cancer by 28%.[10] The significance of maternal-infant bonding is also identified as a significant benefit of breastfeeding. Significant decreases in child abuse and neglect have been observed among mothers that initiated breastfeeding with their infants.[10,19]

Despite the known benefits, rates of breastfeeding initiation among the U.S. population is only 81.1%.[1] Breastfeeding exclusivity is reported as 44.4% (3 months) and 22.3% (6 months); while 51.8% of all mothers continue to breastfeed at 6 months and 30.7% at one year according to 2016 CDC data.[1] Rates of breastfeeding within the African-American population, however, are substantially lower than White and Hispanic populations within the U.S.[1,14] African-American women have initiation rates of 66.3%, compared to their White (84.3%) and Hispanic (83.0%) counterparts. Rates of breastfeeding exclusivity and duration further indicate an intolerable disparity among African-American women. For any breastfeeding (non-exclusive), at 6 months, only 39.1% of African-American mothers continue to breastfeed, compared to 57.9% (White) and 45.6% (Hispanic).[1] Exclusive breastfeeding of African-American infants at 6 months of age is only 14.6%, falling short of the Healthy People 2010 goal of 17% and significantly behind the 2020 target of 25.5%. Current rates of exclusive breastfeeding among White and Hispanic peers are 26.8% and 19.1%, respectively.[1] At 12 months, breastfeeding

duration rates dropped to 19.3% in African-American mothers, compared to 36.1% (White) and 25.7% (Hispanic).[1] As infant health and nutrition is of paramount concern, the U.S. Department of Health and Human Services (HHS) has recommended increased targets for breastfeeding. In 2010, HHS re-affirmed the importance of increasing rates of breastfeeding initiation, exclusivity, and duration by adjusting the Healthy People 2020 goals. Healthy People 2020 targets aim to increase breastfeeding initiation to 81.9% from 75%, while raising exclusivity and duration rates to 25.5% and 60.6% at six months. [6,20] The existing gap between African-American breastfeeding rates and Healthy People 2020 targets further amplify the significance of this issue.

Despite reports of positive breastfeeding outcomes by the AAP, critically low rates of breastfeeding initiation among African-American mothers leave African-American infants at highest risk to develop diseases and chronic health conditions.[5] Low breastfeeding rates also increase the risk of post-neonatal deaths among this population.[21] African-American infants are almost two times more likely to experience SIDS.[5,22,23] Additionally, there is a positive relationship between rates of infant mortality and breastfeeding secondary to demonstrated reductions in complications of prematurity, low-birth weight (LBW) and infectious diseases. African-American infants have the highest rate of infant mortality, which is 2.2 times the rate of White infants. Death rates in 2013 of non-Hispanic, Black infants were 11.1 per 1,000 live births compared to 5.1 per 1,000 births for non-Hispanic, White and 6.0 per 1,000 births for other races.[24] They are also almost two times more likely to be born low-birth weight (LBW). In 2014, non-Hispanic, Black infants were born less than 2,500 grams (5lb.8 oz) 13.2% of the time compared to non-Hispanic, White infants (7.0%) and Hispanic infants (7.1%).[25] In children, rates of obesity are elevated in Black children (23.8%) compared to White children (13.1%) ages 6-11. Rates of asthma are also significantly higher among non-Hispanic, Black children

compared to White children (age <18), 13.4% compared to 7.6%, respectively.[26] Through adulthood, African-Americans continue to experience the highest rates of morbidities and death from chronic diseases of cancer, diabetes, and hypertension when compared to other U.S. populations.[5] Improvements in mortality and morbidity could be realized within the African-American childhood and adult populations if progress could be made in rates of breastfeeding initiation among African-American mothers.

Over the last 30 years, U.S. Surgeons General have raised the state of breastfeeding as a national issue. Dr. C. Everett Koop led this charge by convening the first Surgeon General's Workshop on Breastfeeding in 1984 in an effort to protect, promote, and support breastfeeding.[9] In 2011, U.S. Surgeon General, Dr. Regina Benjamin issued a similar Call to Action to the nation to highlight the importance of breastfeeding for the health and well-being of mothers and infants. Her report issued several recommendations to remove barriers that exist across the nation.[9] Specifically, Dr. Benjamin focused on racial and ethnic minorities, highlighting the actions necessary to decrease the unacceptable disparities in breastfeeding persisting among racial minorities. Specific calls to action focused on: increasing the number of racial and ethnic minorities in the International Board Certified Lactation Consultant (IBCLC) role, establishing paid maternity leave to reduce the impact of employment among disadvantaged racial and ethnic groups, and supporting small non-profit organizations promoting breastfeeding in communities of color.[9] Additionally, the 2011 report calls for research and surveillance to provide insights into disparity reductions in breastfeeding rates that are associated with race/ethnicity, income, and preterm birth.

National action is underway in hopes of providing answers to reduce the disparities that exist among African-American mothers in breastfeeding initiation. In 2013, DHHS launched the

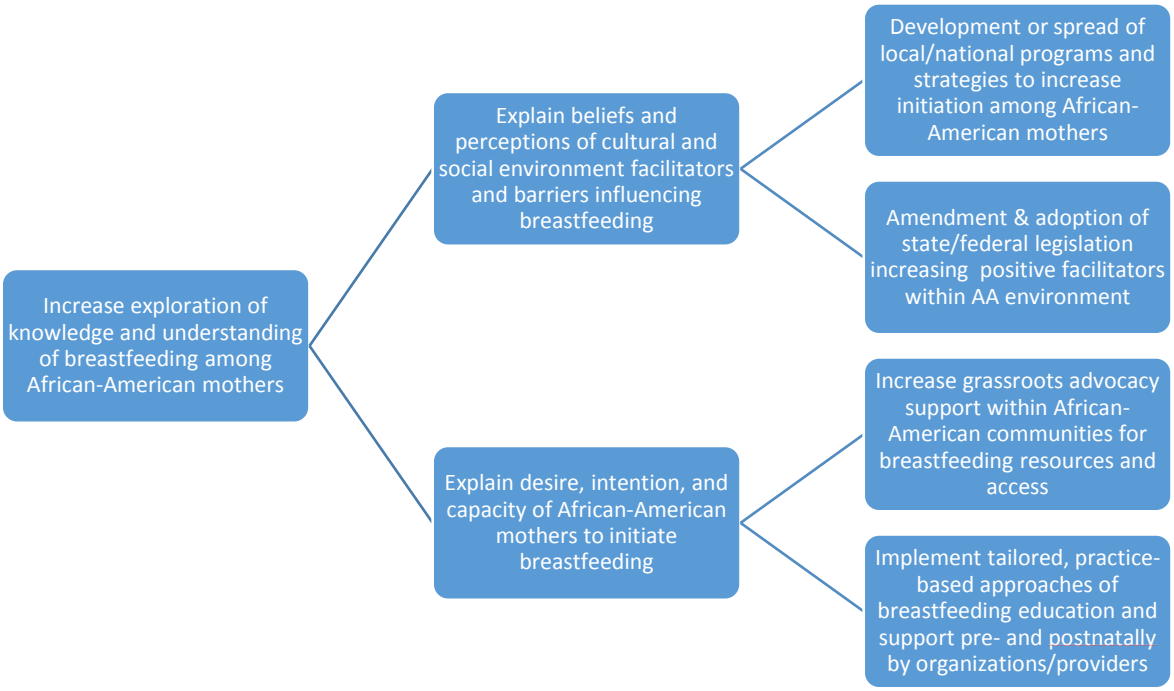
It's Only Natural campaign to provide breastfeeding information and support to African-American mothers.[23] The goal of this campaign was to increase awareness of the benefits of breastfeeding and improve breastfeeding initiation among African-American women.[23] As this program aims to address myths, lend support, and overcome challenges within the African-American culture, the federal government took an initial step towards positively influencing this national "burning platform" issue in hopes of improving the health outcomes of many African-American infants.[19,23]

There is much debate about the Women, Infants, and Children (WIC) Special Supplemental Nutrition Program and breastfeeding initiation. In the U.S., approximately 50% of all childbearing women are enrolled in the WIC program.[27] Despite WIC's support of breastfeeding as the superior feeding method and rising percentage trends of ever breastfed infants, data indicates a significant disparity in breastfeeding initiation among WIC participants versus non-participants.[1,9,13,19,28] This is sometimes referred to as the "WIC gap".[29] WIC-enrolled mothers report initiating breastfeeding 74.1% compared to non-WIC enrolled, eligible mothers (82.0%) and non-WIC enrolled, ineligible mothers (91.1%).[1] African-American mothers, however, seem to be significantly plagued by this concern of extremely low breastfeeding rates among participants. In 2014, African-American mothers comprised only 17.9% of the total 687,351 breastfeeding women enrolled in WIC.[30] These WIC rates of breastfeeding initiation fall below the Healthy People 2010 and 2020 targets.[20] This may be a direct result of the significant investment in formula, 11.6% of yearly budget, compared to 0.6% investment in breastfeeding initiatives. In 2009, WIC spent 25 times more money on formula than on initiatives supporting breastfeeding ($850 million vs. $34 million, respectively).[27] Our nation must closely examine the value of WIC in the face of poor breastfeeding initiation and

preventable infant health outcomes. This is a controversial issue that warrants attention and research to examine the influence of incentives in the WIC program and the barriers that inhibit breastfeeding in mothers, particularly within the African-American community.

The reality of persistently lower breastfeeding rates among African-American women indicates the need for additional research and action. Additional research must: 1) increase exploration of knowledge and understanding of breastfeeding among African-American mothers; 2) explain desire and intention for breastfeeding initiation, capacity, and beliefs and perceptions of this population; and 3) develop tailored strategies to increase initiation while informing the breadth and depth of knowledge of organizational, public health, legislative, and African-American communities.[9,31]

Figure 1. *Correcting the State of Breastfeeding Initiation in African-American Mothers*



Quality research and current program evaluation is essential to understanding the perceptions of cultural and social environmental factors that positively and negatively influence breastfeeding behaviors within the African-American community.[7] As more is understood about the influences of breastfeeding initiation for African-American mothers, researchers will understand how maternal/child advocates can best support breastfeeding initiation.[8] This is critical to the creation of community, organizational, and national programs/policies to support increased breastfeeding initiation practices among African-American women.[32]

Significance of the Issue

African-American breastfeeding initiation rates have yet to reach targets set for Healthy People 2010. As our national leaders highlight the diminishing gap in breastfeeding initiation between White and African-American mothers since 1990 (35% to 18% difference), unnecessary health and economic implications continue to face the African-American community.[9] In addition to decreasing lifelong morbidities and infant mortality, increases in breastfeeding initiation and exclusivity would reduce the national economic burden associated with healthcare treatment significantly. Achievement of the Healthy People 2020 goal of approximately 80% breastfeeding compliance among U.S. mothers could save $10.5 billion dollars and prevent 741 deaths per year.[33] The achievement of 90% exclusivity would yield an estimated cost savings of $13 billion dollars in medical expenses, 911 less deaths, and approximately $1500 dollars from infant formula costs per family annually.[2,4,33] By impacting the rate of breastfeeding initiation in the U.S., opportunities exist to decrease the number of preventable deaths among African-American infants and decrease excess cost of medical treatment nationally.

Provision of breastmilk is essential to decreasing infant mortality, morbidities, and chronic illnesses experienced as a result of the current disparity in breastfeeding initiation. Positive influences within cultural and social environment contexts may promote breastfeeding initiation behavior among this group of mothers.[7] Without further research to explore facilitators and barriers, evidence to implement cost-effective breastfeeding programs and strategies within communities and organizations will continue to be limited.[9] Future research must identify best strategies to increase breastfeeding initiation and drive implementation within healthcare organizations and public health policy to correct this national shortcoming.

Purpose & Specific Aims

The goal of this research is to explore the perceptions of African-American mothers regarding facilitators and barriers that influence breastfeeding initiation. The hope is to gain further understanding of these factors in an effort to significantly increase the overall rates of African-American initiation, ultimately impacting rates of duration and exclusivity. The objective of this study will be fulfilled by addressing the following questions:

1. What are the *cultural factors* that promote or hinder breastfeeding initiation in African-American mothers?
2. What are the *social environment* factors that promote or hinder breastfeeding initiation in African-American mothers?
3. What are the characteristics of an effective, tailored strategy to increase breastfeeding initiation in African-American mothers based on their (AA mothers) perceptions of facilitators and barriers and expertise of key informants?

Research Aims

1. Using focus groups and key informant interviews, identify perceptions associated with breastfeeding initiation among African-American mothers and key stakeholders.
2. A) Identify the cultural factors that promote (facilitate) or hinder breastfeeding initiation in African-American mothers.

   B) Identify social environment factors that promote (facilitate) or hinder breastfeeding initiation in African-American mothers.

3. Develop a tailored strategy to inform individual breastfeeding behavior, organizational practice, and community beliefs/perceptions to increase initiation rates of breastfeeding among African-American mothers for improved childhood outcomes (based on maternal focus group and key informant interviews).

CHAPTER 2- LITERATURE REVIEW

The purpose of the literature review is to identify current knowledge, inconsistencies, and gaps in the literature regarding factors influencing breastfeeding initiation among African-American women. The ultimate goals were: 1) to determine current breadth and depth of knowledge and understanding about breastfeeding among African-American women and 2) to inform the development of research study questions to further explore the cause of disparities in African-American breastfeeding initiation practices.

Parameters for this literature search focused on identifying descriptive and analytical peer-reviewed articles specifically on African-American mothers and breastfeeding initiation. Both qualitative and quantitative research were considered in this review. Federal and state reports were also included from government resources. In an effort to answer my research questions, the following literature review question was asked:

What does the literature indicate are the various factors that positively influence or hinder rates of breastfeeding initiation among African-American mothers?

Methods

A systematic review of the literature was conducted to gather and analyze research articles related to African-American mothers and breastfeeding initiation. The literature search used the PubMed (MEDLINE) and CINAHL electronic data bases. The bibliographies of identified articles from the PubMed and CINAHL searches were also reviewed ("snowballing") to identify additional articles and reports applicable to this subject matter.

Table 1. Electronic Databases Searched and Years of Coverage.

Electronic Database	Search Criteria: Years/Filters	Description of Database
PubMed	2009-2014/English language	Database of indexed citations and abstracts to medical, nursing, dental, veterinary, health care, and preclinical sciences journal articles. Includes additional selected life sciences journals
CINAHL	2009-2014/English language	Database of cumulative indexed citations and abstracts to Nursing and Allied Health Literature

Government reports were searched as additional sources of data. Specifically, web searches of the U.S. Department of Health and Human Services and the Centers for Disease Control and Prevention were conducted. These two federal government websites possess a repository of data concerning current breastfeeding rates, government calls to action and programming concerning the shortfalls within African-American breastfeeding practices and goals for African-American breastfeeding by the year 2020. Three other government websites of interest regarding African American breastfeeding initiation were also included in this search.

Table 2. *Government Websites Searched and Data Source*

Government Website	Government Data Source
http://www.surgeongeneral.gov/library/calls/breastfeeding/index.html	Surgeon General Call to Action Report
http://www.usbreastfeeding.org/LegislationPolicy/FederalPoliciesInitiatives/HealthyPeople2020BreastfeedingObjectives/tabid/120/Default.aspx	Health People 2020
http://womenshealth.gov/itsonlynatural	It's Only Natural Campaign
http://www.cdc.gov/vaccines/stats-surv/nis/nis-2012-released.htm http://www.cdc.gov/breastfeeding/data/nis_data/index.htm	National Immunization Survey Data
http://www.cdc.gov/breastfeeding/pdf/2013breastfeedingreportcard.pdf http://www.cdc.gov/breastfeeding/pdf/2014breastfeedingreportcard.pdf	2013 & 2014 Breastfeeding Report Cards

Key Words Search Strategy

The following search strategy was used to explore the question "*What are the various factors that positively influence or hinder rates of breastfeeding initiation among African-American mothers*?" The key words noted in Table 3 highlight the concepts foundational to this topic within the literature.

Table 3. *Concept and Key Word Search*

Concept	**Key words searched**
African-American	African-American OR African American, OR race, OR Black, OR ethnic
AND	
Mothers	Mothers, OR females, OR women
AND	
Breastfeeding Initiation	Breastfeeding initiation, OR human milk initiation
AND	
Facilitators	Facilitators, OR promoters, OR positive influencers, OR supports
OR	
Barriers	Barriers, OR hindrances

Multiple terms were selected to validly reflect a comprehensive review of pertinent research applicable to the factors influencing breastfeeding initiation among African-American mothers. As necessary, the terms were adjusted to ensure the maximum number of articles for this search.

Inclusion/Exclusion Criteria

Literature inclusive of all three following elements were included for further review of the title and abstract:

- Breastfeeding initiation among mothers
- Inclusion of race, specifically African-American race, is explicit
- Inclusion of factor or intervention that positively or negatively influenced breastfeeding initiation outcomes in study

Literature including additional elements beyond the outlined inclusion criteria were incorporated in the review, as long as results pertaining to an intervention in African-American breastfeeding

initiation was specifically highlighted. This was commonly found in articles examining factors in breastfeeding exclusivity and duration, which are often informed by elements and factors influencing breastfeeding initiation.

Any articles excluding at least one of the aforementioned criteria were excluded from further review. Additionally, exclusion criteria for searched literature included:

- Breastfeeding initiation focused within a context or presence of a disease or health condition
- Identification of race as a factor without specific identification of African-American or Black
- Lack of an identified intervention or program influencing breastfeeding initiation

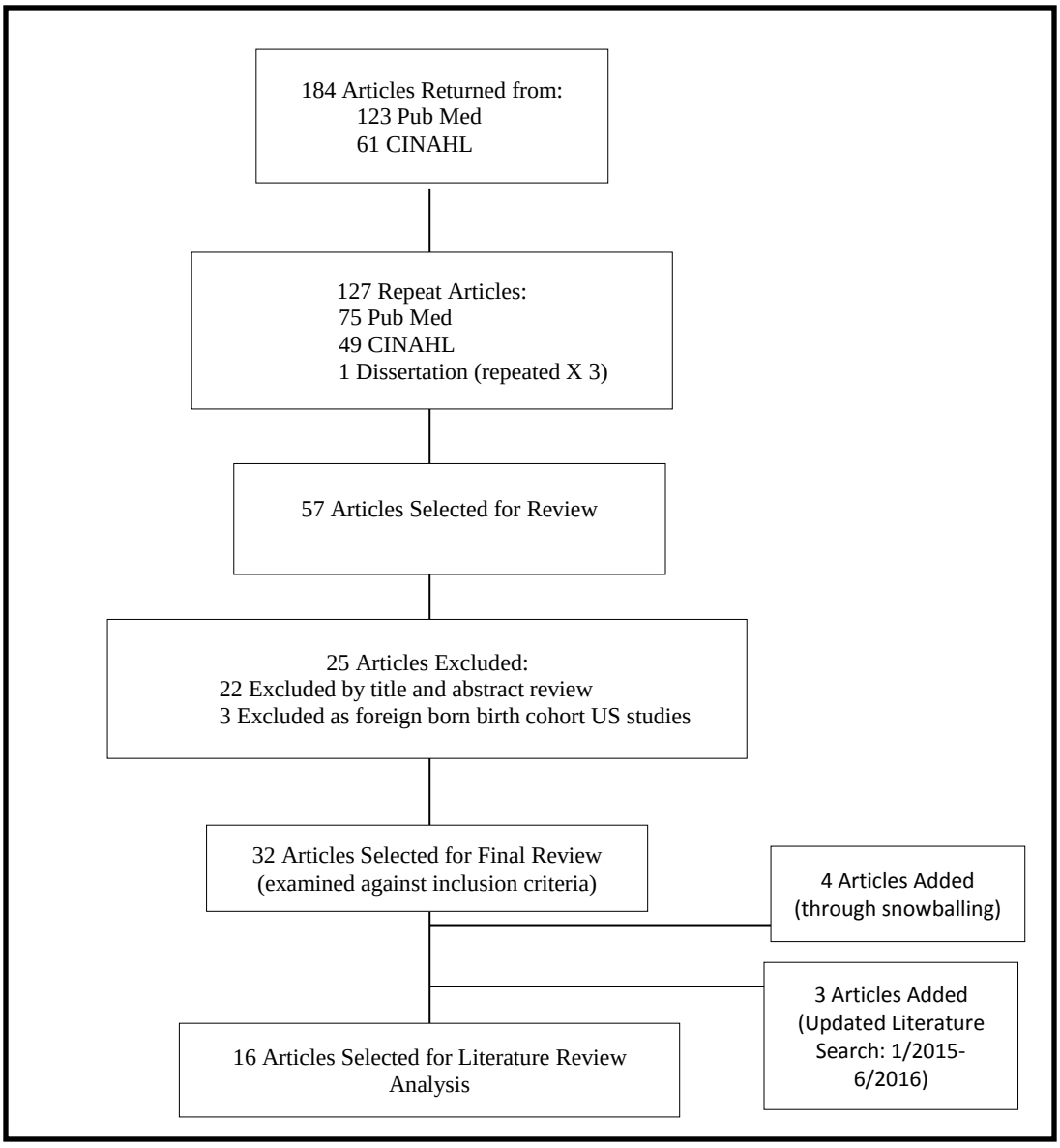
Review of Search Results

A review of all studies was conducted by the lead researcher to determine inclusion or exclusion from this literature review. Preliminary search results yielded a total of 184 articles from PubMed and CINAHL databases. Upon removal of duplicate articles and dissertations, 57 remaining articles were reviewed for initial inclusion based upon title and abstract information. Twenty-two articles were excluded based on title and abstract, with 3 articles excluded secondary to non-U.S. born cohort studies within the United States. Four additional articles were added for review through snowballing. A total of 36 articles were reviewed in full detail and examined for inclusion criteria requirements. A total of 23 studies were excluded for failing to meet all three requirements deemed essential for inclusion in the review. A total 13 of the 184 articles were selected for inclusion in this literature review.

This literature review was updated in 2016 to ensure inclusion of pertinent literature from January 2015 through June 2016. The lead researcher utilized the same methodology for

inclusion as previously described. A total of 11 articles were reviewed in full detail according to inclusion criteria requirements and updated date criteria. In total, 3 articles were selected for inclusion in the literature review based upon meeting all three essential requirements. In total, 16 articles were selected for final inclusion in this literature review.

Table 4. Literature Review: Search Results



With the exception of four integrative literature reviews, all other articles included were primary research. A table of evidence was developed to compare and contrast the research (See Table 5).

Description of the Literature

Although the literature on the science of breastfeeding and its influence on maternal-child outcomes is rapidly growing, research studies addressing African-American mothers, and more specifically the effectiveness of interventions and factors influencing breastfeeding initiation, is lacking. Limited qualitative and quantitative research on perinatal and postnatal experiences in the African-American maternal population exists. Unfortunately, most research focuses only on select variables: socio-economic level, homogeneous geographic locations, subsidized government program participation, or mixed ethnicity/racial research focus (not exclusively African-American mothers).

There is a considerable gap that exists regarding the experiences of African-American mothers and validated factors/interventions (through research) that influence rates of breastfeeding initiation. The disparity found in the number of articles and quality of research on breastfeeding in African-American women versus White and Hispanic women is concerning and must be addressed by the public health and maternal-child research community.

Sixteen (16) studies reported six themes critical to breastfeeding initiation among African-American mothers: Provision of health information and encouragement by hospital providers; professional breastfeeding support; peer counseling; breastfeeding state laws; participation in WIC Program, and Baby-Friendly Designation.

Provision of Health Information and Encouragement by Hospital Providers

Provision of health information and encouragement of hospital providers has been identified as a significant influencer in the personal decision to breastfeed among African-American mothers. This intervention, which may encompass actions such as healthcare information for mothers and infants, anticipatory guidance about breastfeeding, and positive reinforcement and support by hospital providers, can be critical in shaping the perceptions and experiences of African-American mothers deciding to initiate breastfeeding.

Cottrell and Detman (2013) sampled 253 African–American women from three Florida counties to explore the perinatal experiences that influenced their breastfeeding decisions and experiences. Their results indicated that mothers who chose to breastfeed identified being made aware of health information and benefits for their baby as a significant influencer. In some instances, the provision of positive health information regarding their own health was also indicated.[11] Several factors were also identified as barriers related to health information about breastfeeding such as pain, incompatibility with personal habits, knowledge deficits about breastfeeding, and level of discomfort.[6,11]

Ma and Magnus (2012) also identify the importance of receiving breastfeeding information from hospital staff as critical in the initiation of breastfeeding, particularly in at-risk populations. In their study, 2,036 Louisiana, WIC-enrolled, first time mothers were sampled regarding their positive deviance towards breastfeeding.[18] Although study results indicated that African-American mothers were less likely to initiate breastfeeding as compared to their white counterparts, participant quotes such as "hospital staff gave me information" among the small black deviant population indicated to the authors that receipt of information about breastfeeding from the hospital staff after delivery was critical to this positive breastfeeding behavior.[18]

Professional Breastfeeding Support

Professional breastfeeding support for African-American women includes the need for trained professionals, such as lactation consultants, doulas, nurses, and case managers in health and community care settings. This support should occur pre- and postnatally to influence breastfeeding initiation. Racial and ethnic disparities may be reduced when professional breastfeeding support is provided (psychosocial and practical support).

Gee and colleagues (2012) solidify the critical importance of professional support in breastfeeding initiation by examining the experiences of 899 African-American mothers (in addition to 1,635 mothers of other races/ethnicities) and the influence of hospital breastfeeding support in Louisiana. Results indicated that African-American women were 60% less likely than other ethnic groups to initiate breastfeeding, and that the in-hospital experiences of these women were dramatically different than their racial counterparts.[34] African-American mothers reported significantly lower incidence of positive support factors as compared to their racial counterparts, such as: "hospital staff helping mother learn to breastfeed" and "hospital staff instructing mother to breastfeed on demand". Significant differences in support regarding infant rooming-in and telephone support were also identified as barriers.[34] This study highlights unequal presence of professional support as a critical factor in African-American maternal breastfeeding initiation.

Kozhimannil and colleagues (2013) also showed a positive influence on breastfeeding initiation with professional breastfeeding support through the use of certified doulas with diverse low-income women. With an intervention group composed of 46.6% African-American or of African descent mothers breastfeeding initiation was "near-universal" in study participants that received certified doula support. Approximately 98% (97.9%) of the intervention sample initiated breastfeeding, while only 80.8% of the non-doula group initiated breastfeeding.[35] Of

critical importance, 92.7% and 99.5% of the African-American and of African descent doula intervention group initiated breastfeeding suggesting the presence of culturally appropriate certified doulas are a key to diminishing perceived racial barriers of breastfeeding and reaching universal breastfeeding initiation goals.[35] This study suggests that lack of professional support is a significant barrier in breastfeeding initiation and that there is a need for cultural concordance of mothers and providers.

Gruber and colleagues (2013) examined the support of doulas in breastfeeding initiation through their study of African-American and Hispanic socially disadvantaged mothers at risk for adverse birth outcomes. In their study including 226 women, a non-randomly assigned intervention group consisting of 97 mothers (77% African-American) received up to 8 childbirth classes and doula support throughout their pregnancy. The impact of this intervention was focused on four areas, one of which included incidence of breastfeeding initiation. Results showed that doula assisted mothers were significantly more likely to initiate breastfeeding compared to non-assisted doula mothers (79.4% versus 67.2%, respectively).[36] Over 90% (90.2%) of adult mothers assisted by a doula in this study positively initiated breastfeeding, while approximately 67% (67.4%) of adolescent mothers initiated. Over 67 percent (67.4%) of adolescent mothers initiated. This study supports doula care as a positive influence in changing the disparity that exists in breastfeeding initiation among African-American women.[36]

Fitzgerald (2015) also identified the importance of professional support during the pre and post-natal period through her study of community perinatal case managers and low-income African-American women in Massachusetts. With a group of case managers in Boston, the quality improvement strategy of this study aimed to build knowledge and capacity of case managers to promote initiation of breastfeeding among clients. Results indicated that 100% of

clients participating in this quality improvement initiated breastfeeding within 24-48 hours post-delivery, with more than 50% initiating within 1 hour after birth and 92% continuing to breastfeed 2 weeks post-partum.[37] Overall, African-American mothers reported higher self-efficacy in 13 of 14 categories postnatally related to promotion of breastfeeding.[37] This quality improvement intervention highlights the critical importance of knowledgeable and competent community professional breastfeeding support pre- and postnatally to positively influence breastfeeding decisions of African-American mothers.

Cottrell and Detman (2013) identified professional breastfeeding support as a key factor through the provision of breastfeeding classes and post-partum support among the African-American mothers in Florida counties. Early infant feeding assistance by nurses or lactation consultants was identified as an important positive factor in facilitating women's efforts to breastfeed. Additionally, attendance in a breastfeeding class prenatally or upon hospital discharge was also highlighted as a positive factor.[11] Lack of professional breastfeeding support at birth and after leaving the hospital and lack of discussion by medical provider were identified as a significant barrier in breastfeeding initiation.

Ma and Magnus (2012) endorse the presence of professional breastfeeding support in their study which examined "positive deviants" in a Louisiana, WIC maternal population. They strongly believe that positive deviance, particularly among black and low-income women with low breastfeeding initiation, can be realized with focused initiatives (such as hospital support with breastfeeding initiation shortly after birth).[18]

Peer Counseling

Several clinical studies conducted by researchers, community-based programs, and WIC have indicated that trained breastfeeding peer counselors are a factor in breastfeeding initiation.[38] Wambach and colleagues (2011) set out to validate this theory through a prospective, non-blinded three-group randomized control trial of 289 Midwestern adolescent mothers (ages 15-18), predominantly, African-American. Their primary aim was to test the hypothesis that interventions of peer counseling and developmentally sensitive education would increase breastfeeding initiation within the experimental and attention control group of adolescent mothers (over the control group). Their research results indicate that peer counseling and developmental education are positive factors in breastfeeding initiation. Seventy-nine percent (79%) of participants in the experimental group initiated breastfeeding (compared to 66% and 63% of the attention control and control group, respectfully).[39] Adjustments for covariates and group assignments, however, invalidated the statistical significance initially presented by these research findings.

Breastfeeding State Laws

The recent enactment of breastfeeding laws among some states within the U.S. has been examined as another potential factor in the initiation of breastfeeding. Hawkins and colleagues (2013) examined the impact of state breastfeeding laws on initiation and disparities among infants. Through a retrospective study examining 326,263 mothers over an 8 year period, the researchers found a positive correlation between the presence of two types of state breastfeeding laws with increases in breastfeeding initiation in 32 states. African-American mothers experienced a 5.6% point increase in breastfeeding initiation in states with new laws permitting breastfeeding in any location.[40] The lack of this provision in all states presents a significant

barrier for African-American mothers, particularly those with less than a high school education, according to study results.

Similarly, Smith-Gagen and colleagues (2013) examined breastfeeding practices by race in the context of 8 specific breastfeeding laws aimed to promote and protect breastfeeding. This study, which compared breastfeeding initiation pre and post legislation, indicated that 4 of the 8 laws were associated with increased proportions of breastfeeding initiation in the ethnic populations.[41] Specifically with African-American mothers, 5 of the 8 laws resulted in a higher percentage of infants "ever breastfed" (initiation) among the sample population compared to infants not breastfed.[41] They also found that 5 laws intended to support breastfeeding duration were significantly less helpful to African-American women.[6] These barriers included: laws requiring break time from work, private areas to pump, jury duty exemption, educational campaigns, and enforced pumping laws.[41]

Opportunities continue to exist regarding breastfeeding state laws to ameliorate the obstacles, particularly related to work, that impede the likelihood of breastfeeding.[6,11,18] Some legislative progress, however, has been demonstrated by a few laws created that positively support breastfeeding practices among African-American mothers.[41]

Participation in Women, Infants, and Children Program (WIC)

Women, Infants, and Children Program is a national program with the mission of safeguarding the health of low-income women and their children who may be at nutritional risk from birth through the age of 5.[30] In recent years, national surveys (i.e. National Immunization Survey) have indicated lower breastfeeding prevalence among WIC participation, raising tremendous concern about WIC's impact on breastfeeding initiation.[1]

Murimi and colleagues (2010) examined the influence of participating in a WIC program (formula provision) on breastfeeding decisions among 130 WIC participants in central Louisiana (57 African-American women - 43.8%). Results indicated that African-American women had breastfeeding initiation rates that were 21% lower than White women in this cohort of central Louisiana WIC participants.[13] Murimi and colleagues recognized the negative influence associated with non-exploration of the benefits of breastfeeding and associated risks of introduction to artificial formula with WIC participants. They also highlighted significant barriers for WIC participant breastfeeding initiation as pain, lack of adequate milk supply, and inadequate family support.[13]

Similarly, Marshall and colleagues (2013) conducted a study in Mississippi with 3,494 African-American and White mothers to determine if participation in the WIC program was negatively associated with the initiation of breastfeeding as compared to non-enrolled WIC program participants. Of the 1,806 African-American women enrolled in this study, 38.4% of the African-American WIC-enrolled participants initiated breastfeeding as compared to 45.9% of the African-American non-WIC enrolled participants ($p = 0.0595$).[42] The researchers concluded that WIC participation was not associated with breastfeeding initiation for African-American women.

Ma and Magnus (2012) examined the incidence of breastfeeding initiation among WIC-enrolled, first time African-American mothers among "positive deviants". This group was 0.39 times less likely to initiate breastfeeding than their White counterparts.[18] These research studies implore more investigation of the WIC program and its influence on breastfeeding initiation rates among African-American mothers.[42]

Baby-Friendly Designation

The Baby Friendly Hospital Initiative (BFHI) has been identified within the literature as an effective strategy for African-American mothers to achieve rates of breastfeeding and equalize initiation rates within the U.S.

Parker and colleagues (2013) examined this well-established premise through a cohort study exploring the rates of breastfeeding initiation within a US, inner city hospital NICU in Boston in 1999 and 2009. The aim of the study was to demonstrate continued improvement in breastfeeding initiation rates 10 years after the BFHI designation. Results indicated that breastfeeding initiation increased in African-American mothers/infants to 86% in 2009 from 68% in 1999.[43] Among all races, rates of initiation increased from 74% to 85%. Barriers associated with breastfeeding initiation included staff education, expense, and organizational buy-in. Further research on the impact of BFHI facilities and African-American breastfeeding initiation is warranted.

Integrative Literature Reviews

Four integrative literature reviews were examined in the evaluation of factors influencing breastfeeding initiation in African-American women. As authors sought to explore facilitators of breastfeeding initiation, similar findings were identified in themes, such as health care providers, networks (friends who have breastfed and/or peer counselor), and family members. Each integrative study highlighted other divergent factors positively and negatively influencing breastfeeding initiation.

Spencer and Grassley (2013) explored literature regarding factors that influence breastfeeding initiation (as well as intention, and duration) in the African American population over a 17 year period (1994 to 2011). They evaluated 278 articles as potential sources,

identifying 37 studies as rigorous and relevant. The authors concluded that six positive factors are critical to increasing breastfeeding initiation among African-American mothers. These positive factors include: support from health care providers/peer counselors, confidence in breastfeeding, intrinsic motivation, family member or friend who breastfed, social support from family and friends, and high self-efficacy.[5] Barriers associated with breastfeeding initiation and continuance include: work and school obstacles, milk supply perceptions, embarrassment, pain, and comfort with formula.[5]

Chapman and Perez-Escamilla (2012) evaluated U.S.-based randomized trials targeting minority populations and breastfeeding interventions. Their objective was to highlight "promising public health approaches" to decrease the breastfeeding disparity among minority groups. The researchers reviewed 22 publications, selecting 20 publications for detailed review and analysis. Chapman and Perez-Escamilla concluded that several interventions successfully improve breastfeeding outcomes among minority women within the U.S. Among studies that reviewed African-American mothers specifically, positive interventions included: breastfeeding teams (paired nurse and peer counselor; lactation consultant and peer counselor), group prenatal education and care, father breastfeeding education, and WIC enhanced breastfeeding education.[44] The researchers concluded that additional research and multi-faceted efforts would be necessary to minimize the barriers and disparities in breastfeeding outcomes within the U.S.[44] Researchers also identified the lack of diversity among health care workers as a significant barrier to establishing rapport and partnership with racially diverse mothers to increase initiation rates.

Jones and colleagues (2015) also conducted a systematic review of literature focused on breastfeeding among minority women. Their objective was to address barriers, identify effective breastfeeding interventions from randomized control trials, and provide recommendations to the

medical community on ways to increase rates of breastfeeding in minority women. Using Chapman and Perez-Escamilla's review as a foundation, the researchers explored literature from 1999 to 2014 with additional descriptors. The search yielded 7 additional studies, with four RCT interventions focused exclusively or partly on African-American mothers. The targeted interventions highlighted in each article focused on home, telephonic, and/or hospital-based peer counseling education during the prenatal, perinatal, and postpartum periods.[45] Additionally, researchers believed that peer counseling could also be instrumental in delaying the introduction of complimentary foods to infants among African-American mothers. Jones and colleagues also encouraged obstetricians and obstetric medical professionals to increase the introduction of breastfeeding education early in the prenatal period to promote and encourage breastfeeding among African-American mothers.[45] This is critical to making a meaningful impact on the future health of mothers and children within this community and increasing rates of initiation.

Johnson and colleagues (2015) also explored literature through systematic review highlighting key interventions and strategies impacting breastfeeding initiation and duration among low-income African-American mothers, with particular focus on post-partum maternal psychological vulnerabilities. The researchers evaluated over 508 studies from multiple disciplines focused specifically on African-American mothers during the period 1995-2013. In total, 23 published studies (with distinct interventions/strategies) were identified. Johnson and colleagues utilized Bronfenbrenner and Carter's social ecological framework to categorize the published interventions: macrosystem/public policy level (0 interventions); exosystem/institutional level (4 interventions); interpersonal level (3 interventions); individual level (2 interventions); and multi-level (16 interventions).[46] Some of the highlighted interventions and strategies included: Baby-Friendly Hospital Initiatives (BFHI), home and

telephonic lactation consultant support, prenatal breastfeeding-focused educational appointments, peer prenatal group support and peer counseling, and combined macro-level motivational support and informal support network engagement (family, partners, friends).[46] Johnson and colleagues believe that several gaps remain among interventions necessary to successfully support African-American women desiring to initiate breastfeeding. Although the gaps are many, some of the most critical are issues of discrimination in healthcare delivery, needed policy enhancements, lack of psychological and social support, lack of media use, and social class challenges.[46] Strategies and interventions must become more integrated and permeate several layers of the social ecological system in order to successfully meet the needs of African-American breastfeeding mothers.

Table 5. Summary of Literature Results for Factors that Positively Influence Breastfeeding Initiation among African-American Mothers

Author(s) **Year of Study** **Journal**	**Methodology**	**Sample Population (Source)**	**Purpose, Hypothesis or Independent Variable(s) explored**	**Results** **(specifically pertaining to African-American (AA) mothers)**	**Quality/Study Limitations**
[11] Cottrell, B., Detman, L. (2013) Journal of Maternal Child Nursing	Descriptive qualitative study	• 253 African–American women • 3 Florida counties • Healthy Futures Perinatal Research and System Design	To explore perinatal experiences that influenced AA breastfeeding decisions and experiences.	• Breastfeeding initiation: County A-46.5%; County B-64.5%; County C-51.25% • The provision of health information on infant benefits are a significant influencer of the decision to initiate breastfeeding. • Provision of health information regarding self (maternal) benefits may also be a positive influence of decision to breastfeed. • Pain, incompatibility with personal habits, knowledge deficits about breastfeeding, and level of discomfort were identified as barriers of initiation. • Key Factors: Provision of health encouragement and maternal knowledge of breastfeeding benefits.	*Stratification by county location, populations, and size offered variety of AA type participants for more generalizability *Participants volunteering for interview may have opinions/experiences differing from those foregoing interviewing *Focused primarily on perinatal experiences (and not postnatal experiences that may also influence breastfeeding)
[18] Ma, P., & Magnus, J. H. (2012)	Retrospective, cross-sectional study	• 2,036 mothers (52.6% black mothers) • Louisiana, WIC- enrolled	To explore characteristics of positive deviance towards breastfeeding initiation in disadvantaged, poor	• Breastfeeding initiation: Black mothers – 19.8%; White mothers - 40.3% • Breastfeeding in the hospital after delivery and receiving help on how to breastfeed in the hospital were significantly associated with initiation.	*Balanced ethnic sample size *Southern geographical region (LA) may pose some limitation since low

Author(s) Year of Study Journal	Methodology	Sample Population (Source)	Purpose, Hypothesis or Independent Variable(s) explored	Results (specifically pertaining to African-American (AA) mothers)	Quality/Study Limitations
Journal of Maternal Child Nursing		first time mothers • PRAMs database	resourced populations.	• WIC-enrolled first time black mothers initiated breastfeeding 0.39 times less than white counterparts. • Low birthweight infant outcomes indicative of black positive deviance. • Implications: Expected deviants may initiate breastfeeding with information about breastfeeding and positive supports.	breastfeeding initiating state *Limited to first time mothers *Disadvantaged poor population in deep south may not make results generalizable
[35] Kozhimannil, K. et al. (2013) Journal of Midwifery & Women's Health	Retrospective, cross-sectional study	• 1,069 mothers (Minnesota Everyday Miracles) – 46.6% African-American or African descent • 51,721 mothers (Minnesota Medicaid) – 18.2% African-American or African descent • Minnesota • Minnesota PRAMs database and Everyday Miracle doula program data	To study whether doula support is associated with breastfeeding initiation among low-income, diverse women.	• Results: "Near-universal" initiation in study participants that received certified doula support. • 97.9% of the intervention sample initiated breastfeeding support. • 80.8% of the non-doula group initiated breastfeeding. • 92.7% /99.5% of African-American/African descent doula intervention group initiated breastfeeding vs. 70.3%/95.2% of African-American/African descent initiated without intervention. • Access to culturally appropriate doula care facilitates higher rates of breastfeeding initiation – currently a significant barrier.	* Inadequately small sample size in doula support intervention group compared to non-intervention group *Inconsistent ethnic make-up among doula (Everyday miracle participants) and non-doula (Medicaid population) *Varied services offered between two programs, which may have introduced bias into the outcomes (not simply impacted by doula service

Author(s) Year of Study Journal	Methodology	Sample Population (Source)	Purpose, Hypothesis or Independent Variable(s) explored	Results (specifically pertaining to African-American (AA) mothers)	Quality/Study Limitations
					offering or non-participation in doula intervention.
[36] Gruber, K. et al. (2013) Journal of Perinatal Education	Retrospective, cross-sectional study	• 226 mothers • 97 mothers in doula intervention group (75 African-American); • YWCA Greensboro Healthy Beginnings Doula Program • 2008	To study whether socially disadvantaged, doula-assisted mothers had better birth outcomes in four categories (including more likely to initiate breastfeeding) compared to non-assisted mothers.	• Results: Doula-assisted mothers were significantly more likely to initiate breastfeeding (79.4%). • "Near-universal" initiation of breastfeeding among adult mothers that received doula support (90%). • 67.2% of the non-doula group initiated breastfeeding. • Access to culturally appropriate doula care can positively influence current disparities in breastfeeding initiation among AA women.	*Small sample size enrolled in study *Participants volunteering for doula assistance may have opinions regarding breastfeeding differing from those foregoing participation *Inability to distinguish the true impact of doula intervention due to the fact that doula involvement was not independent of other services and support received by program participants
[37] Fitzgerald, E. (2015)	Quality Improvement Study	• 24 volunteer, African-American mothers enrolled in Boston Healthy	To determine if improvements in perinatal case manager knowledge and competency	• Results: 100% of AA mothers initiated breastfeeding within 24-48 hours postpartum • 100% mothers continued breastfeeding 1 week postpartum; 92% continued 2 weeks postpartum.	* Inadequately small sample size in intervention group *Participants volunteering for

Author(s) Year of Study Journal	Methodology	Sample Population (Source)	Purpose, Hypothesis or Independent Variable(s) explored	Results (specifically pertaining to African-American (AA) mothers)	Quality/Study Limitations
Journal of Perinatal Education		Start Initiative (clients of trained case managers) • Boston, Massachusetts	increases breastfeeding among Black, low-income women in Boston.	• 13 of 14 categories received higher self-efficacy ratings postnatally (compared to prenatal scores) about breastfeeding promotion.	participation in quality improvement may have opinions/ breastfeeding practices differing from those foregoing participation *Only evaluated intervention effectiveness among mothers (clients) receiving care in 4 BHSI sites (total of 13 clinical/non-clinical sites in operation throughout Boston)
[34] Gee, R. et al (2012) Breastfeeding Medicine	Retrospective, cross-sectional study	• 899 African-American mothers • 2,534 total participants (1,635 other races) • Louisiana	To determine variation in hospital breastfeeding support from AA women in Louisiana.	• Results: 60% of AA women were less likely than other races to initiate breastfeeding or pump milk. • Less positive experiences reported by AA mothers. Breastfeeding support/instruction from healthcare professionals following delivery is positively indicative of breastfeeding initiation (regardless of intention). • AA mothers also less likely to receive instruction and support, phone numbers for support or room in	*Deep south location with poor AA breastfeeding initiation as baseline *Results do not call out distinct factors that may have impacted outcomes besides hospital variation: AA women had significantly lower

Author(s) Year of Study Journal	Methodology	Sample Population (Source)	Purpose, Hypothesis or Independent Variable(s) explored	Results (specifically pertaining to African-American (AA) mothers)	Quality/Study Limitations
		• LA PRAMs database		opportunities as compared to other sub-populations (significant barrier).	marriage %, income, and higher % WIC participation (all may influence breastfeeding outcomes) *Factors influencing population and LA hospitals post-Katrina are not accounted for in results
[39] Wambach, K. et al. (2011) Western Journal of Nursing Research	Prospective, non-blinded randomized control study	• 289 Adolescent mothers (predominantly AA ethnicity) • Ages 15-18 • Bi-state metropolitan area in Midwest – prenatal clinics	To test hypothesis that developmentally sensitive education and counseling interventions provided by a peer-counselor/lactation consultant team would increase breastfeeding initiation when compared to control conditions.	• Results: 79% of experimental group participants initiated breastfeeding; compared to 66% of attention control group and 63% of control group. • Statistically significant association between breastfeeding initiation and experimental intervention ($p < .03$). • Confidence in intervention's effect on breastfeeding initiation is not as strong when adjusted for multivariate analysis findings. • Combination of education, peer, and professional support demonstrate some effectiveness in increasing initiation and lengthening duration -- Supported by Grummer-Strawn and Zimmerman in past studies.	*Rigorous theory based design for study * Standard procedures in recruitment, data collection, and interventions *Inability to distinguish what aspects of each intervention may have resulted individually in most effective positive breastfeeding outcomes and initiation

Author(s) Year of Study Journal	Methodology	Sample Population (Source)	Purpose, Hypothesis or Independent Variable(s) explored	Results (specifically pertaining to African-American (AA) mothers)	Quality/Study Limitations
					*Study relied on self-reports from participants (financial incentive may have influenced and recall bias may have been a factor)
[40] Hawkins et al. (2013) Journal of Epidemiology and Community Health	Retrospective, descriptive study	• 326,623 mothers • 32 states • PRAMs database	To examine the impact of state breastfeeding laws on initiation and disparity of infants.	• Results: Some state laws support breastfeeding initiation rates in 32 states. • 5.6 % point gain for AA women with laws allowing breastfeeding in any location. • Additional laws regarding meal and break provisions and support of breastfeeding in the workplace/other public locations are particularly beneficial for African-Americans and other ethnic groups. • State laws may reduce disparities. • Lack of the provision allowing breastfeeding in any location is a significant barrier for initiation among AA women (particularly those with less education).	*Disproportionately smaller sample size of AA mothers in both years compared to White population in attempt to correlate impact of laws on initiation and duration *Only evaluated women and states in PRAMs database
[41] Smith-Gagen, J. et al. (2013) Women's Health Issues	Retrospective, descriptive study	• 609 African-American mothers • 3,132 total participants	To examine breastfeeding practices by race and ethnicity in the presence/absence of 8 specific breastfeeding laws.	• Results: Four of 8 laws were positively associated with breastfeeding initiation in ethnic mothers. • Five of 8 laws resulted in higher percentages of breastfeeding initiation among African American mothers.	*Disproportionately smaller sample size of AA mothers compared to White and Mexican American population in

Author(s) Year of Study Journal	Methodology	Sample Population (Source)	Purpose, Hypothesis or Independent Variable(s) explored	Results (specifically pertaining to African-American (AA) mothers)	Quality/Study Limitations
		• National Health and Nutrition Examination Survey		• Laws with intention of supporting breastfeeding duration within the AA community were significantly less helpful to African-American women than white women. These barriers included: laws requiring break time from work, private areas to pump, jury duty exemption, educational campaigns, and enforced pumping laws. • AA women are half as likely to breastfeed compared to whites secondary to break-time legislation.	attempt to correlate impact of laws on initiation and duration *Post-legislation data results may be skewed by inclusion of states with higher proportion of breastfeeding overall and programming *Limited inclusion of southern states with high African-American populations and low breastfeeding initiation to examine true impact of legislation
[42] Marshall, C. et al. (2012) Journal of Maternal Child Nursing	Retrospective, descriptive survey	• 1,806 African-American mothers • 3,494 total participants • WIC and non-enrolled WIC participants	To examine the association between WIC participation and breastfeeding behaviors among white and black women in MS.	• Results: 39.7% of African-American women enrolled in the survey initiated breastfeeding. WIC enrolled: 38.4% vs. 45.9% of non-WIC enrolled (p value). • Participation in the WIC program was not associated with breastfeeding initiation. • WIC was significantly and negatively associated with breastfeeding initiation for Caucasian mothers.	*Narrow applicability due to geographical location of study (deep rural south MS) *Disproportionate sample size of blacks enrolled in study to determine difference between

Author(s) Year of Study Journal	Methodology	Sample Population (Source)	Purpose, Hypothesis or Independent Variable(s) explored	Results (specifically pertaining to African-American (AA) mothers)	Quality/Study Limitations
		• Mississippi		• More research is needed to fully understand influence on breastfeeding initiation rates among black women.	WIC and non-WIC (82.5% vs 17.5% respectively) *Stated WIC is not associated with initiation in AA, however p value is close to significance (p=.0595). Multiple life factors were controlled for that may be prevalent in WIC population (education, marital status, smoking)
[13] Murimi, M. et al. (2010) Journal of the American Dietetic Association	Retrospective, cross-sectional study	• 57 African-American mothers • 130 total participants • Rural parish setting – central Louisiana • LA WIC Program	To determine the factors that have the greatest impact on the decisions to breastfeed, initiation, and duration among WIC participants. Also determine impact of incentives (provision of formula) on breastfeeding initiation.	• Results: African-Americans initiated breastfeeding 21% less than white counterparts within LA parish setting. Significant difference of ($p<0.010$). • Differences among races (re: specific influences of incentives) were not explicitly stated. • Majority of participants reported that the availability of free formula did not affect their breastfeeding decision (no race specific data was included). • Identified barriers of breastfeeding initiation highlighted non-exploration of the benefits of breastfeeding and associated risks of artificial formula with WIC participants. Additionally pain, lack of adequate milk supply,	*Small sample size for inclusion in a study that contradicts previous findings of WIC's impact on breastfeeding initiation *Central, rural LA geographical location (major limitation) *Results simply reinforce known disparities in breastfeeding

Author(s) Year of Study Journal	Methodology	Sample Population (Source)	Purpose, Hypothesis or Independent Variable(s) explored	Results (specifically pertaining to African-American (AA) mothers)	Quality/Study Limitations
				and inadequate family support are also identified.	initiation among AA and White populations
[43] Parker, M. et al. (2013) Journal of Human Lactation	Cohort study	• 117 mothers/infants (1999 cases) – 66% African-American • 142 mothers/infants (2009 cases) – 59% African-American • Boston inner-city hospital	To determine the rate of breastfeeding initiation and continuation in a US, inner-city, level 3 NICU 10 years after Baby-Friendly designation	• Results: Breastfeeding initiation increased from 74% in 1999 to 85% in 2009. • Breastfeeding initiation increased from 68% to 86% among black mothers from 1999 to 2009 (P = .01). • Barriers associated with breastfeeding initiation included staff education, expense, and organizational buy-in. • Further research is needed to study the impact of BFHI facilities and African-American initiation.	*Study focused on a NICU population – many not be generalizable to a well-baby population *Unable to evaluate the specific factors of Baby-Friendly most influential on positive change *Presence of additional lactation consultants may have positively influenced baby-friendly outcomes (in 2009) *Inability to control for confounders within study *Quality study evaluating influence of BFHIs in the AA, disadvantaged

Author(s) Year of Study Journal	Methodology	Sample Population (Source)	Purpose, Hypothesis or Independent Variable(s) explored	Results (specifically pertaining to African-American (AA) mothers)	Quality/Study Limitations
					population as an intervention
[5] Spencer, B. & Grassley, J. (2013) Health Care for Women International	Integrative literature review	• 37 studies analyzed	To explore factors that influence breastfeeding initiation, intention, and duration in the African-American population	• Results: Positive factors identified to increase initiation of breastfeeding in the African-American population include: support from healthcare providers, confidence in breastfeeding, intrinsic motivation, family members or friends with prior breastfeeding experience, social support from families and friends, high self-efficacy. Focus on tailored interventions for the AA community using black feminist thoughts to maximize rates and decrease disparity gap. • Barriers associated with breastfeeding initiation and continuance include: work and school obstacles, milk supply perceptions, embarrassment, pain, and comfort with formula.	*Review of AA studies including populations of at least 25% (may represent a disproportionately low population for some studies included) * Clear summary of all studies presented with results and interventions noted among each study
[44] Chapman, D. & Perez-Escamilla, R. (2012) Advances in Nutrition: An International Review Journal	Integrative literature review	• 20 studies analyzed	To identify and evaluate U.S.-based randomized trials evaluating breastfeeding interventions targeting minorities and highlight positive public health approaches for minimizing disparities.	• Results: Identification of several interventions to increase breastfeeding among minority women in the areas of peer counseling, professional support, breastfeeding teams, breastfeeding-specific clinic appointments, group prenatal education, and enhanced breastfeeding programs. • Among African-American women, interventions of the breastfeeding teams, group prenatal education and care, father education, and WIC education were most influential.	*Cross-section all U.S. based randomized trials evaluating interventions – focusing on all minorities *Clear summary of all studies presented with results and

Author(s) Year of Study Journal	Methodology	Sample Population (Source)	Purpose, Hypothesis or Independent Variable(s) explored	Results (specifically pertaining to African-American (AA) mothers)	Quality/Study Limitations
				• Efforts must be multifaceted, with several interventions tailored for optimal timing to best meet the needs of specific ethnic groups. • Critical need for more diverse health care workers to facilitate cultural connection and partnership among mothers.	interventions noted among each study
[45] Jones, K. et al (2015) Journal of Breastfeeding Medicine	Integrative literature review	• 7 studies analyzed	To identify and evaluate additional studies in U.S. based randomized trials evaluating breastfeeding interventions targeting minorities (beyond the 20 analyzed by Chapman and Perez-Escamilla).	• Results: Identification of several interventions to increase breastfeeding among minority women in the areas of peer counseling, professional support, and enhanced breastfeeding programs. • Among African-American women, interventions of home/telephonic/and hospital-based peer counseling during the prenatal, perinatal, and post-partum periods were most influential. • OBYGNs and obstetric medical professional must introduce breastfeeding education early in prenatal period to make meaningful impact.	*Cross-section of remaining U.S. based randomized trials evaluating interventions from 1999 – focusing on all minorities *Clear summary of all studies presented with results and interventions noted among each study
[46] Johnson, A et al (2015) Journal of Breastfeeding Medicine	Integrative literature review	• 23 studies analyzed	To identify key interventions and strategies that impact initiation and duration of breastfeeding among low-income African-American mothers.	• Results: Identification of 23 distinct interventions and strategies effective in impacting African-American maternal breastfeeding initiation and duration. • Strategies/interventions categorized according to adapted social ecological model: macrosystem (public policy-0); exosystems (institutional-4), interpersonal (family/peers-3), individual (2), and multi-level (16).	*Review of AA studies during 1995-2013 focused on interventions and strategies to enhance initiation/duration in AA mothers. *Inclusion of studies with at least 25% of population identified

Author(s) Year of Study Journal	Methodology	Sample Population (Source)	Purpose, Hypothesis or Independent Variable(s) explored	Results (specifically pertaining to African-American (AA) mothers)	Quality/Study Limitations
				Strategies include: Baby-Friendly Hospital Initiative, lactation support, prenatal education, peer counseling/support, and network engagement. • Critical need for additional interventions within the African-American community to focus on issues of discrimination in healthcare delivery, policy enhancements, psychological and social support, media use, and social class challenges.	as AA (may represent a disproportionately low population for some studies included). *Excluded studies with mixed-race participants not identifying as AA. * Clear summary of all studies presented with results (grouped according to framework) and interventions noted among each study

Discussion

The 12 studies within the literature review reported 6 themes critical to improving breastfeeding initiation among African-American mothers: Provision of health information and encouragement by hospital providers; professional breastfeeding support; peer counseling; breastfeeding state laws; participation in Women, Infants, and Children (WIC) Program; and Baby-Friendly Designation.

Three out of the six themes in the literature review reinforced the positive influence of provision of education, support, and encouragement in increasing breastfeeding initiation rates. *Provision of health information and Encouragement by hospital providers and professional breastfeeding support* reinforced the concept that if increased initiation rates among African-American mothers are desired, knowledge of positive maternal-infant health benefits of breastfeeding initiation during the prenatal and immediate post-partum period is imperative. Additionally, health care providers must encourage the practice of breastfeeding and actively participate in shaping early experiences of breastfeeding in care indiscriminately.[19,31] *Baby Friendly Designation* also supports the positive influence of education and support through the use of trained health care professionals, fostering the establishment of breastfeeding through hands on care and support groups, and the provision of prenatal information regarding infant/maternal benefits of breastfeeding. These themes provide evidence that national goals for breastfeeding initiation among African-American mothers can be realized with targeted strategies focused on professional breastfeeding support and education during the prenatal period, birthing process, in-hospital stay, and post-partum period.

Two of the six themes regarding *Participation in WIC Program* and *Breastfeeding State Laws* revealed the influence of state and federal legislation and programming on breastfeeding initiation. Both state legislation and the WIC program aim to promote and protect breastfeeding

through policy implementation, despite demonstrating positive and negative influence on breastfeeding practices in African-American mothers. These themes highlighted the importance of amended and future federal and state legislation and initiatives focused on the reduction of barriers and positive facilitation of breastfeeding initiation for African-American mothers.[40,41]

The 4 integrative literature reviews concluded similar findings regarding positive influences of breastfeeding initiation in African-American mothers. Although some divergence appeared between the integrative reviews, common themes of support from health care providers, peers, and family members emerged as the salient points from these integrative reviews.[5,44-46] Overall, the conclusion is that further research and tailored, multi-level education and interventions are needed to determine optimal programs and services for maximizing breastfeeding initiation among African-American mothers.

Despite prior research that demonstrated mothers who received peer counseling were significantly more likely to initiate breastfeeding, the research studies in this review were limited to one single RCT with inconclusive evidence.[31,38,47] Since peer counseling was positively associated with increased duration and exclusivity, further research is warranted to validate the positive impact on initiation.

While much of the literature seemed aligned with previous findings of breastfeeding research in African-American mothers, there were some unexpected findings. These findings focused primarily around conflicting WIC, breastfeeding laws, and peer counseling findings. In terms of the WIC program, Murimi and colleagues. and Marshall and colleagues' findings were unexpected as the national CDC National Immunization Survey (NIS) data and other researchers have determined a correlation between decreased breastfeeding initiation and WIC participation.[13] Baumgartel and Spatz also determined that WIC mothers experience lower

breastfeeding rates when compared to other demographically similar mothers who do not participate in WIC.[27] Interestingly, Marshall et al. concluded that participation in the WIC program was not associated with breastfeeding initiation (after adjusting for significant multivariate factors).[13,42] This finding is likely due to the idea that the population that participated in this research may vary from other mothers who declined enrollment in the study or the total population sampled in the CDC's NIS data.[1]

Smith-Gagen and colleagues revealed unexpected results related to a number of breastfeeding state laws intended to support initiation and continuation of breastfeeding in African-American mothers. African-American mothers were half as likely to breastfeed in areas with state laws requiring break time from work, private pumping areas, and exemptions from jury duty.[41] As state laws have been implemented to facilitate, promote, and support breastfeeding practice for mothers, this was an unexpected finding. Study findings may be related to 2 different factors: 1) implementation of one or two laws in a state will have minimal impact on a population with already critically low baseline rates of breastfeeding initiation and 2) introduction of state laws does not account for the financial impact on hourly employees due to break time and extended meal time provisions.

Wambach and colleagues determined the intervention of peer counseling as only partially supportive of breastfeeding initiation in their study following a multivariate analysis adjustment.[39] This finding was surprising, however, based on a number of studies that highlighted peer counseling as a factor that supported increased breastfeeding initiation.[31,38,47]

Limitations of Current Research

Many of the research studies analyzed presented several limitations. First, the homogeneous nature of many sample populations selected by researchers severely limited the ability to generalize study findings to the broader African-American maternal community. The majority of the studies utilized mothers from low socioeconomic status and/or poorly resourced geographic areas with severely low baseline breastfeeding rates as research participants. The lack of heterogeneity of study results in relation to socio-economic status and geographic location significantly challenges the findings presented by the researchers within this literature review. It also limits the ability to accept the results as conclusive evidence without additional studies for validation.

Second, a number of studies reported positive research findings only after examining a disproportionate (non-representative) sample of maternal subjects.[35,42] These limitations present challenges relating to the generalizability of study results and questions the valid representation of African-American women throughout various regions of the U.S.

Third, many of the research studies supporting interventions as positive in African-American breastfeeding initiation were indistinguishable from other study interventions influencing research results, omit exclusive findings for African-American mothers, or fail to account for confounding factors. Three studies specifically present scenarios that make it difficult to determine the influence on the results.[34,39,43] The thoroughness of distinguishing confounding factors and the influence of each variable on the results is critical to the interpretation and application of research findings.

Finally, only one study in this literature review utilized a true experimental design. While this study presented a rigorous theory based design with standard procedures for

recruitment, data collection, and intervention, no other studies reported were as rigorous.[39] The majority of the studies were retrospective descriptive or retrospective cross-sectional in nature, utilizing data captured for the purposes of WIC, PRAMs, and National Health and Nutrition Examination Survey (NHANES). This presented significant limitations to some studies regarding inclusion of critical topics of interest secondary to unavailable data in the database. The use of previously captured data also required researchers to match investigational questions with WIC, PRAMs, and NHANES database results to provide valid and reliable answers.

Strengths of the research studies analyzed in this literature review include their classification as peer reviewed journal articles. Each presented objective findings from primary research and/or used credible state/federal databases. Additionally, all of the articles presented research that is replicable for purposes of validating results and supporting future policy and program development in support of African-American maternal community. The articles also presented an examination of the cross-section of themes influencing African-American breastfeeding initiation. While not all of the studies were rigorous in nature, they laid the foundation for future experimental studies with representative and proportional distributions in six areas. Finally, many of the studies were consistent in validating the foundational premise that a significant disparity exists in breastfeeding initiation between African-American mothers and other subpopulations within the U.S. It is critical that scientific research validates this fact in an effort to garner financial support from private foundations and the government for additional research, programmatic strategies, and policy implementation within this community.

Limitations of this Literature Review

Several limitations exist within this literature review. The search process year ranges (seven years) and language (English only) may have excluded a number of articles from inclusion in this review. A broader time period of ten years and other languages may have revealed additional themes and interventions in the literature that positively influence African-American breastfeeding initiation.

Additionally, the criteria excluding breastfeeding initiation within the context of other disease processes may have omitted a number of critical studies identifying positive interventions or barriers. Several of these studies were prevalent in the literature and focused on African-American maternal depression, obesity, and diabetes. Exclusion of studies including non-U.S. born target populations also omitted findings pertaining to breastfeeding initiation among non-U.S. born African mothers. Similarly, no studies were included that researched U.S. born, African-American mothers living abroad. Review of this literature may have provided additional insight regarding cross-cultural influences on breastfeeding initiation and practices.

The search process yielded a number of relevant studies for this literature review; it failed, however, to capture all relevant literature. Four additional studies of interest were identified through the process of snowballing. Additional terms may have also been useful for searching within the literature, although some may have been considered redundant or dated by current standards: ethnicity, negro, colored, Afro-American, or Afro-Usonian.

The omission of breastfeeding studies defined by terms of exclusivity and duration may have also limited the inclusion of studies within this literature analysis. While focus on duration would have likely added a significant number of studies to this review, the primary intent was to examine factors facilitating or hindering breastfeeding initiation.

Implications for Future Literature

This analysis has revealed some basic answers to the literature review question examining various factors that influence rates of breastfeeding initiation among African-American mothers. We should, however, be cautious about accepting this review as conclusive.

This review of the literature only concludes that this area of research is immature and presents significant gaps. It sets the foundation for more rigorous studies focused on African-American mothers with: greater generalizability; heterogeneous characteristics of socioeconomic status; diverse access to healthcare and community based resources; mixed method designs; and various state breastfeeding practice baseline performance characteristics in "ever-breastfed" category (i.e. initiation). In addition to more experimental methodology, conducting semi-structured individual interviews, focus groups, and control designs will yield more quality research data regarding the experiences and influence of interventions on this disparate group. This methodology must examine the influence of cultural support, social-environment support (i.e. maternal/family support and paternal influences), and maternal-infant well-being and behaviors on breastfeeding initiation. As indicated by the conceptual model by Lee and colleagues, culture, social environment and community networks are a tremendous influence on breastfeeding decisions and initiation.[7] Finally, more multi-state and national research studies should be created for a comprehensive evaluation of federal programs, such as the *It's Only Natural* Campaign.[23,31]

It is clear that researchers are beginning to recognize the disparity in breastfeeding initiation among African-American mothers as a societal ill that must be corrected. However, the focused effort on producing quality research and implementing strategies continues to be lacking among African-American mothers due to cultural misperceptions, minimal financial

support for research, and political will. Without further research validating positive and negative influences, the gap between African-Americans and other races will not diminish. Future research must work to validate factors and drive strategies within the African-American community, healthcare organizations, and public health field to correct this national shortcoming.

CHAPTER 3- METHODOLOGY AND RESEARCH DESIGN

Conceptual Framework

Effective program and policy implementation are fundamental in achieving positive health behaviors among populations. Public health and behavioral researchers have developed many frameworks theorizing the factors that predict behavior. Few frameworks, however, have addressed the behavior of breastfeeding initiation among ethnically diverse populations. As disparities exist between ethnicities and socio-demographic regions, researchers must create models to gain a better understanding of why African-American mothers adopt or refuse breastfeeding initiation. This will be necessary to design and implement strategies to reduce disparities. This will also be critical in the reduction of mortality and morbidities experienced by the African-American infant population.

Social Ecological Models (SEMs), known also as socioecological models, ecological models, or social ecological frameworks, are models that recognize that both individual and environmental factors influence health behaviors of individuals. (Figure 2) These models emphasize the fluid interaction of individual and environmental factors on various levels through iterative processes.[48] Golden and Earp have concluded that SEMs are necessary tools to understand health determinants and how behaviors are influenced and reinforced by factors at multiple levels.[48] They are critical to the creation of strategies to create change in determinants, intentions, and ultimately behaviors.

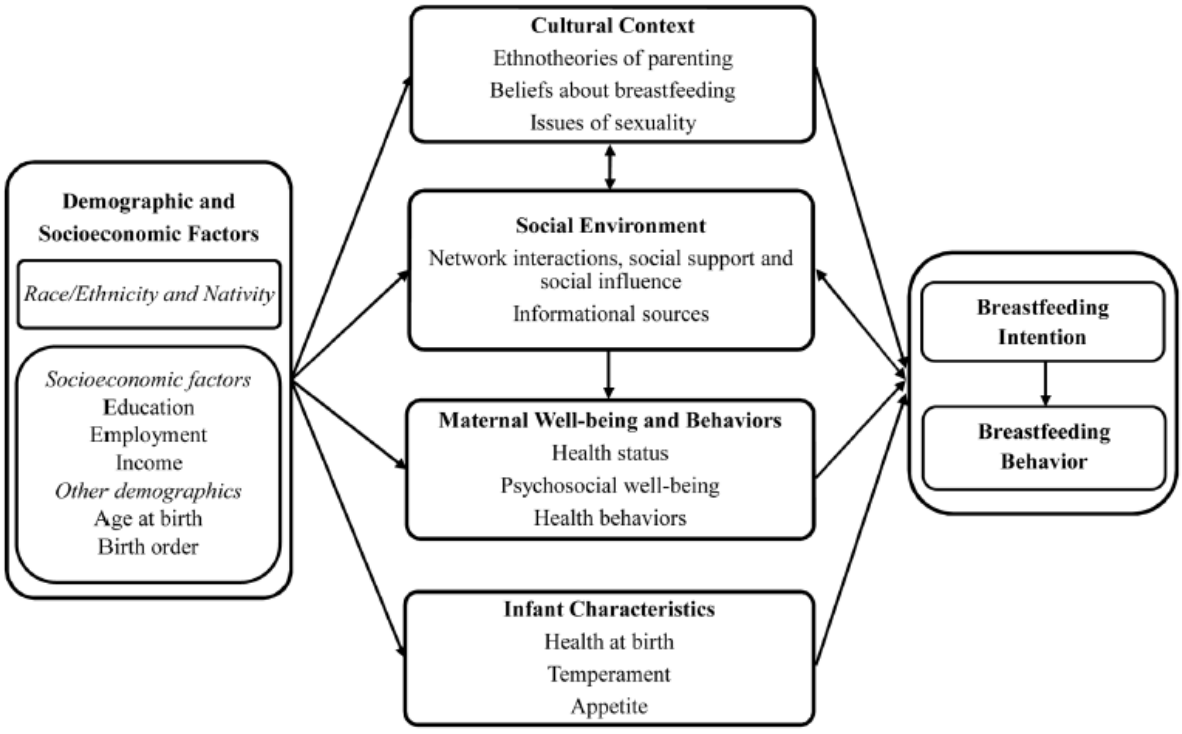
Figure 2. Social Ecological Model

Although not well understood, the breastfeeding initiation in African-American mothers is influenced by many internal (individual) and external (interpersonal, organizational, community, and public policy) factors of the SEM. Several themes, such as some of the prominent topics discussed within the literature review, have been clearly defined and can be distinctly characterized through the SEM constructs: organizational (Provision of Health Information and Encouragement by Hospital Providers; Professional Breastfeeding Support; Baby-Friendly Designation; WIC Program), community, and public policy (Breastfeeding State Laws). Many other themes, however, such as those specifically focused on the individual and interpersonal constructs have been far less defined within the literature or lack unique, culturally tailored interventions specific to African-American mothers and their community. This absence leaves a significant void in addressing important historic, cultural, social, and environmental factors that influence breastfeeding initiation and must be addressed through focused research and analysis.[19]

The Conceptual Model for Breastfeeding Behavior is a framework that examines the relationship of individual, interpersonal, organizational, community, and public policy/societal elements in the context of breastfeeding intention and behavior specifically.[7] This model

identifies that non-modifiable factors of demographics (race/ethnicity and nativity) and socio-economic factors (education, employment, income, age, birth order) interplay with modifiable factors in determining if a mother will breastfeed. These factors include: cultural context (beliefs about breastfeeding, issues of sexuality); social environment (network interactions, social support, social influence, information sources); maternal well-being and behaviors (health status, psychosocial well-being, issues of health behaviors; and infant characteristics (health at birth, temperament appetite). [6,7,19,31](Figure 3) This conceptual framework emphasizes the critical importance of research exploration and understanding all elements that help determine breastfeeding decisions; particularly the modifiable factors which lead most directly to breastfeeding intention and initiation.

Figure 3. Conceptual Model for Breastfeeding Behavior



In this research, the Conceptual Model for Breastfeeding Behavior will provide the foundational framework to assist with understanding the problem of low breastfeeding initiation in African-American women and why this phenomena exists. As the Conceptual Model for Breastfeeding Behavior illustrates, breastfeeding is a direct result of modifiable factors and breastfeeding intention.[48,49] The Conceptual Model for Breastfeeding Behavior will help us to explore perceptions of the facilitators and barriers in breastfeeding initiation among African-American mothers. This will also be critical to the tailoring of practice and strategies to increase rates and improve overall health of African-American infants.

Study Overview

Qualitative research designs provide a method for exploring and understanding human and social problems according to individuals or groups.[50] Collected within the context of participant setting, this design supports a method of inquiry that gains an in-depth understanding of human behavior and reasons that determine such behaviors. A qualitative research design is the most appropriate methodology to explore general themes and current practices of African-American mothers.

To conduct this study, two data sources of focus groups and key informant interviews were utilized. The focus groups were conducted with urban-based African-American mothers, while the key informant interviews engaged Subject Matter Experts (SMEs) with national and international exposure to breastfeeding initiation practices and policies. The cumulative results of the focus groups and key informant interviews informed the design of a causal loop model and *Plan for Change* that will positively influence the implementation of strategies and practices surrounding breastfeeding initiation among African-American mothers.

Study Design

In an effort to address two of the four central, modifiable elements of the Conceptual Model of Breastfeeding Behavior, a qualitative research design was used to explore the perceptions of facilitators and barriers of cultural context and social environment in breastfeeding initiation among African-American mothers. The design also assisted in deciphering the interplay between culture and environment, as they pertain to African-American mothers.

Focus groups were conducted with African-American mothers to explore the two elements of the conceptual model. Focus groups are group interviews that serve the purpose of uncovering factors that influence opinion, behavior, or motivation while bringing to light differences in perspectives between groups and categories.[51] While gaining the perspective from a group of mothers, this format simultaneously assisted in the exploration of breastfeeding initiation in greater depth through brainstorming and probing within an interactive group setting. Focus groups assisted in gaining a better understanding of how African-American mothers and their families feel or think about breastfeeding initiation. They also helped to validate or refute ideas and feelings shared in the literature review, while clarifying information that is currently ambiguous about the African-American cultural context and social environment.[51] African-American mothers self-disclosed their first hand maternal experiences, which ultimately assisted in the creation of practice and community-based recommendations to decrease barriers and increase facilitators of breastfeeding initiation.

Key informant interviews were conducted with local and national breastfeeding SMEs. The purpose of the key informant interview is to collect information from a range of professionals who have first-hand knowledge about the breastfeeding community.[51] Interviews focused on 3 domains: 1) perceptions of barriers and facilitators among African-American

mothers; 2) current policies, legislation, and organizational breastfeeding practices within the local and national community critical to this issue; and 3) obstacles in implementing and amending legislation and practice critical to increasing African-American maternal breastfeeding rates. They also offered opinions regarding the critical gaps within practice and policy influencing the prevalence of low breastfeeding initiation among this population. These interviews provided insight regarding the nature of the breastfeeding initiation problem within the African-American community and offered strategic recommendations for future implementation.

The use of both focus groups and key informant interviews allowed for detailed, rich data collection from the African-American maternal community and key SMEs throughout the region and U.S. Undoubtedly, this data has the ability to inform critical stakeholders and influence the remediation of this national shortcoming.

Focus Groups

A sample of 34 African-American mothers participated in 6 focus groups from the West Philadelphia Nicholas and Athena Karabots Pediatric Care Center of The Children's Hospital of Philadelphia (CHOP). Each focus group was approximately 120 minutes in duration, with 90 minutes dedicated to the focus group discussion addressing cultural and social environment factors influencing breastfeeding initiation. Questions focused specifically on: personal and familial beliefs breastfeeding, issues of sexuality, network interactions, social support, social influence, and informational sources. To be included in the study, participants were required to meet the following inclusion criteria: U.S. born African-American woman, English speaking (primary language), a mother of a healthy, term newborn within the past 3 months (neonatal intensive care admission excluded), maternal age of at least 18. Consistent with the AAP

recommendations for breastfeeding, selected mothers were also required to be negative for Human T-cell lymphotrophic virus type II or II, brucellosis, active tuberculosis, HIV, and illicit drugs.

The lead researcher conducted purposeful selection of subjects for the focus groups from mothers of infants (0-3 months of age) referred for primary care at The Karabots Center. The Karabots Center, which provides primary care visits to over 3,700 newborns annually and services a primarily African-American population, offered access to a comprehensive source of varied perceptions about breastfeeding in the Philadelphia African-American community. The lead researcher aimed to select a diverse sample of African-American mothers with various demographics (i.e. maternal age of 18 or >, single/multiple children, employment/school return status, WIC enrollees/non-WIC enrollees) to ensure multiple perspectives were represented. Additionally, positive or negative breastfeeding at the time of enrollment was the only criteria used to stratify mothers among the 6 focus group sessions. Otherwise, each group was heterogeneous to maximize sampling variation.

Key Informant Interviews

The lead researcher selected 7 SMEs to participate in key informant interviews based upon their professional experience with: 1) policy/legislation creation and programming informing breastfeeding initiation, 2) direct influence on African-American mothers and breastfeeding practices, and 3) organizational or independent programs/projects that may inform breastfeeding initiation rates among African-American mothers. These individuals represented a sample of national SMEs providing insight regarding a number of issues critical to the disparity in rates of African-American breastfeeding initiation. The cross-section included: PhD Breastfeeding Nurse Researcher, WIC Program Director/Executive Director, Hospital of the

University of Pennsylvania Helen O. Dickens Center for Women Clinician, PA State Breastfeeding Coordinator, Founding Executive Director of Black Mothers' Breastfeeding Association/Grassroots Advocate, International Board Certified Lactation Consultant/Registered Nurse Grassroots Advocate, and City of Philadelphia Councilman. Each key informant interview session was conducted in a 1:1 interview format lasting 45-60 minutes.

Data Collection

The lead researcher obtained Institutional Review Board (IRB) approval from The Children's Hospital of Philadelphia and the IRB of the University of North Carolina at Chapel Hill (UNC). Upon IRB approval, the lead researcher initiated steps for the enrollment of African-American mothers in the study. The lead researcher actively recruited eligible mothers on weekdays. Each eligible participant was approached by a nurse or medical assistant at the Karabots Center during their infant's scheduled appointment regarding potential interest in speaking with the lead researcher about study participation. If interested, the mothers remained in their exam rooms to discuss the purpose of the research, requirements of participation, and interest in enrollment via a standardized script.

At the conclusion of the research study overview, the lead researcher reviewed the informed consent and requested participant signature. Enrollees were subsequently given information regarding scheduled focus groups (time and date) and transportation fare for their session. Each participant also received a follow-up telephone call regarding their upcoming focus group session. As an incentive for enrollment in the research, participants were offered a small incentive ($25 Visa Gift Card) for agreeing to participate in the study at the completion of the focus group session. Additionally, a meal and return transportation fare were provided for each participant on the day of the focus group. Two pediatric nurses from CHOP were onsite to assist with childcare of older siblings during each focus group session.

Before commencing each focus group, participants were re-acclimated with the purpose of the research study and asked to orally re-confirm comfort with participation and audio-taping before beginning the session. Participants were also reminded that their participation was completely voluntary and that they could disengage at any point during the session if desired. The sessions were pre-scripted to address the research objectives based upon a review of the literature, the modifiable components of the Conceptual Model of Breastfeeding Behavior, and the goals for focus groups or key informant interviews. The focus group interview script consisted of 16 open-ended questions with cues to help provide additional description, as needed.

The lead researcher initiated steps for enrollment of the 7 SMEs in the study by contacting each individual via email. Email correspondence detailed the purpose of the study, details of study participation, and request for participation. Upon agreement of participation, an appointment was negotiated according to the key informant's schedule. Similar to focus groups, the lead researcher reviewed signed consent and permission for audio-taping with each SME before beginning the interview. Interviews were held via phone conferencing for national leaders outside of the Philadelphia region and in-person for local Tri-state (NJ, PA, DE) leaders. A semi-structured question interview guide, consisting of 19 questions for the SMEs, obtained data regarding factors and programs influencing organizational, community, and societal/political elements in the creation of breastfeeding initiation and maintenance of the behavior.

Focus groups and key informant interviews were conducted by the lead researcher with maternal subjects and SMEs, respectively. Focus group pre-scripted, open-ended questions were administered sequentially by the lead researcher in the presence of a co-facilitator (Appendix G). Each focus group was recorded, with field notes simultaneously taken by the co-facilitator

regarding specific details about the session. Field notes captured the impressions, interesting ideas, and key words during each focus group session.[51] To protect confidentiality of each maternal subject, focus group participants were given the option of selecting a pseudonym to protect their identity. Each participant, however, opted to use their actual first names during the recorded focus group sessions.

Key informant interviews were administered using a second pre-scripted, interview guide (Appendix H). Interview questions consisted of semi-structured, open-ended questions. Each interview was recorded to ensure completeness and accuracy of each interview session.

In conjunction with the PI and dissertation committee, the lead researcher determined, based upon the research questions and aims, that 1) no additional types of data sources were needed to capture additional viewpoints regarding the phenomenon of initiating breastfeeding in African-American mothers and 2) no additional focus groups and/or key informant interviews were necessary to ensure concepts of redundancy and saturation.[52]

Data Analysis

The audio recorded focus groups and interviews were transcribed by a trained transcriptionist.

To discover common themes, the researcher reviewed each transcript using common exploratory techniques. Focus groups and key informant interviews were grouped into "families" and analyzed using Atlas TI 7.0. Data from the focus groups and key informant interviews were analyzed separately to elucidate the experiences, facilitators, barriers, and challenges of breastfeeding initiation identified by each respective group. The lead researcher, however, utilized the same codes during analysis to identify common themes, sub-themes, and triangulation of concepts between focus group participants and key informants.

A codebook was developed inductively from the primary results of this research as transcripts were reviewed. Revisions to the codebook and coding process were an iterative process as new themes and sub-categories emerged. Coding consistency was assessed after completion of the first 2 focus group and first key informant interview transcripts by the lead researcher and a PhD Nurse Researcher with experience in quantitative and qualitative research methods. Full coding and analysis of each transcript occurred independently before meeting together to discuss differences and agreement regarding codes, primary themes and sub-themes. This also helped to ensure consistency of the coding process for the remaining focus group and key informant transcripts.

Written notes were stored in a locked file cabinet and electronic transcripts were stored on a secured network. Due to use of actual names by focus group participants, transcripts only identified first names to maximize confidentiality of study participants. The master list of full names was secured separately from focus group transcripts under a password protected system to ensure subject identity was protected. SME comments were de-identified in documentation and reported anonymously in aggregate. All demographic information was excluded from the transcripts and notes to ensure the protection of professional identity.

CHAPTER 4- RESULTS

This chapter reports the results of the focus groups conducted with African-American mothers and interviews with key informants concerning perceptions of facilitators and barriers in breastfeeding initiation among African-American mothers. The presented findings illustrate the most compelling responses and themes to the following research questions focused on cultural and social environment factors that influence breastfeeding initiation and opportunities to increase initiation.

Research Questions

1. What are the *cultural factors* that promote or hinder breastfeeding initiation in African-American mothers?
2. What are the *social environment* factors that promote or hinder breastfeeding initiation in African-American mothers?
3. What are the characteristics of an effective, tailored strategy to increase breastfeeding initiation in African-American mothers based on their (AA mothers) perceptions of facilitators and barriers and expertise of key informants?

Participants and Data Collection

Six focus groups and 7 key informant interviews were conducted during the summer, fall, and winter of 2015. With a total of 61 women consented, 34 mothers participated in the study, offering extensive insight into issues of perceptions and beliefs (personal/familial/cultural), issues of sexuality, and familial and network influence. One mother was disqualified due to failure to disclose the preterm gestational age of her infant at birth. Among the 8 key informants

consented, 7 key informants from various professional backgrounds participated providing critical insight into the aforementioned issues, as well as issues of programming, policy, and future opportunities to increase breastfeeding initiation. The table below summarizes the sample participants in this research study by group.

Table 6. Participants by Group

Maternal Focus Groups	(n=34)
Breastfeeding	22
Non-Breastfeeding	12
Key Informants	(n=7)
Government Official	1
Healthcare Professional/Clinician	2
Grassroots Advocate/Executive	1
PhD Breastfeeding Nurse Researcher	1
WIC Administrator	2

Overall, the 34 focus group participants and 7 key informants offered extensive knowledge, diverse perspectives and experiences to inform this critical issue. Descriptive statistics highlighting the variation in participants' demographic information can be located in Appendices A and B. Focus group and key informant interview questions may also be found in Appendices G and H.

Data analysis procedures were followed as described in Chapter 3 (Methods). Additionally, due to the anticipated "no-show" rate among this population and based upon feedback from site administrators, the researcher obtained permission from the CHOP IRB

during summer 2015 to increase the number of targeted focus group participants (and exceed the original target of 32 if needed).

Emergent Themes and Sub-Themes

Upon review and analysis of the focus group and key informant interview data, emerging primary themes validated the significance of modifiable factors on breastfeeding initiation decisions and perceptions at the individual, interpersonal, community, and organizational levels. Emerging primary themes from focus groups and key informant interviews were analogous to most factors of the two central, modifiable domains of the *Conceptual Model for Breastfeeding Behavior* (i.e., cultural context and social environment factors) and the external domain of the *Conceptual Model for Breastfeeding Behavior*, breastfeeding intention. The primary themes also highlighted key perceived facilitators and barriers that were relevant to underlying historic, cultural, social, and environmental factors influencing breastfeeding initiation in African-American women. The primary themes included: beliefs about breastfeeding; issues of sexuality; familial/network influence; informational sources; barriers; facilitators; and intention. Many sub-themes also emerged, supporting the details of the primary themes throughout the discussions.

The primary themes and subthemes are highlighted below in Table 7. The results are inclusive of both key informant and focus group participants. Table 8 at the end of the chapter summarizes emerging primary themes and sub-themes with interpretations and positions of maternal participants and key informants.

Table 7. Emerging Primary Themes and Sub-Themes

Emerging Primary Themes	Sub-Themes
Cultural Context (Factors)	
Beliefs about Breastfeeding	Benefit to Baby and Mom/Healthier
	Increased Bonding
	It's Natural
	Historic Cultural Events have Influenced Beliefs, Exposure and Perceptions of Breastfeeding (non-normalized)
	Formula is as good as Breastmilk
	Racism/Community Disparities Supporting African-American Maternal Breastfeeding
Issues of Sexuality	Breasts for both Nutrition and Sexuality
	Breastfeeding for Sexuality/Sexual Act
	Over-sexualization of African-American Females
Social Environment (Factors)	
Familial/Network Influence	Self-Influence
	Matriarchal Influence
	Paternal Influence
	Sister Influence
	Friend/Peer Network Influence
	Religious Community Influence
Informational Sources	Prenatal Clinics
	WIC
	Physicians
	Nurses
	Lactation Consultants
	Internet Sources
Breastfeeding Intention	
Intention	Positive Intention
	Negative Intention/Ambivalence
Barriers and Facilitators	
Barriers	Competing Priorities
	Pain
	Embarrassment of Public Exposure
	Lack of Knowledge and Support of Breastfeeding in African-American Community and Home
	Lack of Information and Education about Breastfeeding Prenatally
	Lack of Access to Equipment and Resources
	Aversions to Breastfeeding
	Convenience of Formula and Bottle-Feeding
	Self-Centeredness and Independence
	National Policy
Facilitators	Engaged/Involved Fathers
	Prior Positive Experience/Exposure
	Cost and Convenience of Breastfeeding
	Peer Counselors/Peer Support Groups
	Supportive Family (home) Environment
	Baby-Friendly Hospital Influence
	WIC

Cultural Context (Factors)

Themes and sub-themes in the cultural context domain were identified by participants of focus groups and key informant interviews. The two primary themes, *beliefs about breastfeeding* and *issues of sexuality*, provide some background knowledge regarding the prevailing perceptions about breastfeeding among African-American mothers, their families, and the community. This domain gives context to the mixed perspectives of beliefs about breastfeeding and sexuality within the African-American community, which continues to influence decisions of breastfeeding initiation.

Beliefs about Breastfeeding

Benefit to Baby and Mom/Healthier. Benefit to baby and mom was frequently mentioned by participants in both breastfeeding and non-breastfeeding focus groups as a prevailing belief about breastfeeding. This was also mentioned by key informants. While some participants cited benefits to the baby as most important about breastfeeding, other participants cited maternal protections as a critical reason to breastfeed. Increased intelligence (intellect), protection from common cold and ear infections, and strengthened immune systems were benefits offered by participants regarding benefits for the baby. Maternal benefits included return to pre-delivery weight/shape and protections against maternal illness (such as breast cancer) as significant advantages for mothers.

> *I've heard that, you know…it's the best thing ever. You know, it helps your child from becoming more sickly, and it's supposed to make them smarter. I read somewhere about it's a lower case of SIDS, and a higher IQ. (Non-Breastfeeding, p4, 033)*

> *And then like, I feel as though like breastfeeding it…it strengthens their immune system. Like with him, I breastfed for a good three weeks with him. He never really like got a common cold or an ear infection or anything of that nature… (Breastfeeding Mother, p1, 0117)*

…It's healthier for the baby all around, um…it keeps them from uh…certain sicknesses that other children get that weren't breastfed….it helps your weight go down after birth faster…. (Non-Breastfeeding Mother, p3, 054)

...My biggest thing was the breast cancer thing 'cause I am BRCA-positive, which is um…I carry the gene to have breast cancer…So, anything that I could do to lower my risk because it's like I have like twenty family members with breast cancer and that would be be good for me. So, it's like kind of selfish, you know to make that decision for myself, too, but um…. (Breastfeeding Mother, p5, 062)

Breastfeeding is….also to kind of eliminate sicknesses, because like um…I think breastfed babies um..are able to fight off certain infections because of the antibodies that we do give off to the baby…it's like we are made to protect our children…. (Breastfeeding Mother, p5, 488)

No, 'cause I've explained that um…to my baby's father a million times, you know this is (breastfeeding) is healthier. She's going to be so smart. She might go to Yale or something and he's like, out of breastmilk, though? And I'm like, you don't understand, like it helps their brain develop. I'm not saying, you know she's going to be super baby. I'm just saying like it's better than the formula will ever do for her. (Non-Breastfeeding Mother, p3, 438)

I think that we have become too booshie, so that we're not concerned about the way we look and whether this is going to affect how we look, and we're not as concerned about the nutrition for our…for our child. And if everyone understands truly what the importance of breastfeeding, it's important for the mom. It's one of the best ways to get yourself back to normal after birth. Key Informant, p8, 041)

Increased Bonding. The phenomena of increased bonding among breastfeeding mothers and infants was highlighted several times by participants across both maternal focus groups and key informants. Participants highlighted an increasingly positive bonding experience for breastfeeding infants, emphasizing the heightened connection between the mother and her child. Despite not breastfeeding, non-breastfeeding focus group participants identified the act of breastfeeding as a positive exchange between the mother and her child through more skin-to-skin contact and enhanced connection. Key informants echoed these sentiments and identified the opportunity for a stronger national leave act to increase bonding through breastfeeding among infants and their mothers for our nation's future.

I think of mother and child connection. I feel as though they get a little bit more connected to the parent when they're breastfeeding, 'cause they get the skin-to-skin contact and it's more like a…an exchange between like mother and child. (Non-Breastfeeding Mother, p6, 122)

I mean I love him just being with me, period. Um…so yeah, I'll be breastfeeding and like his dad will be like, did you pump? No, I did not pump today. I'm going to feed him. So yeah, just the bonding, it's really wonderful and like I told his dad, I didn't know that I was going to love him so much and want him with me so much. (Breastfeeding Mother, p2, 931)

I think I like the bonding experience. I love my son to be attached to me, whether it's on my breast or like laying like to smell me, so I think that I just…I love that experience and that's what makes it easier because I'm just naturally trying to develop a stronger bond with my child and that's what makes all of the pain worth it, you know, to just bond stronger with them. (Breastfeeding Mother, p2, 923)

I think if we had a better leave act that covered fifty-two weeks, that would be fabulous, because that would give mom…you know, time not to feel rushed, to feel like they can really bond and figure things out….We just have a baby and we run back to work and these are the little ones that are going to running this, you know, nation. We should probably nurture them as much as we possibly could. (Key Informant, p7, 306)

We've had moms who, you know, come in and they're like, oh no, I'm not going to breastfeed or, okay, maybe I'll pump for a little bit and then the next thing you know they've gotten this bonding experience with their baby 'cause they did try it and they love it and now they're a year out and they're like, nope, I'm stopping when my baby is ready to stop. (Key Informant, p7, 370)

<u>It's Natural.</u> Throughout many of the focus groups, particularly among breastfeeding mothers, they referred to breastfeeding as being "natural". For some, the reference to the word *natural* focused on the connection to spirituality and a divine design by God. While others did not reference the divine connection, they did mention the perfect creation and exactness of the breastfeeding phenomena. Other participants utilized the word *natural* to refer to healthy and the absence of additives and chemicals that could be found in man-made products, such as formula.

So, it was like a lot that factored into, you know, the thought process (of breastfeeding) and then it being natural is always a good thing. It's …you can't mess with something that was created perfectly, like to work perfectly. It just…it works too well for you to be like, oh well, you know you're not supposed to use your breast for that, um…you know, you kind of are 'cause it works. It's like great…..like even when you pump, you pump out

exactly what your baby is eating at that point and time….you know, it just caters exactly to your child and something that works that smoothly just seems like an automatic decision. (Breastfeeding Mother, p5, 066)

So people who are, you know, who have a spirituality about them, um it seems like they understand better the natural order of things, so they accept it more and they support it more, because it's like this is what you should do 'cause this is what God intended you to do. (Breastfeeding Mother, p5, 338)

I just think God created everything kind of perfectly, like the way that everything works, like your baby cries, you can feel the tingling and…you know, it just seems like, okay, this is what's supposed to happen, so it just was kind of like, you know, you just do it because it's, it seems so perfect. (Breastfeeding Mother, p5, 062)

When you think about it, it's natural and I feel as though it's something that we should just be used to as a community. It's something that goes along with life and most likely, nine times out of ten, you all were breastfed, especially if you were older. So it's something that we should get used to. (Non-Breastfeeding, p6, 450)

The whole process of pregnancy, childbirth, breastfeeding, the way it's structured is just like to me…when you see it, how can you deny that it was like perfectly masterfully like created… (Breastfeeding Mother, p5, 440)

Historic Evolution of Breastfeeding in African-American Culture. The historic evolution of breastfeeding within the African-American culture was a topic that was referenced by both key informants and mothers in breastfeeding and non-breastfeeding focus groups. Participants referenced the implications of slavery and the lack of knowledge and non-normalized experience in the black community as significant in current day perceptions of African-American mothers and the community about breastfeeding. Key informants particularly highlighted the critical historical influence of slavery on the perceptions of infant independence, spoiling, and breastfeeding. Some mothers believed that raising awareness of history may influence initiation of breastfeeding among modern day African-American mothers.

I do think that our history has um…a lot to play in how we perceive breastfeeding and that has unfortunately snowballed into a lack of knowledge. The media doesn't show modern day African-American women breastfeeding their babies, connecting with their babies, and there's still kind of that um…independent, you know you've got to be able to survive. I don't have time necessarily to cuddle you, and breastfeed you, and if I'm

holding you too long then I'm spoiling you and you're going to be soft and unfortunately that's still a big piece to what we see, especially in our inner-cities where it is all about survival a lot of times….I don't think that that connection is often made where breastfeeding your baby is a great thing and you're not spoiling them. You're actually making them more independent and it…helping them thrive you know. And you know, I think that does play along with from our past where it is now. (Key Informant, p7, 084)

But then there's the whole um…historical thing, like what's the trauma that's going on with black families and black moms that to our families over time that um....has led us here. You know, we could talk about um…if we talk about like one of the social barriers, which is like spoiling the baby, then we could link that to history, like so why is it that um…black women are preparing their children to be independent at such a young age right? 'Cause if you talk about spoiling the baby, what does that mean? That means that the baby's depending on you. But if we're talking about why the baby is…why you don't want the child to be dependent on you um…and why you're preparing your child for independence at such a young age, then we can think back in this country when babies were um..taken from their moms and when we…you know, you don't feel in control of the situations that might happen to your child when you leave them so they have to be prepared to deal with this harsh world that we live in even at a young age so we can link the historical, societal, and social barriers together…. That' doesn't mean that you don't love your child, right? That just means that you love your child so much that you understand this world is harsh to black folk and they got to be independent and strong early-on. (Key Informant, P13, 204)

I just know as far as one thing for our community to realize is when we were slaves we fed everybody's baby. The…you know what I mean, so when they come at somebody differently and go why are you breastfeeding? It's embedded in us, period. This is what we do, not just because we were slaves but because that's the way God created us. (Breastfeeding Mother, p5, 326)

….Even if you go back in history, back into slave times, white women did not feed…breastfeed their babies as often as they went and took them to a black woman who just breastfed and they would give their child to them to breastfeed. (Non-Breastfeeding Mother, p6, 468)

That lack of historical experience. I'm seventy years old….My mother breastfed me because that's what she knew to have happened in the past. With the introduction of formula, mothers were going to work and so they weren't breastfeeding. They weren't even encouraged to breastfeed, and so there were several generations where breastfeeding just wasn't the norm. And so as we are trying to…to return to breastfeeding as the norm, we're fighting an uphill battle. (Key Informant, p8, 025)

There are a lot of people in the African-American community that don't even know that much, like that we were forced to feed, you know, our master's children, breastfeed them and things like that. They don't even know about that information alone, so I think even if they knew that, they might change their opinion. Like well, if they thought we were…you

know, that if we were good enough to do that, that we should be made to do that, then maybe it's better that we do it for our kids. (Breastfeeding Mother, p5, 350)

Formula is as good as Breastmilk. Despite having a wealth of knowledge about the benefits of breastmilk for infants, some participants primarily in the non-breastfeeding focus groups expressed skepticism and uncertainty regarding the true benefits and superiority of breastmilk over formula. Some of this skepticism may be rooted in the strong presence and acceptance of formula within the African-American community and the lack of normalization of breastfeeding within the community. The uncertainty about the true superiority of breastmilk over formula raised by participants sheds light on the need for additional education of mothers and the African-American community.

I didn't breastfeed with my six-year old, and I actually had none of those problems with her. Like she's not sickly. She's very smart. You know, it's like the opposite so it was kinda…I was on the fence like, you know, I guess some people have those problems and you know, some people don't. I don't really think they're contributed just to breastmilk. (Non-Breastfeeding Mother, p4, 033)

Well my feeling are I heard that breastfeeding is um…more better for your baby….um, I have fifty/fifty agreement on it because I have other kids that were not breastfed, so I had like four kids and one I breastfed, some I didn't so. And, I really don't see too much of a difference. (Breastfeeding Mother, p2, 036)

But the other ways, like the formula, I don't really see any children being harmed or any less focused from, you know, the formula milk. So to be honest, I just think that both of them are really great….great ways to feed your child, and as long as, you know, it's an option, I think people will choose what they feel…pretty much. (Non-Breastfeeding Mother, p4, 043)

…'Cause I be like, you know, I bottle-feed and they be like I don't know why you do that. They were like I don't know why you do that, you know he's going to be smarter if you breastfeed him. But they were like, no, he's going to be smarter and I was just like, man, you're all young and dumb like me. How do you all know? We're both in the same path, we both on the same train. You don't know. (Non-Breastfeeding Mother, p6, 270)

I think that they're not giving formula milk enough credit, you know? I just kinda feel like no one…no milk will be able to take away from breastfeeding, but there is other good choices out here that are better than breastmilk. You know? Like I just…I don't feel as though like breastmilk should be taking over like this….There is other good choices out

here that are better than breastmilk. You know? Like I just …I don't feel as though like breast milk should be taking over like this. (Non-Breastfeeding, p4, 235)

Racism/Disparities. The issues of racism and disparities within African-American communities were mentioned in several discussions by mothers of both focus groups and key informants. Key informants raised prominent issues of discounting parental ability and desire to breastfeed due to stereotyping, unequal approaches in care, and negative communication as "subtle" acts of racism that widen the disparity in the African-American community. Mothers of breastfeeding and non-breastfeeding groups highlighted existing disparities found within African-American communities (when compared to neighboring White communities) and perceived "white privilege" as issues critical in the final decision to initiate breastfeeding.

I love working with the (African-American) fathers. But just for a minute, you know, you're the average, you know, nurse from the suburbs and you've got a mother with tattoos and you know whatever else that comes in and the father may be wearing the, you know, the pants down around God knows where. But those are things I think are subtle because what you think about this is first of all, many of these women…nurses are gonna say, well, these people shouldn't be having a baby to begin with and…but I think there is some of this…in this…in this culture within the hospital where we cut back…we've cut back asking so much. I think there is this…oh you know, this mother's never gonna want to breastfeed, so why am I spending this time. You know, we'll just say, we'll just support her.. If she says that she wants to feed formula, that's what we're gonna do. And I do think you see that more with low income, young, urban, African-American mothers than….and I do think that's a type of racism. (Key Informant, p12, 231)

I do 'cause I see uh…that it's um…that there are many instances where we see that happen, for example, you know, people have stereotypes, and they have impressions, and they have ideas and that affects how they prioritize things. And um, you know…subconsciously, or unconsciously sometimes it affects uh…where they make an effort, you know? I mean if you talk about poor black neighborhoods with single mothers, you know, do we think it's a good idea to spend our time and money, our limited resources in trying to get them to breastfeed and providing a program, and things like that? I mean, I think um…those decisions happen everyday…. (Key Informant, p10, 292)

So, I think it depends on who the mom is seeing as a provider or as a care…you know, lactation supporter. I do think that it (racism) can play a role if she comes across someone who is not supportive or truly believes in not providing her with the same care that she/he would someone else. And that's going to hinder her. She's not going to get the information that she needs. She's not going to get that authentic support that she

needs and she's probably not going to return, because she's probably going to clearly see immediately that, you know, this really…you're not sincerely trying to help me. Mm-hmm. Um, you know, oh well it's not working for you , just stop. Just go ahead and give the baby formula. That's still happening where another mom who comes in, maybe she's Caucasian, maybe she's, you know, middle-class, maybe she's married, they're going to give her more support and that…that does still happen. (Key Informant, p7, 482)

I noticed that, like the point that she brought up of stores and stuff like that in white…predominately white communities, there are stores that have rooms. Like when you go into Springfield where we go to …you know…you're allowed to go in the fitting room or a room on the side…there are many different places that I've gone to in predominately white areas there where they have a space for mothers who are nursing and then there's like a little sign with like a stork on the door. You know that you can go in and you can nurse and things like that. In our community, you don't find that at all. (Breastfeeding Mother, p5, 362)

I agree to the point where sometimes it's more…is white people are move privileged than African-Americans are when it comes down to jobs or anything like that, like job security for a white male is much more um…let's say its's much more secure for them than African-American men who's out there….Another instance whereas a black female and a white female in a store and breastfeeding, if a black female automatically just pop out her boob and feeds her baby, it's an issue, but if you see a white mother doing it an aisle down, it's not no problem. So as a community I feel as though black people sometimes get hindered by the way society treats us and we automatically just take a road where we just try to avoid it altogether. (Non-Breastfeeding, p6, 392)

Issues of Sexuality

Breasts for both Nutrition and Sexuality. Issues of sexuality within the African-American community provoked lively discussion among participants. Many breastfeeding and non-breastfeeding focus group participants offered a positive perspective in the dual purpose of the female breast for feeding and sexuality. They spoke eloquently to the ability of their breasts to appropriately serve as the provider of nutrition for their infants and sexual objects to their partners during moments of intimacy. While some participants discussed the ability to serve in both roles at once, others voiced the need to create limitations during periods of breastfeeding. Many participants offered their perspective on the significant barriers that exist in the African-American community regarding acceptance of breasts for the primary purpose of infant

nourishment. These thoughts included: the lack of normalization of breastfeeding within the African-American community, the over-sexualization of African-American females in the media, and general love of black women by African-American males.

> *I feel that it's…it's for both, you know? And um…everybody is entitled to their own opinion, you know, where the breast is concerned but um…you know, there's a time and a place for everything, and when it's the baby's time, it's the baby's time. You ain't coming near my breast. You know, it's for the baby. I don't care if it takes three years. It's for the baby. You know, when it's your time, it's your time. And everybody's entitled…if they feel that…okay, it's pure sexuality and the breast is for that, then that's on them, you know? But you being the mom you know…you know, what is for you, you know nourishment for your kids…and that's my opinion. (Breastfeeding Mother, p1, 491)*

> *I believe that it's for both purposes, like I do believe that it's for the sexual purpose for your husband but it's also for nurturing your child when that time comes. And um…even for me, like before I started, I even wondered myself. I was like I wonder if it's going to like have that similar kind of feeling but it's like absolutely not the same and I've even explained it to my son's father. I was like, you know, it's really like totally different, like it's nowhere near the same type of sensation. (Breastfeeding Mother, p5, 474)*

> *If you want me to be honest, so I like having a dual purpose. I like being able to like…be able to feed my kid and please my man. I think that's pretty cool. Like only women can do that. Men don't have that. They don't have that option… (Breastfeeding Mother, p5, 482)*

> *But initially he was trying to talk me out of it (breastfeeding), because even to him it was like, okay, this is supposed to be a sexual thing until he actually saw me nursing and then was like, oh, there's nothing sexy about that. It's just like, oh okay, you know, because it's…I guess people have misconceptions that when the baby is sucking on your breast it's going to feel similar to a man and it doesn't at all. And even like him (my fiancé'), we have a joke that…we have an ongoing joke with our kids, like he'll tell our kids when they're coming up on their first birthday…eviction time, you got thirty days 'til they're mine. You know what I mean? Because to him, like it even becomes like an off0limit thing to him, because it's like, okay, this is not their purpose anymore. Their purpose is for my kids, so I'm going to take a back seat. (Breastfeeding Mother, p5, 456)*

Breasts for Sexuality/Sexual Act. The sentiments that breasts are solely for the purpose of sexuality or the act of breastfeeding was sexual in nature were mentioned primarily by participants in non-breastfeeding focus groups. Overall, mothers presented reservation regarding the act of breastfeeding based upon reactions of their partners, personal skepticism, or concerns about feeding children directly from the breast. Some mothers identified concerns specifically

with feeding male children (sons) from the breast, preferring a bottle for delivery of milk. Others identified concerns, such as sexual arousal as significant reasons for avoiding breastfeeding with their infants.

> *I believe that is true, because um…as you know, I have a son, so that did play a part in another reason why I chose to bottle-feed, 'cause remember I told you I was going to breastfeed. I was going to pump, but when the pump didn't work, I didn't…I always …like I just felt like I didn't want to do that, like I just felt like, no, that's not right, but like I know in my but I'm just like, no, I don't want to do it like that. So that did play a part that…that did play a part that we used them as sexually, but that did play a part on the reason why I gave him the bottle, because I felt like I'm having a son, I just feel…no, I just like, no, I don't want to do it. (Non-Breastfeeding Mother, p6, 418)*

> *I've had people say, oh, I can't breastfeed. I just…my son and he's a boy, him just on my chest….I'll breastfeed my daughter, it's fine but my son, it's just weird. (Breastfeeding Mother, p5, 424)*

> *I learned that many times the husbands don't want the mothers to breastfeed their sons. They will allow them to breastfeed their daughters. But we had to have, um, focus groups where we talked with the women and their…husbands and partners and said listen this is good for the baby. And so they would say oh, give it to him in a bottle, because they see the breast, you know as a sexual object. (Key Informant, p8, 025)*

> *I think that all African-American males seeing the sexual purpose, because um…when I tried to get my baby's father to do that again, he was like, no I'm not doing that. It got milk in there….but I think they see it for a sexual purpose, 'cause he's like, I don't want my son to be eating like that. Give him the bottle. (Non-Breastfeeding Mother, p3, 376)*

> *Like the reasons why I don't breastfeed is because I do think that it's sexual and it's just creepy…The fact of having to put my boob in my baby's mouth. I know it sounds like, you know, it's harmless, and I know that that's the way for them to eat, but I just…I can't see me doing it, you know?...Like I said, you have to wiggle it around, you know, for the baby to latch on. He can't just hold it up there and just expect the baby to just come it. That right there alone for me is creepy….I've had a friend that told me that she gets aroused from feeding her child. Like I can't do that. Like I cannot do that. Like honestly, I'm not saying that it's a crime or anything, but to just know that that's happening, like it's just a very uncomfortable feeling, uncomfortable situation, and I'd rather not put myself through it. (Non-Breastfeeding Mother, p4, 485)*

<u>Breasts are Sexualized.</u> The discussion of breasts being oversexualized within the African-American community was a discussion found most commonly in the commentary among breastfeeding mothers and key informants. Participants agreed that perception of body

image (self-image) and perspectives of males within the community were significant in creating this sentiment of over-sexualization. Although some participants recognized the short-sightedness of this phenomena, they voiced uncertainty of how to change this due to the lack of normalization of breastfeeding within the community, focus of black males on breasts for sexuality, and media depiction. Breastfeeding mothers believed that there is an ignorance within the community about breastfeeding that must be changed.

> *I do think that it is extremely different for African-American males because in our communities, like…I'm sorry. I'm trying to get the words. It's just bad. Like everything is just all about sex – Sex. Sex, sex, sex, sex. And it's specifically in our community, and it's just horrible. It's horrible….I do think it's a lack of ignorance in the Black community because we don't talk about breastfeeding. It's not common in our community, and Caucasian…in the Caucasian community, it's very common. It's almost like normal for them. And ummm…Black males, they're not thinking about breastfeeding because that's not what they were raised around. Like I said, all they know is sex, sex, sex, sex, sex. The boobs is for sex and that's it, because they are ignorant. (Breastfeeding Mother, p1, 519)*

> *I think that that's one of the barriers (of breastfeeding), as well, is because it's so sexualized and especially in the African-American community, people are so concerned about their sexual, you know, ability, or you know, they take pride in that it causes them to not look at themselves as nurturing…being as a women, not to look at themselves…like what we're capable of doing….Where people are like, well, this is…breastfeeding is not normal, that's for your husband…. It's just not sensible. It doesn't make sense. They're so…it's just…it's just strange. It's just sad how women are sexualized to that extent and it's like men don't understand or like no one cares what happens with their penis, their chest, their Adam's apple, like they don't have these kinds of problems that we have. It's just…oh my god in sane but it's true, like we're very sexualized and I think that's the big barrier within our community is that people are so focused on sex that they don't see it for what it is, like what it was really made for. Like that's what it was really made for. (Breastfeeding Mother, p5, 474)*

> *And then the whole sexualized…you know how breasts are sexualized, and then images of women…Black women and their bodies. Women often say well, my breasts are gonna sag and, you know, this whole body image… (Key Informant, p11, 445)*

> *You were like created once you gave birth, but I mean the whole, you know TV, media, all of that other crap, they spun it around, like that's the only thing that breasts are used for, when though, they're like feeding tools for the kids. So no, it's not right, but I don't know how to change it now, 'cause it's been like how many…it's been years of this, so it's nobody that can change it. (Non-Breastfeeding, p3, 346)*

Even coming home from the hospital it's like ok, you have a baby, but it was like…you look good, doll. And you know, I live on a block where it's..I live on a block where it is not just young guys, but its older guys…And the only thing they see is just…I think they just see Black Goddess. Like oh, she is just….oh, I just gotta have…I gotta have her…I don't think it's because of, you know, how they was raised, but it is just that they are brought up to… I like women, and it's breasts and boobs or whatever they want to call them. That is part of who we are. That is part of our body that they like. So yeah, so honestly, it's not even like they just totally disregard the breastfeeding, it's just that that it's there. I like it. I love it. I want to touch it. (Breastfeeding Mother, p1, 521)

Social Environment (Factors)

Focus group participants and key informants similarly identified the prevailing themes and sub-themes that emerged within the Social Environment domain. The two primary themes, *familial/network influence and informational sources*, provided detailed insight into the impact of interpersonal and organizational interactions on African-American mothers' breastfeeding initiation decisions. The influence of individuals and the environment surrounding African-American mothers during pregnancy and following delivery is undoubtedly powerful. Responses revealed that these external influencers are critical in shaping the attitudes, behaviors, and final breastfeeding decisions of African-American mothers, even among those possessing personal desire and intention to breastfeed.

Familial/Network Influence

Self-Influence. Self-Influence was one of the sub-themes highlighted by participants as most influential in their final breastfeeding decisions. Some mothers who identified "self" as most influential shared that others in their familial and social network had little interest in or did not care about their final breastfeeding decision. Other respondents reflected upon the interests of others in their interpersonal network; they highlighted, however, that their decision to breastfeed was most influenced by personal thoughts or factors.

I would say I was my biggest supporter because um…nobody really cared if I breastfed or not, but I…it's something I decided to do and wanted to go forth with it. (Breastfeeding Mother, p2, 228)

Really, nobody because it was my decision. This was my fourth child. Then, with my first child, my baby father wanted me to breastfeed. He was just making sure I did, but I wasn't really into it 'cause I was…I was young and I wasn't really into it, so. This time, nobody. It was my decision. It was all up to me. (Non-Breastfeeding Mother, p6, 244/248)

I made my own decision on if I was gonna breastfeed or not. I mean I was the only….I mean I was the worst critic…probably I should say that. Only because even as many times as everyone brought the positives in front of me as far as breastfeeding I, my mind was made up. I'm very selfish, so therefore it was a straight no for me. (Non-Breastfeeding Mother, p4, 161)

No, I wasn't influenced by anyone….or anyone in the community, but there are a lot of people that…as everyone is saying, why are you breastfeeding? I can't have nobody on my boob and….you know, a lot of….I don't know anyone in my community that breastfed. Everybody bottle feeds. Everybody. But it didn't really influence me. (Breastfeeding Mother, p1, 299)

I didn't consult with anybody about breastfeeding. It was just my decision on my own. (Breastfeeding Mother, p1, 203).

Matriarchal Influence. Matriarchal influence was a sub-theme identified often by participants when referring to familial and network influence on breastfeeding initiation decisions. Matriarchal influence, which refers to the influence of a maternal or paternal grandmother/great-grandmother of the infant, was the most common type of influence recognized by participants. Breastfeeding and non-breastfeeding focus group participants identified examples of positive and negative matriarchal influence on their breastfeeding decisions. Key informants, in particular, recognized the critical influence of grandmothers in final decision-making, highlighting the lack of support found among 'younger' grandmothers and significant concern of interference in lifestyle of breastfeeding daughters.

Positive Matriarchal Influence

My mom, um, she …'cause she really basically pushed me to do it and like now that I am doing it I just…he was easy, like as soon as he came out he started breastfeeding, so….my mom, she's like my number one supporter. (Breastfeeding Mother, p5, 224)

Because my mom and my stepmom, they both done it and they…I got a lot of information from them and how they experienced it…I just felt as though it just made more sense to breastfeed and my results from it are really good, so I'm happy. (Breastfeeding Mother, p5, 108)

Like my mom is my biggest supporter. Like I said, she breastfed all three of us. My grandma didn't breastfeed. She bottle-fed. Um…and my mom breastfed all of us for a year, so that's my same plan is to breastfeed my son for a year. (Breastfeeding Mother, p5, 202)

Negative Matriarchal Influence

One of my most negative influencers was my mother. She just made it seem like, you know, you should be bottle-feeding so that you know, you can have time to do…to basically do you, and then that gives other people an opportunity to, you know, hold the bay and want to keep the baby and watch them and, you know all of that. (Breastfeeding Mother, p1, 289)

But my mom was like, you might as well just give that baby that bottle. She was like um…she was like you could…I wanted to give it (breastmilk) to him for at least like a certain amount of time. I wanted to at least give it to him for the first month and she was like you can give it to him for that, but you're going to wind up giving him that bottle. I know you. And that's what…and I think that hearing her say that, that played a part in my brain. When I had him, hear that, that was like my mom would just give it (the bottle) to him, she's right, and now he's on the bottle). (Non-Breastfeeding Mother, p6, 168)

I think her grand-mom. She was just like, you ain't going to like it, and you ain't going to do this, you ain't going to do it for longer than a week. I think she was just like…she felt like she wasn't going to have no time with the baby. Like I don't know, it was something there that she wasn't liking. (Non-Breastfeeding Mother, p3, 632)

Key Informants about Matriarchal Influence

So, I think that we have to…in the …in the Black community, we have to talk about it because I will tell you that many of the grandmothers, average age thirty-five by the way, are not supportive, and they go ewwhhh, it looks so yucky. One told me, it looks like skim milk. I said, see there's something wrong with your perception because you think it's supposed to be thick and creamy. (Key Informant, p8, 041)

So, I think the occasional grandmother, we have some issues with because I think the grandmother always is gonna look out first and foremost for the daughter. So, if the daughter is interrupting…you know, if she thinks there will be an interruption in school or work or something that breastfeeding would make that more complicated, I think sometimes then we see discouragement. (Key Informant, p12, 117)

So, you know, people have argued, for example, that it's income status, and I think that may be part of it, but we've …we really leveled the playing field in many ways for those mothers. And people would also say, well, there's such strong, you know, influence of the grandmother, and that…you know, that may very well be the case. (Key Informant, p12, 053).

Paternal Influence. Paternal influence was a sub-theme also commonly mentioned by several participants as critical to the African-American maternal breastfeeding decision. Breastfeeding and non-breastfeeding mothers commonly agreed that African-American women are highly influenced by the perspectives of their partner, sometimes yielding their personal desire to breastfeed due to paternal reluctance. Some participants referred to this phenomena "pleasing their partner" or "please our man" among African-American mothers. In general, breastfeeding participants noted more positive paternal influence in breastfeeding initiation decisions compared to non-breastfeeding participants. Additionally, key informants and focus group participants recognized the importance of involving male partners in the breastfeeding discussion early, as fathers are critical influencers in final breastfeeding decisions and behaviors. They identified this as an avenue to positively impact the final breastfeeding initiation decision for African-American mothers.

Positive Paternal Influence

I'm married, and most of my major decision (to breastfeed) came from my husband. I didn't even agree to have any kids, so it was ummm…I wanted him to be happy, but once I realized that it had to go beyond his happiness, that's when I really was like I'm about to be a mom. I am gonna breastfeed, because I didn't want it to be a resentment, like I am only doing this for you (husband). But it did come from him motivating me and saying, you know, you should breastfeed. You should do something different. (Breastfeeding Mother, p1, 357)

His dad (was the most significant person about final breastfeeding decision). He was reading more books than me about it and talking to more people about it, so he was often like the biggest cheerleader for me when I was like I can't do it. I can't like, you know…so that was the biggest supporter. (Breastfeeding Mother, p2, 192

I would say my husband (was the most significant person about final breastfeeding decision). Um…he was more so for the health. Um…he thought it would be better for the

baby, so he was more supportive and pushing and he still is. (Breastfeeding Mother, P5, 120)

Her father…He want...he really wanted me to breastfeed, so that's why I tried when we was there at the birthing center and I was doing it, but I didn't like it. He wanted…then he wanted me to try pumping. I tried that, too, but it just really didn't do it. So, then he was just like well, if it's really uncomfortable for you, then, you know, we can go to the bottle feeding. (Non-Breastfeeding Mother, p4, 209)

Negative Paternal Influence

You know, but I think they (African-American males) see it for a sexual purpose, 'cause he's like, I don't want my son to be eating like that. Give him the bottle. I'm like, it's healthy for him, but yeah, I can't do that anyway. (Non-Breastfeeding Mother, p3, 392)

Initially he was trying to talk me out of it (breastfeeding), because even to him it was like, okay, this is supposed to be a sexual thing until he actually saw me nursing and then was like, oh, there's nothing sexy about that. (Breastfeeding Mother,p5, 456)

Paternal Influence (General)

I would say the most important thing to get that person to start breastfeeding would probably be their partner, I think. Well, I think that Black women…they more like to 'please their partner', like their man. So, I would think like if you have a man telling you like, you know, I want you to breastfeed my baby like…they're more likely to do it. (Breastfeeding Mother, p1, 341)

…I think what's even more important is getting our men involved in it, as well, because a lot of women are influenced by their mate. And I watch a lot of my girlfriends if their boyfriends, baby's father, or whatever aren't for it, then they're not going to do it. (Breastfeeding Mother, p5, 350)

…We want to please our man, like so if he's not with it, we're not with it, um…so just getting them to understand all of the benefits. (Breastfeeding Mother, p5, 776)

Out of all of the…many of the men that come with their partners here, and I ask the question…I like to always hear their perspective about breastfeeding. And the men are always like, yeah, if it's the healthiest thing then, yeah, you know? And I feel that's a really huge part in…will play a really huge part in mom's like initiation and longevity with breastfeeding, too, so….especially if he says no, don't do it, right? And then that also plays a part as well. (Key Informant, p11, 425)

Sister Influence. Although not as prominently mentioned in discussion, the influence of sisters in breastfeeding initiation decision-making for African-American mothers was notable. Breastfeeding mothers recognized the influence and role-modeling of sisters as overwhelmingly

positive. In some instances, sisters informed positive breastfeeding initiation decisions, while in others they directed breastfeeding behavior. While few participants referred to the influence of sisters as negative, some sisters' comments highlight aforementioned cultural factors related to sexuality and beliefs about breastfeeding as critical in failing to support the behavior of breastfeeding.

Positive Sister Influence

She was…she's like on my chops about, you know, breastfeeding because she breastfed my niece till she was about two and a half years old, and it was…you know good. It was beneficial so…she helped me make my decision. (Breastfeeding Mother, p1, 209)

…My sister um…really decided you're going to breastfeed, that's it. I said okay, I have no problem with that. I didn't know that it would um…be so difficult sometimes, you know…it's difficult but um…they (she) supported it and I also thought it was a good idea so. (Breastfeeding, p2, 216)

…Like I said, the breast cancer thing and kind of pressure from my sister, who's like really um…So you know, it was kind of like, okay that's what you're going to do, you know? So it was like, you know, I didn't really have much of a choice, like I said, it was just automatic. (Breastfeeding, p5, 116)

The baby's aunt, she just supports us so much. 'Cause I know a lot…like I said, I know a lot of people that did it, but they didn't last on it because the baby still seemed like it was hungry, so they you know, supplemented and wound up just flat-out just not breastfeeding them, whatever. So, she supports us. She's like, at least try to do it six months, but I'm like, if my six months come I might want to continue to do it, but she's like, no, it's up to you if you want to continue to do it. She supports it a lot. (Breastfeeding Mother, p2, 200)

Negative Sister Influence

My sister just straight up told me not to breastfeed. She's like because if I didn't like dealing with my niece who is like super attached to my sister with the breastfeeding and it's hard to like wean her off of my sister to do anything without the baby just basically being attached to her hip. She's like I think you will want to bottle-feed instead of breastfeed. (Non-breastfeeding Mother, p6, 188)

My fact is…my sister. She was like, she can't have no baby suck on her breast and her boyfriend can't deal. She was like, don't do it. (Breastfeeding Mother, p1, 261)

Friend/Peer Network Influence. In addition to family members and partners, participants commonly mentioned friends as an influential group in their decision of breastfeeding initiation. Friends and co-workers were most commonly defined as the social network external to family providing the most influence around their decisions. Some participants referred to the encouragement of friends and co-workers as critical while determining their personal breastfeeding decisions or during their breastfeeding process. Overall, breastfeeding and non-breastfeeding participants referred uniformly to having friends that participated in breastfeeding and formula feeding their children. Both groups also highlighted the positive and negative pressure from peers related to breastfeeding decisions. Some breastfeeding participants without breastfeeding peers called out the lack of a friend support system as a significant barrier. Additionally, participants made reference to negative commentary and influence of friends, sharing that this behavior created a significant gap in network support. Despite having some friends that encouraged and modeled positive breastfeeding initiation and long duration, other participants maintained their positions about not breastfeeding. Key informants discussed the critical issue related to a lack of friend and network support while attempting to overcome the social barrier of initiating breastfeeding in the African-American community. Some called out that breastfeeding is not commonly done among friends/peers and identified the need for the development of stronger network support for young women initiating breastfeeding.

> *I have two friends who are pro-breastfeeding. Um, they both breastfeed their kids, one with twins and one with a daughter, um…different experiences but they both you know, give me tips here and there. They tell me not to give up. You know, sometimes I cry in my hard times. I'm like it's so difficult or this is going on. You know, they are supportive, but society and the rest of the community is wish-washy, the way we just talked about it, you know, discouraging; they're not uplifting about it. (Breastfeeding Mother, p5, 248)*

> *Well the biggest supporter for me is actually one of my best friends, like as soon as she found out that I'm breastfeeding she made sure like for my baby shower got me*

everything possible that she could think for the breast pump, creams, whatever. So, she's a real advocate of it. (Breastfeeding Mother, p2, 220)

Well, my friend, she was told that she had to breastfeed because her baby was premature….So she told me, you know, try to breastfeed because this is the best thing and babies grow faster and all kinds of stuff. So, she was basically leaning to just basically, you know, two different minds is two different people. So…she wanted to breastfeed. I didn't. (Non-breastfeeding Mother, p4, 229)

…People would say peer pressure has to do with, you know, teenagers and stuff, but you have adults that do have peer pressure around. You know, their girlfriends telling them oh, you don't want that baby sucking on you. You wanna have those nice, big boobs up there and…you know and that can be a very, very negative influence, especially for someone, you know, that believes in breastfeeding and they have that negative influence around. (Breastfeeding Mother, p1, 407)

My initial um…breastfeeding information came from co-workers. They talked to me everyday about it. It was like, you're going to do it, right? Just do it. Just do it. Let's just say peer pressure. (Breastfeeding Mother, p2, 539)

Well, I can tell you a lot of friends did not breastfeed. They was telling them at the hospital, like I am not breastfeeding this baby, so it was straight on the formula, on the bottle. That's why I said I didn't really have a lot of support system with that, 'cause a lot of my friends didn't do, you know, like breastfeeding stuff. (Breastfeeding Mother, p2, 349).

…Maybe your girlfriends didn't um…nurse their children so you…we're really, really, really trying to overcome that um..barrier…that social barrier, where um, you know, you have few or no friends or few or no um people in your uh…earlier generation who could support you. So, I think that those things are critical um..to address when we're talking about black women and breastfeeding. (Key Informant, p13, 196)

I know that one of the most influential barriers that we're facing is really with the network support…they (hospital coordinators) feel that that's an area within the African-American population that seems to, you know, the lack of I guess, support has really played a factor in, uh…in a lot of moms deciding to breastfeed. (Key Informant, p9, 105)

It's not something that was…that's commonly done among their friends and peers, or if it is, they don't know about it. (Key Informant, 10, 108)

Religious Community Influence. The influence of the religious community in breastfeeding initiation was evident throughout discussion with mothers and key informants. Crossing both Christian and Muslim faiths, participants discussed thoughts influenced by their religious beliefs. In several comments by breastfeeding mothers of faith, breastfeeding was

referred to as "created perfectly" by God and "a child's rite". Other mothers, however, maintained that religion does not dictate personal choice in breastfeeding initiation decisions. Some key informants offered that religious communities offer tremendous opportunity to influence positive breastfeeding initiation among African-American mothers.

> *I also have other people…like part of my religion also because I'm Muslim and they, you know, suggest that I breastfeed also, but that goes back to, you know, what worked for you does not work for me. (Non-Breastfeeding Mother, p4, 259)*

> *It's really easy for me, because like I said earlier, um…my friends all of my friends in the Muslim community, they all have done it, so um…I'm pretty much the last one with the baby, so when I ran into problems in the beginning I was able to turn to them. Um…but again, it's easier with them, because everybody does it, so um…gatherings when we're out in the community, it's just easier. So it's you feel comfortable. (Breastfeeding Mother, p5, 268)*

> *And also like religiously, in my religion, Islam, we have to support our children for like up to two years, so that's why, another reason that I chose to breastfeed. (Breastfeeding Mother, p1, 105)*

> *Religiously, it's (breastfeeding) our child's rite, so once a child's involved and to give the baby their rites, stop and then feed the baby for that, you know amount of time… (Breastfeeding Mother, p5, 484)*

> *Because in that community, in a spiritual community, um…I notice people are more supportive, I guess, because it's you know, biblical or it comes from the Bible. It's you know the foundation that this is God's creation, so people who have a deeper foundation than that I find have more support for it than, you know, people who don't. So people who are…you know, who have a spirituality about them, um…it seems like they understand better the natural order of things, so they accept it more and they support it more, because it's like this is what you should do 'cause this is what God intended you to do. (Breastfeeding Mother, p5, 105)*

> *I think, for example, the churches, if they made this an important point of um…kind of um…the church providing um…because there's many of them and there's a lot of African American church goers and, uh, there's a lot of uh…it's a structure where seniors are together with young people, so it's not just the opinions of the peer group. (Key Informant, p10, 456)*

Informational Sources

Prenatal Clinics. Prenatal clinics were identified often by participants during focus groups as an influencer in their breastfeeding initiation decision. Breastfeeding and non-breastfeeding participants overwhelmingly recognized the consistent intervention of prenatal clinics as positive for African-American mothers in the Philadelphia Community. Many participants described the position of the clinics as pro-breastfeeding. One particular prenatal clinic, the Helen O. Dickens Center (University of Pennsylvania), was mentioned often as a significant source of support for women in this population. Key informants validated the importance of the prenatal clinical experience in informing decisions around breastfeeding decisions, particularly in this population.

> *I've also gotten, you know, info from the prenatal clinic, and the nurses always make sure that you have, you know, any form or pamphlets that they have on breastfeeding. They'll make sure you have it in your packet, you know, when you go. You get your little packet. Oh, please read, read… read, read… reading is important. Read all you can about the breast. So… that's where I get all my info. (Breastfeeding Mother, p1, 589)*

> *Um…every prenatal appointment. Like literally every prenatal appointment, especially like afterwards when I go see like the nurse and stuff like that, she would always give me like papers, sometimes the same papers, but she would always give me papers on that (breastfeeding). (Non-Breastfeeding, p3, 504)*

> *I also got a lot of my information about breastfeeding from the Helen O. Dickens Center. They actually like tried to get me to come to a lot of the breastfeeding groups. Like each time you went, even if you already had the paper, they made sure you had the paper again. (Breastfeeding Mother, p1, 657)*

> *I went to Helen O. Dickens, also, and they be on your behind, like really you should breastfeed when your baby comes and they give you little papers and pamphlets on breastfeeding, so that's how I got my information. (Non-Breastfeeding Mother, p3, 482)*

> *I would get actually annoyed a little bit, 'cause I would just be like if I tell you one more time that I'm not… like I haven't decided exactly what I want to do and you keep talking about are you going to breastfeed, like it was… it almost got a little annoying,…. it was good but at the time I was a little mad, but it was… after I look back on it now, yeah, I was happy that they kept asking me, 'cause they want people to… more people to breastfeed, but at the time it was annoying. (Non-Breastfeeding Mother, p6, 516)*

Yeah, I think it's important, especially prenatally, to educate them… educate women so that they're making an informed decision about their choice and, um… understanding. So in my class I really go over their experience and as Penn, being a baby friendly hospital… just going through their experience in the hospital and what to expect I think is also important, and using some of the language that they may hear so they're familiar with it…. so even the work that we do here, you know, in the ten steps to becoming a baby friendly hospital, step three is providing prenatal education, which I was the task force leader for, and then also step ten, which is providing resources. So as a prenatal clinic, I feel like being able to provide women with the information helps to support breastfeeding. (Key Informant, p11, 77,141)

WIC. The WIC Program, sponsored by the USDA Food and Nutrition Service, is a federal program that was frequently mentioned as a source for breastfeeding information, particularly during the prenatal period. Ninety-one percent (91%) of breastfeeding and non-breastfeeding mothers participating in focus groups were enrolled in the WIC program. Although many highlighted WIC as a consistent source of informational support, some participants reported not talking with staff or dwindling focus on breastfeeding after their delivery. More breastfeeding and non-breastfeeding participants, however, identified WIC as a positive resource. Key informants shared mixed feelings regarding WIC as a resource for information. While some recognized the program as a positive source of information, others relayed concerns related to WIC's association with formula (particularly in the African-American community) and inconsistent messaging, programming, and resourcing.

Positive WIC Influence

Yeah, I think they're very good as far as giving out information 'cause I did receive WIC while I was pregnant. And every time I went they gave me the same papers over and over again, even though I told them I already had them. So I… I mean they're really adamant about, you know, what they want you to know… you know, you and the baby's well-being. Umm… yeah, like they do offer a lot of resources… Yeah, I think they're really good at providing information to the… you know, the parents, especially since it's a government thing… I don't know if it's the (inaudible) or whatever, but I do believe that you could get a lot from them, even if you breastfeed or if you don't breastfeed. But they still give you the information either way. (Non-Breastfeeding Mother, p4, 687)

They're pretty much pro-breastfeeding. I know my office is. They give me a ton of information. You know, they tell you to update if you're not using the formula anymore, if

you're automatically breastfeeding, you know, they'll continue the (nutrition) checks for like a year, so they're pretty much supportive. (Breastfeeding Mother, p5, 576)

They are advocates for breastfeeding. 'Cause they'll tell you, well, if you want the formula, we'll give you some formula, too. We'll give you a few cans, but just still try to breastfeed. (Non-Breastfeeding Mother, p6, 838)

Negative WIC Influence

No, I don't… I really don't remember anybody talking to me about um… breastfeeding at the WIC office. Maybe because I just made it clear that I just didn't want to. So they never really pressed me about. (Non-Breastfeeding Mother, p6, 844)

I was going when I was pregnant, so they were all about breastfeeding when I was pregnant, but after I had the baby they just asked, is she breastfed or is she formula-fed? (Non-Breastfeeding, p3, 720)

I pretty much agree with what they said, if you ask for the help they provide it, but pretty much they like you get the formula, here go your checks, you're on your way, so it's not really much like, oh, let's have a conversation about it. They're like you made the decision. Here go your checks, bye. That's it. (Non-Breastfeeding Mothers, p3, 740)

I didn't get that experience that everybody else said that, you know, they always asked you if you're gonna breastfeed. Like I remember them talking about it, but it wasn't like a lot of discussion about breastfeeding when I was going to WIC. (Breastfeeding Mother, p1, 769)

Key Informants about WIC

So WIC is still associated as the formula program. I don't think that moms really care about the food package. WIC still has an inconsistent messaging. We'll have moms who will call over and ask for breastfeeding support. They still have little… you know, I should say a small amount of resources for our breastfeeding moms. They may or may not have a breastfeeding peer counselor in their office. We only have two WIC lactation consultants for the state. And if they call them and they're saying, oh, well I'm having problems with maybe the baby latching, the baby just started getting teeth, they're biting, well, how old is the baby? The baby is seven months. They've gotten messages like, well, you can just stop breastfeeding. And so that inconsistent messaging and lack of support within that organization still is a bad thing. (Key Informant, p7, 414)

I would say that the WIC… the WIC program ought to just be bombed. I think WIC does a disservice to women…. WIC is closed on the weekend, you know, so what do you get? You know, you get the warm line. Leave a message; someone calls you back three days from now. Well, if you're low income and you think your baby's not getting milk and… you know, your only choice is gonna be to get formula. So I've always looked at the choice to feed formula is in many, many of these women's (inaudible) because they're worried that their babies aren't gonna get enough milk, and breastfeeding's not working,

and there's nobody there to answer the questions. I've taken this up with WIC and the Health Department over and over and over again. That model doesn't work, and that's why, you know, we have somebody here they can call… any of us, twenty-four hours a day with a question. So… that I think is… there's just nowhere these mothers can go when they are home and they have a big problem. (Key Informant, p12, 155)

WIC and their breastfeeding peer counselor program, so I think that um… that's a great program….I think WIC gives conflicting messages with their program. So while I think the breastfeeding program, peer counselor program is needed and necessary and that the breastfeeding peer counselors are doing you know, usually they're like these tape-wearing um… breastfeeding, breastfeeding, breastfeeding, I worry about um… the other staff and their ability to move that message forward, as well. (Key Informant, p13, 472)

Healthcare Providers. Various healthcare providers were frequently mentioned by participants as critical resources for information and influential in breastfeeding initiation decisions. The resources most commonly identified were: physicians, nurses, and lactation consultants. *Physicians.* Participants shared mixed experiences about physicians, describing highly engaging experiences in some instances and closed-minded or absent discussions in others. Key informants identified the critical influence of physicians in the breastfeeding initiation decision, but mentioned the medical hierarchy as a barrier that may impact connection between African-American mothers and doctors.

It was mainly my doctor who kept telling me about it. Every time he would come in, like here's another fact on breastfeeding. I'm like, man, she just gave me the paper the last week I was here. I know everything about it and especially when you have your baby, they're always in there. Are you breastfeeding? Just try. Like even if you tell them you don't want to, they're like well let's just try. But I said I don't want to and they just… I don't know. (Non-Breastfeeding Mother, p3, 564)

My doctors, the hospital, and my daughter's doctor, she… they asked me every question and whether I'm breastfeeding and my daughter's doctor, she was my doctor when I was a baby, 'cause she's like… she's really (inaudible). She would take my breast, she'd be like let me see if you're cracking. You know what I mean, like she would help me, 'cause my son, well he was tongue-tied so she was like… I told her the pain I was having. So she'd be like I'll look at your breast for you if you want me to. I was like I don't care. You know what I mean? (Breastfeeding Mother, p5, 520)

I think another barrier could be also, you know, like how… as said previously, you know, with the doctors. Like I, you know, definitely experienced that a lot, like they're really

not open-minded. They really just like… you need to do this, you need to do that, you know? (Non-Breastfeeding Mother, p4, 437)

OBGYN doctor didn't really uh… talk about it, like he didn't talk about it. I mean, I had a male and then I had a female and she was also pregnant. I think she might have asked me before, like you know, are you going to breastfeed? I was like, yes, but it wasn't like, well let me give you some information on breastfeeding and the benefits of it and things like that. So it wasn't until I was actually in the hospital after I had my son and it was like, here's all the information and, you know, here's the numbers you can call if you're having problems. (Breastfeeding Mother, p2, 591)

You know, because… you know, when we see our doctors, they tend to be… whether it's white female or white male, you know, there's like this hierarchy and, you know, so they're unable to identify with that person. (Key Informant, p11, 109)

Nurses. Nurses were identified as a positive informational resource by breastfeeding and non-breastfeeding participants. Respondents described multiple encounters of support during their breastfeeding initiation experiences regardless of their final breastfeeding decision. Although minimal negative nursing encounters were noted, a few participants highlighted inconsistent nursing support as a point of concern. Key informants raised concerns about consistent nursing care to African-American mothers related to issues of cultural differences and subtle discrimination. These are recognized as salient points related to the current disparity in African-American maternal breastfeeding initiation and may open the dialogue for more cultural humility training and tailored education.

So like they just make you… not even make you, but they just give you that environment where it's like oh, well, you just want to… you want to try, even if you don't feel like it. Like I was out of it, but they was like… they even had like to hold my boob and everything because I was just like in so much pain. They… it's so much support that the nurses give you so that you just don't feel like you in it by yourself. Now I ain't had that little one-on-one nurse at my house when I went home, but at the hospital they do give you that feeling like… alright, you know what? I can do this. It was like a… they was like my motivator. You can do it. Come on, you can do it. Like the best experiences is when you like… my baby didn't like latch immediately on all the way so it was very, very painful. And again, like I was in a lot of pain so the nurse would come in and she was like, if you lay on your side and, you know, hold your boob on this… you know, this side or… you know, like rub the side of your breast and stuff like that… she was like, it might help more. Like I did not have a problem like the nurse touching me or anything, but it was

just so welcoming and comforting that I did not have to struggle and try to like do this boob thing by myself 'cause I didn't know what I was doing. So just like having, you know, the nurse come in… like I never really had to page for my nurse. (Breastfeeding Mother, p1, 683)

I had tears running down my eyes, but she was like squeeze… and she would… I'd be like, I can't and she would squeeze my breast for me as my son was latched on. And then she'd be like, no, you're not doing it right. Come on, let's pull it out, like it wasn't like, here you go, here goes your two minutes and go. Like they would really be in there and on top of that they would send a specialist in, but they were there still to help and I really appreciated that, because I didn't know what I was doing and to have like someone there like… you're already trying to hold their head 'cause they're so delicate and I don't feel like I can multitask when you got her squeezing your breast for you, like it's going to come out. I felt like the nurses were phenomenal, like awesome. (Breastfeeding Mother, p2, 627)

You know, nurses change um… shifts so I had some nurses like, oh, just put him on and, you know, they'll grab your boob and try to help you latch in different positions. Then I had some nurses say, oh, just give him a bottle. Then I had nurses say just pump. Other were… they were just going back and forth from each other, don't pump, who told you that, oh pump, just… it'll stimulate it, like I was just so confused. I didn't know what to do. I didn't know who was supporting me, who was against me, so I was lost until I got home….But I was so confused because I didn't know who was really for me, because you know, I heard that pumping right away wasn't good and then other nurses were saying it's good to pump 'cause it'll stimulate, be as though my milk wasn't it, so my support was confusing. (Breastfeeding Mother, p5, 524)

I feel like some of the nurses… although definitely, you know, they support breastfeeding, sometimes can be intimidated by the patient and their presenting issues. And so if they say no, I don't want to breastfeed, or I want to… you know, that time isn't really taken to… at that point to discuss. Now, we don't want to push it on them. We want this to be something that they decide to do, but I do feel like there could be some cultural differences there. And I have actually recently noticed that. Some of my moms who, while down here, will say yes, I'll breastfeed, but by the time they got upstairs, delivered their baby, day one of life, it's like, I changed my mind. And so I don't necessarily know what happens, you know, and whether it's they need to see someone that looks like them to encourage them at that point, and/or do our nurses need just a little more cultural humility around understanding their… these moms and their experiences. (Key Informant, p11, 245)

Lactation Consultants. While lactation consultants were seen as a positive and supportive informational source for some participants, many breastfeeding and non-breastfeeding respondents voiced frustration concerning their hospital experience. Lactation consultants were described frequently as possessing a lack of knowledge/information, rushed, and unavailable during hospital stays. Key informants raised critical concerns related to the lack of lactation consultants of color and refocused on the issue of cultural competence in working with African-American mothers regarding breastfeeding initiation.

Positive Lactation Support

A lot of my support came from a lactation specialist. Um… I seen her, I think, the next morning um… all the way up… I used her all the way up until discharge. Um… and they also had a class for us that we was able to attend, um… so it was pretty helpful. Then when I came here there was more lactation specialists and I used them, too, so um… I had a good experience with the help, so. (Breastfeeding Mother, p5, 532)

I went to Pennsylvania Hospital, so they had a lactation consultant, so she actually latched her on for me. And she showed me how to do it. (Non-Breastfeeding Mother, p3, 462)

Negative Lactation Support

The lactation consultants, they may have come… like they'd either come in there for like five minutes and if your baby don't get right on the nipple, they're like, oh well, we be back. So my mom was really helping me try to latch on. So yeah, they act like they don't have time. (Non-Breastfeeding Mother, p3, 604)

Sometimes like the lactation consultant would come in, but that wasn't really helpful to me. I mean, she would try to help me, but it looked like she was like really busy so she couldn't really like sit there and like help me. (Non-Breastfeeding, p3, 568)

I didn't like the fact that the day I was leaving the lactation consultant came in my last day instead of during my stay. (Breastfeeding Mother, p5, 526)

The lactation consultant that they had come in um… really wasn't educated and that annoyed me because I… luckily I've breastfed three other children so I already… I'm okay, like I know what I'm getting myself into ahead of time, But I felt bad because I'm like other women who have it… like the stuff she was saying I was like… and then I just said, I said do you have children? And she was like, yeah, I have a nine month old. I said do you breastfeed? And she was like, actually, I don't. And I was like, oh, okay, that explains it, but I felt bad because it was like she was going in to talk to other people and

she doesn't even know what she's talking about because she's like well why are you holding the baby like that? Because when my kids are first born, because I have triple D's, I… football hold is automatic because you can control your breast easier. And you can control a baby's head easier. And she just really didn't know, you know, so I just felt kind of annoyed that she was going around talking to people, because I'm like, she's going to give them misinformation and somebody's going to get even more frustrated and discouraged because the one person who's supposed to help above all else doesn't know what she's talking about. (Breastfeeding Mother, p5, 560)

Key Informants about Lactation Support

My problem was I was looking for support from the lactation specialist. She wasn't there, she wasn't available… (Breastfeeding Mother, p5, 524)

I also think going to back to having lactation consultants not be of color and having… so for example, our neighboring hospital has twenty lactation consultants on staff, not one of them is a person of color. They have breastfeeding peer counselors that are granted in from the state. They're of color. So it almost is like, (chuckling) well, I have a peer counselor whose of color but yet when I want to talk to someone who's going to be more clinical and technical, then that person isn't the same, and so, you know, what's the difference here? And so I think that is a little disjointed. (Key Informant, p7, 278)

There are few um… African American Internationally Board Certified Lactation Consultants and also, those who are IBCLC's um… who are not black, what kind of cultural-appropriate training have they received to deal with like certain cultural nuances? (Key Informant, p13, 356)

Internet Sources. Internet sources, social media, maternity websites, and apps were mentioned by participants as alternative sources of information. Breastfeeding and non-breastfeeding participants frequently mentioned Google as a common source of informational support. Key informants highlighted the relevance of social media in sharing education and information for this community. One key informant suggested that organizations rethink their approach to better engage African-American mothers using social media or apps.

Yes, Google will save your life. Go on that phone. I did Google everything, but I joined the app called Baby Bump. Like sometimes even nurses will comment on there or different professionals will comment and say, you know, do this or do that. I know one of my biggest things about breastfeeding was soreness and how to, you know… how to get them healed. And then I learned that your actual breast milk is the biggest thing to help your breasts heal. So… and I learned that through the Baby Bump app from my phone… (Breastfeeding Mother, p1, 617)

Google. Google tells you everything. Google is my doctor. I looked up everything. (Non-Breastfeeding Mother, p3, 486)

I guess they just assumed that I knew most of the stuff, which was fine… I read everything. I think, people tell me that I should tell people that I work for google because I google everything…And I always have the answer to everything, 'cause I'm like I will Google it. (Breastfeeding Mother, p5, 506)

So I think right now social media is the way to go for moms. This is where they're finding their information. I think there have been some great things that have come out of that, breastfeeding groups, um… advocates from all over, you know, all different types of educational levels, um… multiple children, maybe I never breastfed before but I'm breastfeeding this one. So that's really great to see, lots of online things, those are all factors, as well, um, so that access may not necessarily be in the community but I think social media and the internet has a lot to play with that. (Key Informant, p7, 108)

I think that culturally we see things very different in the African-American community, and so I think that the way we accomplish what we want to do is not through the media as such… although it could be in Facebook, you know, because they live on Facebook. I don't know if you see them. They walk around. They come in here. They don't even hear their names called 'cause they're on the phone, on the phone, on the phone. So I think that we can use social media to make a difference. (Key Informant, p8, 049)

I think it would be really good for probably every organization to think about how to better reach these moms, maybe it's having a social media page or having some app that they can kind of write the information in and discuss things with you that way. (Key Informant, p7, 430)

Breastfeeding Intention

Breastfeeding intention is the desire and interest of a mother to initiate breastfeeding, which is strongly influenced by factors at multiple levels. Intention, inclusive of *positive intention* and *negative intention/ambivalence* in breastfeeding behavior, is significantly influenced by non-modifiable factors, aforementioned cultural and social environment factors (modifiable factors), and the SEM.

Intention

Intention/Negative Intention. The subject of breastfeeding intention was mentioned often by participants during focus groups when describing their initial thoughts of breastfeeding initiation. Based on participant commentary, the belief that positive intention to breastfeed is highly influenced by modifiable and non-modifiable factors was validated. Positive breastfeeding intention was most often reported by breastfeeding mothers who had prior experience or exposure to breastfeeding and felt positively empowered by providing for their baby or "doing something different". Key informants also shared feedback on the importance of empowerment in positive intention to breastfeed. In situations of reported breastfeeding intention, some participants failed to initiate breastfeeding. Many non-breastfeeding mothers expressed thoughts of negative intention or ambivalence about breastfeeding initiation during their pregnancy. Their comments highlighted not being persuaded towards positive intention despite messaging and increased support by providers. In some cases, mothers' minds were made up early in the pregnancy, despite ongoing educational information being shared.

Positive Intention

I didn't think about it because this isn't my first child, and I breastfed all my kids, so it just comes naturally. I didn't have to think about it… if I was gonna do it. (Breastfeeding Mother, p1, 153)

I already knew that I was gonna breastfeed, and I said I'm gonna push it. Instead of going three weeks, I wanted to go, you know, until he was six months. (Breastfeeding Mother, p1, 165)

And when I first started going (to the doctors) I was like, yeah, I think I'm going to breastfeed, like I'm definitely sure I'm going to breastfeed. I'm definitely sure. (Non-Breastfeeding Mother, p6, 138)

When I found out I was pregnant I knew I was going to breastfeed. Um… I tried with my other two kids and it didn't work, so this is my last one and I just wanted to try something different and I tried. (Non-Breastfeeding Mother, p6, 142)

I think it does give them a little bit of empowerment and understanding when you talk about but look what you're doing for your baby? You know, nobody else can really ever do this. (Key Informant, p7, 366)

Negative Intention/Ambivalence

I didn't think about it until I was in my first prenatal with my midwives, and we had like a whole long talk on everything. And I told them that I'd try, but I knew I wasn't gonna like it. (Non-breastfeeding Mother, p4, 189)

I knew I was going to bottle-feed. I didn't even want to think about breastfeeding. (Non-Breastfeeding Mother, p6, 154)

I know everything about it and especially when you have your baby, they're always in there. Are you breastfeeding? Just try. Like even if you tell them you don't want to, they're like well let's just try. But I said I don't want to and they just… I don't know. (Non-Breastfeeding, p3, 564)

I just never… I… my oldest is twelve. I did try with her but I had to go to work so I really just… I didn't want to do it. I just rather bottle-fed. (Non-Breastfeeding Mother, p6, 088)

Barriers and Facilitators

All focus groups and key informant interviews included questions about barriers and facilitators of breastfeeding initiation for African-American mothers. Participants were asked to identify specific factors that facilitated or hindered the positive adoption of breastfeeding based on their personal or professional experiences and knowledge. Both mothers and key informants were encouraged to reflect upon factors at the various levels of the SEM model, inclusive not only of the individual level but also the external levels (i.e. interpersonal, organizational, community, and public policy/societal) that encourage or impede positive breastfeeding initiation.

Barriers

The topic of *barriers* was frequently discussed during focus groups and interviews by mothers and key informants respectively. Many barriers identified by participants were identical to hindrances raised in prior examinations of breastfeeding in African-American women.

Multiple issues such as competing priorities, pain, embarrassment of public exposure, lack of knowledge and support in the African-American community and home, self-centeredness and independence, lack of knowledge among African-American mothers, lack of access to equipment and resources, and national policy emerged as prevalent sub-themes critical in determining breastfeeding initiation of African-American women. Other important barriers were also mentioned when discussing this topic.

Barriers to Breastfeeding Initiation

Competing Priorities. The challenge of juggling multiple responsibilities was one of the most commonly mentioned barriers among participants during focus groups. Mothers frequently mentioned the demands of additional children, work, home schedule, school, and lack of time for breastfeeding and pumping as rationales for this sub-theme. These issues were commonly highlighted by non-breastfeeding and breastfeeding participants alike with mothers associating the ability to "stay-at-home" and support with positive initiation. Key informants also highlighted the "real-life" competing pressures on mothers attempting to initiate breastfeeding, underscoring the existence of barriers beyond the social and societal challenges of breastfeeding initiation and concerns of supporting family members.

> *Definitely work, your schedule, having other kids, and that right there is definite 'cause we can… not saying that there's not no white people out there that, you know, don't have to pay their bills, but they have like more help and their husbands can… they go home… they work, whereas now we like got to go out there. We got to go out there. We got to work. We got other kids we got to take care of and stuff like that, so therefore like we ain't got… I'm not going to say we don't have time, but our schedules don't go with us breastfeeding. They sit at home and, you know, they can lash out their boob every two hours and stuff and be okay with it, but we… like I don't feel as though it's for us to do that. (Non-Breastfeeding Mother, p6, 284)*

> *The time, the job, it requires a lot and some African-American women are not able to stay at home to do this. If you have a family to feed, I mean, yeah, you can pump, but if you ain't pumped already, you're working a twelve-hour shift and you got two or three other kids to worry about, you… it's too demanding. It's very demanding. So it's easier to put*

you on formula where I can say put two scoops and do this, so I think that's often why, you know, it's the time, the demand. (Breastfeeding Mother, p2, 409)

It's very much time-consuming and, you know, we don't have the time and we may have to do the formula. It takes so much time and energy to pump and breastfeed and just sit there and allow them to feed until they're done. And if you have other children like most, you know, um… grownups do, it's just… it takes too much time. You got other things to do, you know, like clean, and feed the other child, if they have homework you have to help them with their homework, you know, if they want to go outside you have to, you know, take them outside. You know, it's a lot. (Breastfeeding Mother, p2, 433)

I think if you're a stay-at-home like mom, it'll be easier for you to breastfeed because you have all of the time to give the child, but when you have to work, and go to school, and other things like that it's… it's no time. Non-Breastfeeding Mother, p6, 1050)

So, you know, maybe if you're returning to work, or you're returning to school, or you're having childcare concerns, these are some of the real life things that our peers are helping to support our moms with, so it's not just… those are like societal and social barriers. (Key Informant, p13, 140)

So I think that the occasional grandmother, we have some issues with because I think the grandmother always is gonna look out first and foremost for the daughter. So if the daughter is interrupting… you know, if she thinks there will be an interruption in school or work or something, that breastfeeding would make that more complicated, I think sometimes then we see discouragement. (Key Informant, p12, 117)

Pain. Participants described pain as a significant barrier in the breastfeeding initiation experience. Breastfeeding and non-breastfeeding mothers discussed this sub-theme using various physical descriptors of discomfort, soreness, and hurting throughout focus groups. Some participants also referred to the anecdotal accounts of others' painful experiences as the reason they chose not to breastfeed. Although many breastfeeding mothers spoke similarly to pain as non-breastfeeding mothers, they reported that continuation of breastfeeding, correct technique, and increased duration would bring resolution to the physical discomfort.

I tried to breastfeed and it only happened for four days. It hurt too bad. I don't know. It hurts. (Non-Breastfeeding, p3,022)

And then like when I started, it was a little painful like the first couple days because normally you're sore and stuff, but after awhile it gets better. But when I went to pump, and they was like, you know, it's not really supposed to hurt when you pump and stuff like that, but when it's not really flowing yet, it tends to hurt because you're like… you're

kinda clamping on and just a little bit coming out. And once, you know… it gets easier once, you know, the baby sucks on it and gets it, you know, flowing. But yeah, I think that's (pain) one of the main barriers, too. (Breastfeeding Mother, p1, 409)

And umm… you know, the barrier… whew. Lord, my boobs hurt so bad 'cause they're not used to this breastfeeding anymore and umm… but they did help because they gave you the gel to put on it. You know, they gave you the little ice packs, you know, to put on it to soothe it so… you know, like you said, that was a barrier. The pain hurts so bad. You're not used to doing this anymore. (Breastfeeding Mother, p1, 705)

I did think about breastfeeding first and I didn't think it was going to hurt that much. I don't know. It was real painful. (Non-Breastfeeding, p3, 076)

And people's experiences… they say like oh, my God, it hurted so bad, and you might think… oh, my God. I don't even want that feeling. (Breastfeeding Mother, p1, 885)

I know one of my biggest things about breastfeeding was soreness and how to, you know… how to get them healed. And then I learned that your actual breast milk is the biggest thing to help your breasts heal. (Breastfeeding Mother, p1, 409)

Embarrassment of Public Exposure. Many participants openly discussed their feelings regarding the topic of breastfeeding and public exposure. Mothers, primarily from the non-breastfeeding groups, expressed a sense of embarrassment and stigma associated with breastfeeding in public. They reported feeling self-conscious about "bearing their body parts in public places" and the discomfort with breastfeeding in front of other people. Some subjects further described this as an intimate experience that should be done in a secluded area and not in a public place. A few breastfeeding participants discussed awareness of the legality to breastfeed in public and not being "too scared" to do so. Key informants also articulated the challenges related to this topic. Recognizing that culture plays a significant part in the acceptance of breastfeeding in public, key informants verbalized concern about breastfeeding initiation and lifestyle challenges in the African-American community.

One of the biggest barriers that I would believe would be a sense of embarrassment of, you know, where it's appropriate and/or inappropriate to breastfeed. You know, a lot of people have that self-consciousness about, you know, baring their body parts in public places, so I think that embarrassment would be one of those barriers. (Breastfeeding Mother, p1, 403)

Just… it was just uncomfortable for me just to sit there and breastfeed in front of other people. I think it seems like it's more intimate. Like I feel… I did feel more comfortable when I was by myself. Like if I went upstairs to my bedroom or something like that, but also it was too much. Like I felt like I had to seclude myself to, you know, actually breastfeed, and I know if I was out in public, you know, I'm not gonna, I'm not gonna do it. Like if I was at the mall or… you know, maybe I would be willing to go in the car and do it, but just not, you know, in public how we see it. (Non-breastfeeding Mother, p4, 097)

And I was gonna say that… she says it's more for a stay-at-home mom because this day in age, people stare at you like they're trying to bore a hole through your face. You could be trying to feed your child, and they're just like… maybe they want to come underneath the blanket and latch on. I don't know. It's just that not only with you already feeling uncomfortable, with someone staring a hole in you, makes you feel even more uncomfortable. So yeah, I agree with her. I think that's something that a stay-at-home mom should do. If they're gonna breastfeed, I think that would be the best thing for them… to just stay at home. Because like you said, you know, if your child's hungry, you have to whip your boob out anywhere. Market, mall, bus, walking down the road… I mean if the baby's hungry, you know, you have to feed them. So I just think that for some people, they still haven't gotten comfortable with the whole having to feed your baby. If you're in a restaurant eating and you're eating… your baby… you know, so like some people look at you like it's like the creepiest thing in the world or it's really, really gross, you know? So you also have to think about that as well. If like people still haven't changed a lot, like they look at you. (Non-Breastfeeding Mother, p4, 269)

I think there's some issues around the breastfeeding and pumping in public, and that… what I call the whole lifestyle changes. And, um… and I do think that this is something that's overplayed, and I do think that it's something that people don't respond to well. (Key Informant, p12, 123)

There's more to breastfeeding than mechanics. If I um… am a mom and I have to take, you know, public transportation and I'm on uh… I'm on a bus or a system that does not have a culture of breastfeeding, then you know, I might be a little concerned about nursing my child, right? So I might decide that I want to give them formula because it's just easier. (Key Informant, p13, 144)

<u>Lack of Knowledge and Support of Breastfeeding in the African-American Community.</u>

Breastfeeding mothers and key informants highlighted the lack of knowledge, support, and exposure as another significant barrier in breastfeeding initiation for African-American mothers. Current lack of acceptance of breastfeeding as normal, due in part to knowledge deficits and gaps in exposure to breastfeeding by some African-American generations, has been instrumental to

the overwhelming sentiment that the community (inclusive of family and friends) makes breastfeeding hard for African-American women. Many mothers highlighted the tremendous challenge of initiating breastfeeding within a culture that is accepting of formula and bottle-feeding as the norm. Others mentioned the level of ignorance that currently exists within the community and highlighted this as the reason for lack of openness to the behavior. Key informants also shared similar beliefs on lack of exposure and its influence on knowledge and support of breastfeeding within the African-American community.

> *I do think it is a lack of ignorance in the Black community because we don't talk about breastfeeding. It's not common in our community, and Caucasian… in the Caucasian community, it's very common. It's almost like normal for them. And umm… Black males, they're not thinking about breastfeeding because that's not what they were raised around. Like I said, all they know is sex, sex, sex, sex, sex. The boobs is for sex and that's it, because they are ignorant. (Breastfeeding Mother, p1, 539)*

> *People in my community is like… you better get that WIC. They was like, get her off the nipple. Do not breastfeed. Like I didn't really… it's challenging because like my husband is like my biggest motivator. I don't really have like a lot of support. Like it's just… I don't know. Everybody's just so accustomed to Similac, and so at times it is very draining because I'm new to this….People and like my neighbors and stuff, they was like, you're still breastfeeding? It's two weeks. You're still breastfeeding? So I don't really have like that support because like everybody around me just believes in the bottle and formula. (Breastfeeding Mother, p1, 243)*

> *And like as far as the community, I can agree with L., right? Because a lot of people say oh, why are you breastfeeding? Oh, no, I can't. Huh-uh, I'm not having no baby on my boob. You know, and stuff like that. (Breastfeeding Mother, p1, 255)*

> *So I do think that our history has um… a lot to play in how we perceive breastfeeding and that has unfortunately snowballed into a lack of knowledge. The media doesn't show breastfeeding, let alone modern day African American women breastfeeding their babies, connecting with their babies. (Key Informant, p7, 084)*

> *That lack of… of historical experience. Um… I'm seventy years old. I was born in 1945. My mother breastfed me because that's what she knew to have happened in the past. With the introduction of formula, mothers were going to work and so they weren't breastfeeding. They weren't even encouraged to breastfeed, and so there were several generations where breastfeeding just wasn't the norm. And so as we are trying to… to return to breastfeeding as the norm, we're fighting an uphill battle. (Key Informant, p8, 025)*

When you consider that the average woman between the ages of forty and sixty didn't breastfeed, um… you're lacking experience. You're lacking knowledge, and that's why I say that knowledge is so important… (Key Informant, p8, 045)

Lack of Information and Education about Breastfeeding Prenatally. Lack of information and education about breastfeeding prior to delivery was also mentioned frequently by participants. Primarily breastfeeding mothers highlighted a lack of information sharing regarding breastfeeding initiation prior to delivery. Some mothers discussed receiving information regarding "little benefits" of breastfeeding during pregnancy; however, this was in significant contrast to being "swarmed" post-delivery with information and education. Mothers described pre-delivery breastfeeding discussion as generally lacking information, leaving women in the community with questions regarding how to breastfeed and what to do once they decide to initiate breastfeeding. Although some mothers did initiate breastfeeding based on their personal desires, many acknowledged the need for earlier intervention during pregnancy. With earlier intervention, mothers believed that African-American women may be more open to the idea of initiating breastfeeding. Additionally, participants highlighted some risks due to lack of knowledge among expectant African-American mothers, sharing that delay in education (until post-delivery) could result in non-breastfeeding initiation. Key informants supported the premise that earlier education, even prior to the prenatal period, is critical to empowering African-American women to make informed choices about infant feeding.

I for one… I didn't really have a lot of information on it, so if I would have just went by what people in my community would have said, I probably wouldn't even breastfed because I didn't know a lot about it. (Breastfeeding Mother, p1, 861)

I didn't get no information. While I was pregnant, they didn't ask. I didn't receive any information about breastfeeding um… other than the signs that you see hanging up in the doctor's office about it. Nobody asked me whether that was something I was going to do. (Non-Breastfeeding Mother, p6, 520)

Like they really swarm you after the pregnancy with doctors, but while you're in the beginning, they tell you, you know, the little benefits about it, but when… after you have the baby they just really try to pound it into your head, like breastfeeding, breastfeeding. (Breastfeeding Mother, p2, 579)

I actually didn't receive any information until I went into the hospital. Um… I didn't get it prior to that from my doctor or anything, um… so the most information came once I delivered. (Breastfeeding, p5, 502)

I feel like if you're waiting for people to get to the hospital, a lot of times you have less of a chance at reach… you can reach more people if you do it when they're still pregnant. Um… there are a lot of people I know that don't have information, don't know what to do, how to do it, or um… just hear so many myths about things… (Breastfeeding Mother, p5, 756)

'Cause I really like that they… if it starts early in their pregnancy to talk about breastfeeding, then maybe you're more prone to do it after the baby is born, because you're getting education, they're learning about it as the… as you're going through the whole process of pregnancy. (Breastfeeding Mother, p2, 401)

I think it's important, especially prenatally, to educate them… educate women so that they're making an informed decision about their choice and, um… understanding. (Key Informant, p11, 077)

I have learned that when a mom is pregnant, she's more open to things that relate to her baby than any other time in her life. She'll give up smoking. She will, um… you know, she'll stop drinking. She'll do a lot of things because she wants what's best for that baby. So if during that period… and sometimes that window is smaller than others 'cause we don't get to see the moms as early in the pregnancy… but if during that period we can share with her the importance of breastfeeding, I think that she's open to it and she's listening. Once the baby's born, all bets are off. (Key Informant, p8, 133)

I think, you know, we need to start a lot earlier than what we're doing. We can't be waiting until mom's pregnant to talk about breastfeeding. If we're having sexual education in the classroom, during that reproductive piece we should be talking about what the breasts are for and that… to really start that normalization there. (Key Informant, p7, 318)

Lack of Access to Equipment and Resources. The lack of access to equipment and resources was recognized as a significant barrier within the African-American community. Numerous times throughout discussion, participants highlighted the lack of access to quality electric breast pumps. Resources, such as the lack of supplies (i.e., breastfeeding bras, nipple

shields) and insurance was also mentioned. While a few participants highlighted securing a pump through the WIC program, many discussed challenges related to timely delivery of pumps, expense of pumps, lack of inquiry about pump accessibility at home by hospital providers, and lack of quality pumps for effective initiation. While some key informants were concerned about early receipt of pumps by African-American mothers soon after birth, they also reiterated the need for focus on quality hospital grade, electric pump distribution to African-American mothers.

> *I got it (breastpump) from my insurance, but it came late….When I got… by the time I got the breast pump, it was like already a little too late. I was only pumping maybe an ounce of milk from either one, and when I went back to the doctor to see how I can get my milk back up, they said the best way was to put him on me, but he still wouldn't take it. (Breastfeeding Mother, p1, 805)*
>
> *I think some of the barriers are… let's say… let's start off with maybe the person not being able to get a breast pump may have a lot to do with it due to insurance purposes. You know, they are very expensive to buy from the store. You know, some insurances, they offer you breast pumps, but it might be… it might not be electric or it might be not as good as, you know, the other. (Non-Breastfeeding Mother, p4, 437)*
>
> *I got home my breasts were huge and they were like really hard and my breast was scabbed up and I had to use a shield. By the time I got home my pump wasn't there. It wasn't delivered, so I don't know, it was just a lot. And it never got delivered, actually. (Non-Breastfeeding Mother, p3, 774)*
>
> *…Like and the whole breast pump thing, like 'cause first of all, they're expensive so if people's insurance doesn't cover them or say like they're waiting so long for… through the program, like they're expensive. People who can't like afford like them breast pumps. (Non-Breastfeeding Mother, p6, 1176)*
>
> *But what we find happening is that the definition of breast pump is such a low level that the insurance companies are sending mothers, you know, basically a little twenty-five dollar battery-operated pump, and that's a barrier for every mom, but it's a special barrier for moms… and many of the women I've work with… and not all, certainly, but the vast majority here in the city I work with are urban, poor, young, African-American mothers. They're not in jobs with a corner office where they can go and pump. You know, they are hotel maintenance, gambling boat casino operators… they work in bars. So the kinds of things that people try to offer as solutions and… you know, for these people just don't work, and a breast pump being one. If any mother needed a breast*

pump that was gonna get her breast emptied in fifteen minutes, it's a mother in this kind of a job. (Key Informant, p12, 163)

And then they're not even giving a lot of times quality breast pumps anyway and so that's also another thing that's not helping with that. (Key Informant, p7, 190)

Aversions to Breastfeeding. The sub-theme, aversion to breastfeeding, was a common discussion primarily found in non-breastfeeding focus groups. Descriptors and phrases, such as "no baby on my breast", "gross", and "weird", emerged from participant responses when speaking candidly about the practice of breastfeeding or directly feeding infants from the breast. Some participants talked about this aversion as a mental barrier or "phobia", describing it as an issue of "mind over matter". Some participants discussed the concerns of leakage and desire to only offer breastmilk from a bottle (never from the breast) due to their personal challenges with having an infant suck directly on their breasts. This phenomena was validated by one key informant who shared her insight regarding the current generation of African-American mothers and pumping versus direct breastfeeding.

Like I can't… I won't… like I can't do that, like I… all I… like even before like when he was still in my stomach, like I try to pic… no, I'd try to picture me like breastfeeding him on my boob and like all I could think about was like, no, I can't do this to my own son. I wouldn't let… I wouldn't even do… I wouldn't do that to nobody. I wouldn't do it to a dog. I wouldn't… I couldn't do it. (Non-Breastfeeding, p6, 430)

And first, like um… I know that people that breastfeed that their breasts… I mean their breasts leak and like I didn't want… that was another reason why and I was like, well, I don't want to be leaking everywhere and having to put pads and diapers in my bra. (Non-Breastfeeding Mother, p6, 968)

Not really thinking about the like an object for sex, but it's really kind of weird. Like it's kind of gross. Actually just like the thought of baby like sucking on your titty or breast, boob… whatever you want to call it. It kinda… it's like mind over matter. Like I would say it's mind over matter. (Non-Breastfeeding, p4, 473)

No. No, no, no. I did not think about breastfeeding. I don't think that anyone probably could have persuaded me to breastfeed. It just was… my mind was made up and I am… my phobia is stronger than I am, obviously, because like I can't get over… even though I

know that it's just a mind thing, I still can't get over the fact of just propping my boob up and feeding my child. (Non-Breastfeeding Mother,p4, 065)

The fact of having to put my boob in my baby's mouth [creeps me out]. I know it sounds like, you know, it's harmless, and I know that that's the way for them to eat, but I just… I can't see me doing it, you know? (Non-Breastfeeding Mother, p4, 489)

I've seen the same sort of thing in my Mothers' Milk Club meetings, in that this generation of mothers pumps. You know, they will pump their milk and feed it in a bottle to their babies, but they don't want to feed the babies at breast. (Key Informant, p12, 053)

Convenience of Formula and Bottle-Feeding. Some participants simply offered that the convenience of formula is a significant barrier to breastfeeding initiation. Many non-breastfeeding participants openly discussed the convenience of formula and bottle-feeding as their behavior of choice. While they often highlighted the ease of formula feeding and preparation as a primary reason for lack of breastfeeding initiation, they also recognized challenges with obtaining childcare while breastfeeding, the time demand, and ability to bottle feed anywhere as rationales for selecting formula as their nutritional food of choice. Many non-breastfeeding mothers identified the multiple elements necessary for effective breastfeeding (i.e. patience, time, nutrition) as additional barriers against initiating the practice among African-American mothers. This sub-theme was not commonly discussed among breastfeeding mothers; although a few did validate the fact that formula could be less demanding than breastfeeding particularly in the context of family and competing priorities.

I think not having to um… with breastfeeding… like with breastfeeding, it's a lot to it. You got to have time, you got to have patience, you got to have nutrition, like you got to be eating the right stuff, you got to uh… make sure you're producing enough, like there's more to it. With bottle-feeding, I put in four ounces of water and then two scoops of milk…And that's all. That's it. I ain't got to waste no time, like it's thirty seconds for that. I ain't got… that's my time right there. (Non-Breastfeeding Mother, p6, 1032)

Yeah, I agree pretty much with what they said, the formula, you could walk down the street and feed them a bottle. I can't walk down the street and pop my boobs out and just be walking. (Non-Breastfeeding Mother, p3, 834)

She's going to be so healthy, but I just can't do it because if I need somebody to watch him I don't have time to put him on my chest and let him eat. I could just make the milk, the bottles, here you go, here he goes, so it's just easier and more convenient, I think. (Non-Breastfeeding Mother, p3, 194)

I would just say time and the patience for it is just like the main thing that I think stops people from breastfeeding, but it's like… I feel like it just takes too much time out of the day when it's easier to just put the scoops in and shake the bottle up, like that's it. (Non-Breastfeeding Mother, p3, 794)

In the middle of the night, I ain't got to get up sometimes. Dad, go make a bottle, feed the baby. You know, I ain't got to worry about having to go over. (Non-Breastfeeding Mother, p6, 964)

I would have to say the option of being able to go to the store and buy a can of milk is what makes it, you know, just easier. Like it's… it's more efficient, it's more… it's… get up, go to the store, buy a few cans, you're fine… instead of having to get up and pump and dump. (Laughing) But… yeah, just that convenience of being able to get it on your own, instead of it having to wait and produce on its own. (Non-Breastfeeding, p4, 829)

Self-Centeredness and Independence. The concepts of self-centeredness and independence were sub-themes closely tied together throughout maternal participant discussion. These sub-themes were noted primarily by non-breastfeeding participants. Some participants discussed desiring an independent baby for the purpose of "mommy time"; while others focused on the importance of not creating a spoiled or coddled infant needing additional attention and support. Participants also referenced commentary by family members (i.e., mothers and partners) who highlighted perceptions of creating dependence and a spoiled infant through breastfeeding. A few breastfeeding mothers also shared their experience related to this sub-theme. Some key informants discussed salient points regarding this phenomena in the historical contexts of slavery, racism, and trauma within the African-American community. They also validated the belief of a correlation between breastfeeding and infant spoiling and dependence within the African-American community.

I'd rather just… I want an independent baby, nothing like it's going to be stuck to me twenty-four-seven 'cause I might have to be like, okay, I need mommy time. I have to go

somewhere and drop her off with like her, or my boyfriend, or my mom… (Non-breastfeeding Mother, p6, 188)

Like all he wants is me so it's just… it gets a little frustrating because everybody's like oh, he's gonna be spoiled. Ain't nobody gonna be able to watch him when he only gonna want me and my boobs and stuff. (Breastfeeding Mother, p1, 927)

I did not want to breastfeed when I found out I was pregnant, because I wanted to go back to work and I didn't… like I didn't know if he was going to be so attached to the point where I wouldn't be able to leave him with somebody else because he wanted the breastmilk. And pumping, it takes forever, so I said oh no, you get the formula. (Non-Breastfeeding Mother, p3, 080)

…Let alone modern day African American women breastfeeding their babies, connecting with their babies, and there's still kind of that um… independent… you know, you've got to be able to survive. I don't have time necessarily to cuddle you, and breastfeed you, and if I'm holding you too long then I'm spoiling you and you're going to be soft and unfortunately I think that's still a big piece to what we see, especially in our inner-cities, where it is about survival a lot of the times. You know, our families aren't getting the same opportunities, and so um… I don't think that that connection is often made where breastfeeding your baby is a great thing and you're not spoiling them. You're actually making them more independent and it… helping them thrive, you know? Um, so I think that that's a huge issue still. (Key Informant, p7, 084)

So I think also, like racism has impacted um… the way that we parent, and why we parent, and also how we show love for our children. And preparing them in their society. So that definitely um… those definitely have a huge impact on breastfeeding. (Key Informant, p13, 772)

But if we're talking about why the baby is… why you don't want your child to be dependent on you um… and why you're preparing your child for independence at such a young age, then we can go back in this country when babies were um… taken from their moms …when we… you know, you don't feel in control of the situations that might happen to your child when you leave them so they have to be prepared to deal with this harsh world that we live in even at a young age so we can like the historical, societal, and social barriers together. They might… you know, often times they might just want to spoil the baby, but what does that really mean? That doesn't mean that you don't love your child, right? (Key Informant, p13, 212)

National Policy. Key informants primarily highlighted the gap in national policy and practices within our country as a significant barrier for initiation of breastfeeding among African-American women. While some recognized policies such as the Affordable Care Act (ACA) as a positive step in the right direction, most recognized the lack of a national maternity

leave policy, gaps in the ACA guidelines, and lack of reimbursement structures for peer counselors as significant national policy opportunities for improving breastfeeding initiation. Key informants also highlighted that the presence of national policy does not imply culturally relevant and authentic bedside care and clinicians for African-American women, which is an issue of great relevance. They called for expansion and clarification of policies, such as the ACA, to help create appeal for additional IBCLCs, a 52-week leave policy for bonding with pay, and more protection and resources for mothers in service-level jobs. A few mothers discussed frustrations associated with breastfeeding initiation within our nation's current leave structure.

> *I think one of the barriers in the community is if you have to rush and go back to work… when you're by yourself and it's like, you know what? I have to go back to work. You might get frustrated. You might not have enough time. You might not know how to pump. So that could be a little discouraging if you… you might really do want to breastfeed, but if it's time-consuming or you're by yourself, you don't get that break, it might hinder you from breastfeeding. (Breastfeeding Mother, p1, 405)*

> *I think certainly if the ACA were more defined, that would be helpful. I don't see it going anywhere any time soon, so of course I'm predicting that they say ACA would be around, um, but truly said, what type of level of support were covered, as well as I think it's really important to… again, everyone has a seat at the table, so peer counselors probably should be reimbursed or, you know, funded, provided some sort of salary for the work that they do um… as far as being billable. That would be the same for a certified lactation counselor and an IBCLC. I think setting up a structure like that would probably be more appealing for more people to come into the lactation field, as well as provide more access to care for our moms wherever they are. And absolutely I think that if we had a better leave act that covered fifty-two weeks, that would be fabulous, because that would give mom, you know, and her family as a whole… you know, time to not feel rushed, to feel like they can really bond and figure things out and, you know, give to our society like we do. (Key Informant, p7, 306)*

> *So some of our criteria-thinking is um… limiting for mothers who work in service-level um… jobs and then like we'll say that the other national thing would be um… and I'm sure you've heard this, but the um… maternity leave policies, right, so it's great if you can afford to take off work without pay…but unfortunately, many people can't afford to take off work without pay and so that affects the mothers um… willingness or ability to um… breastfeed, because you kind of sometimes have to go back to work at an earlier time and we don't have any federal policies in place to… for extending the time periods. So I think those are um… key things. Um… also, so if I talk about locally, you know, like here in Michigan, there's um… there's no reimbursement for community… so there's no*

> *Medicaid reimbursement for community health workers, so we're talking about having breastfeeding peer counselors and community-based doulas uh… in this… under this umbrella of community health workers, then how are those programs sustainable if there's not Medicaid reimbursement for those um… initiatives. (Key Informant, p13, 380)*

> *I do see, though, that ACA is a little hindering because it's not well-defined what type of care mom should receive in terms of lactation support. Um, you know, it says that insurers should cover breastfeeding… I mean, excuse me, breast pumps, but it doesn't really say what type. And if they're not getting the care, then they're like, you know, I'm… I'm just going to get a breast pump. (Key Informant, p7, 190)*

Facilitators

Along with identifying barriers associated with breastfeeding initiation in African-American mothers, mothers and key informants were asked to offer their perspective regarding those elements that make it easier and encourage mothers to initiate breastfeeding. Multiple facilitators, such as engaged/involved fathers, peer counselors and support groups, convenience of breastfeeding, supportive family and community environment, and positive provider support, were among the prominent factors mentioned for African-American mothers. Other facilitating factors were also minimally mentioned by respondents that are supportive of breastfeeding initiation in this community.

Facilitators of Breastfeeding Initiation

Engaged/Involved Fathers. Mothers and key informants highlighted the importance of involving fathers and partners early on in breastfeeding discussions and education. Some mothers highlighted this as critically important, sharing that women are significantly influenced by their partner. They also stressed that paternal involvement encourages nurturing of the child. Participants stated that if partners are not in agreement with breastfeeding, mothers will most likely not initiate breastfeeding. Key informants also referenced effective approaches to involving African-American partners, discussing how they facilitate dialogue about prior

paternal exposure and beliefs about breastfeeding. Like the mothers, key informants recognized the importance of involving fathers early in discussion, education, and decision-making.

> *I think what's even more important is getting our men involved in it, as well, because a lot of women are influenced by their mate. And I watch a lot of my girlfriends if their boyfriends, baby's father, or whatever aren't for it, then they're not going to do it. So I think it's really important to have our men um… reading and have them informed about the benefits of breastfeeding, 'cause it's not just a woman thing. (Breastfeeding Mother, p5, 350)*

> *I would say the most important thing to get that person to start breastfeeding would probably be their partner, I think…. Well, I think that Black women… they more like to please their partner, like their man. So I would think like if you have a man telling you like, you know, I want you to breastfeed my baby like… they're more likely to do it. (Breastfeeding Mother, p1, 341)*

> *I agree with everybody, just having the information more readily available to us, um… having it available, like I said, to our men um… is a big thing for me….I think women in general are um… easily strayed if their partner is not in agreeance with it, like you're… we want to please our man…so if he's not with it, we're not with it, um… so just getting them to understand all of the benefits. (Breastfeeding Mother, p5, 776)*

> *So one mother said at one point I remember… she was so proud that she was pumping for her baby because when the baby's father came and he fed the bottle, that the baby didn't spit up, and that all of the other babies that this father had had or been involved with always had problem with colic and spitting up. So this… and she was using this… this was like a huge source of pride and connectivity between her and the baby's father that I thought was really exciting to see the mothers sharing that. And then I had another mother tell a story that… that she had gotten a call from our NICU to say that there wasn't going to be enough breast milk to last two twins… to last two babies through the nightshift. Was it okay if we gave formula? We always do that. We never just give formula. And the mother came back and she said… I came back and the baby's father looked at me, and he said is everything okay at the hospital? And the mother said yes, they just said that they don't have enough milk to take the babies through the night. They have to give formula. And she… but she told this story… like this happened years ago, and I can still see it… with this pride… and she… you know, she took her little fist and she put it down on the table, and she says that my… my baby's father slammed his fist down on the table, and he said my babies aren't having any formula when they have their mother's milk. I'm gonna drive the milk to the hospital now, and it was like 10:00 at night. So… so we've learned how to engage the fathers. (Key Informant, p12, 117)*

> *There's definitely still a good portion that are not into it. Um… but not many like it used to be or like, no, she's not doing that, I don't care. I think them hearing the message at the same time with mom and me making sure that I elicit mom's goals and her feelings about it and having them hear that part of it. And then also asking them what their*

thoughts were and if they, oh, I don't care, well, what are you… what have you heard about breastfeeding? Tell me what you think. Have any of your friends had, you know, girlfriends or wives that breastfed and just trying to figure out where they're coming from. (Key Informant, p7, 394)

I think that um… one of barriers specifically for a culture is will it um… a man understanding um…to have something to say about the infant feeding choice that their moms make… I mean that their mates make. Um… so realizing that your behavior and your input actually affects the infant feeding decision of your child. (Key Informant, p13, 244)

Prior Positive Experience/Exposure. Prior positive experience or exposure to breastfeeding was one of the most significant facilitators mentioned by participants for breastfeeding initiation. Many breastfeeding participants highlighted past personal experiences with breastfeeding older children or witnessing family members (i.e. mothers, aunts) breastfeeding as the rationale for initiating breastfeeding. Some referred to it as "natural instinct" after breastfeeding previously, while other participants discussed the unthinkable idea of depriving their infant of breastmilk when others have received the benefit. Key informants also highlighted the importance of prior exposure in positive breastfeeding initiation decision-making, recognizing that many African-American women may not have experienced exposure to breastfeeding in their past.

Well I decided four children ago to breastfeed and then after that it wasn't really a choice because I felt like I would be gypping the older children if I didn't breastfeed them. (Breastfeeding Mother, P5, 060)

I thought about it immediately 'cause my mom breastfed all three of her children, so that's why I said early my mom um… and I just see all the benefits that I got from it and my siblings got from it and I was like… even before I was pregnant I was like when I have kids I'm breastfeeding all of them. (Breastfeeding Mother, P5, 102)

I was breastfed until I was three and a half, like to the point where I remember running up to the pool and drinking there. But uhh… I was like, you know, I just want to go all the way with it with him. (Breastfeeding Mother, p1, 273)

...Like I said before, my son… you know, it had a lot of benefits to him. You know, he was not sick or anything so I decided, you know, it worked for him, so it would work for the others. (Breastfeeding Mother, p1, 215)

I can't remember 'cause I… twenty years ago I breastfed my son, so I guess it was just naturally instinct. (Breastfeeding Mother, p5, 112)

And so a lot of times many women say no, or my girlfriend tried it, she hated it. And then some women say yeah, my aunt did it, you know, and that's why I want to do it. But I think most women really don't have that, yeah. (Key Informant, p11, 125)

Cost and Convenience. The cost and convenience of breastfeeding were sub-themes that were closely connected regarding facilitators of breastfeeding initiation. Many breastfeeding mothers highlighted the fact that breastmilk is "free" as one of the largest advantages, closely followed by the conveniences of breastmilk. In addition to the monetary savings, participants specifically referred to the conveniences of breastfeeding highlighting travel without carrying bottles, constant availability of food "on the ready", no spoilage of milk, and ease of nighttime feeding as rationales for positive initiation. These responses were cited frequently by breastfeeding mothers when discussing facilitators of initiation for African-American mothers.

Um..it's nice to not have to say, oh, one, or two, oh, I ran out of milk, you know, I got to run to the store, my baby's hungry. And, you know, there's always food for the baby and like that's the best part about breastfeeding, um… you never have to, you know, run and look for formula. If you don't have the money to feed the baby or buy the formula, you can breastfeed them. You know, so like that's the best part. (Breastfeeding Mother, p2, 915)

That's like the biggest thing, it's free. Um… that it's convenient, like she said, about carrying a diaper bag, like watching my girlfriends have to carry so much stuff because a majority of my girlfriends um… formula-fed and I don't and like I was even surprised, 'cause I thought I was going to have to carry like all that… and then I thought about it. I'm like, wait, I don't really need… all I need is diapers and I was like are you sure, like thinking to myself, are you sure you don't need nothing else? I'm like well, no, the boobs is like automatic. They come with me, so um… it's nice having that. (Breastfeeding mother, p5, 736)

Another thing that really is supportive to me is knowing how much money I'm saving. Like he eats a lot, and when I'm thinking like if I was to be making bottles right now, I would be going through cans and cans and cans and cans of Similac, and that's a lot of money. So when I know that I can just freely pull out my boob, that's one of just… milk is just gonna produce itself, then I say oh, yeah. I'm gonna keep it up. If they hurt, I'm

gonna find some cheap stuff to put on this nipple so that…Because them cans is high, and when you're gonna be buying a lot. (Breastfeeding Mother, p1, 919)

In the middle of night, I don't have to get up. Like all I got to do is reach over and grab you and slap you on…And I may go back to sleep and let you go for what you know, you know, like…It's just like, you know, I can't imagine having to get up in the middle of the night. Um… and I have a lot of people go, oh, my babies, you know, don't really sleep that great at night, whereas I think when you breastfeed you don't notice it as much because you don't have to get up, so you just kind of like… you know, you put them on and then they, you know, nurse. (Breastfeeding Mother, p5, 702)

Peer Support Groups/Peer Counselors. Throughout discussion with breastfeeding and non-breastfeeding mothers, they verbalized interest in hearing other African-American mothers' perspectives and garnering support during the breastfeeding process. Mothers voiced a desire for more interaction and discussion with other mothers having breastfeeding experience versus nurse clinicians lacking personal experience. In dialogue, one mother highlighted the focus group as a peer support that "brought her back together" when considering stopping breastfeeding. Another non-breastfeeding mother discussed how exposure to a focus group peer that mentioned the option of pumping changed her perspective on breastfeeding and "made her want to try it". Other maternal participants discussed the importance of developing more peer support for African-American mothers to encourage initiation in various venues.

Key informants recognized the presence of peer counselors and peer support for African-American women as critically important in increasing initiation. This is one of few topics that was mentioned by every key informant in some capacity. All key informants viewed the presence of peer support and/or peer counseling programs as foundational to modeling and influencing behaviors. Some key informants discussed the positive establishment of peer support group structures in Wilmington (DE), Chicago (IL), and Detroit (MI), and national programs such as *Loving Support* peer counseling framework through WIC. Key informants were, however, concerned about limited culturally appropriate peer support/counseling programs

available to African-American mothers, policy and reimbursement structures that impede access, and consistent peer support programs through providers such as WIC.

> *Basically for me it got easier today. You know, just being in a room full of women that are going and been through the same exact thing, and being able to relate, you know? I was ready to give up before I came here, you know? I was ready to give up because I was late because I was trying to breastfeed and get the pump in and… you know, I'm running around, and I'm fresh out the shower but I'm sweating. She's screaming. I'm like… oh, my God. I'm ready to just say bunk it, you know? But being here just, you know, kind of brought me back together. (Breastfeeding Mother, p1, 901)*

> *Yeah, putting women in a room that… that are… all of them are expecting, and just kinda have them discuss amongst their selves, you know, like these… if I was still pregnant right now and she still has her baby and we're having a session, like I would have… for the first time in life thought about taking that… you know, taking the route and just going ahead and just pumping it out and just giving it to him through a bottle. Like I don't know. Something in that just like…'cause I'm sitting here and I'm like oh, yeah, dummy. Like… you know? You could pump. Like, you know, like where was the pump? You could have pumped it out, and you could have just gave it through a bottle. But again like I said, I don't even know how a pump feels with milk coming out of it because I never tried anything. So maybe that's less gross than actually, you know, putting your boob in your child's mouth. I'd think about that though. Ah, but it's too late. (Non-Breastfeeding Mother, p4, 881)*

> *So it's good to have that support, but it was good to have it from other females who…have been down that road, because you know, for a person who has never breastfed, you really can't tell me about breastfeeding. You can tell me like that's something you would want to have done, but if you only did it like once or twice and you're telling me to stick to it, that wouldn't have helped for me. I needed somebody who went through the whole process…. (Breastfeeding Mother, p2, 267)*

> *I just felt like maybe if they just had a… not more information but just like more people that breastfeed talk to you instead of the nurse trying to tell you um… that this is better. You don't even have kids so how do you know? So that's where I get messed up at. You don't even have kids so how do… how would you know? You're going off of a medical-based. You're not going off of experience. So that would play a more… a much more um… part in me breast… it would have probably helped me a little better if I could have had a… if I could have talked to a woman about breastfeeding instead of a nurse with no kids with no experience. (Non-Breastfeeding Mother, p6, 380)*

> *So I think that's a huge… that's one of the huge um… like social barriers if we're really, really talking about um… shifts in culture and moving to… normalizing breastfeeding for our folks and black folks. Where are the socially, culturally, and relevant, um… and appropriate breastfeeding support groups for black moms. And I think that that's really important when you're talking about peer-to-peer support because you're lifestyle um…*

may be quite different than mine. So if I come talking about something that's specific to my culture or um… like my way of life maybe I could say and, you know, I'm talking to maybe… say that I have to work and then I go to a group of moms who mostly don't have to return to work, then how can they help me make that work for my lifestyle? But when you have um… when you're around people with similar social um… with a similar uh… social cultural background, then you can more so see yourself making this happen. So I really think that that's a huge um… something huge specifically culturally in this country. (Key Informant, p13, 340)

So there are some things in the research we know work. We know our peer counselor model works here in the NICU, and there's been a great history of peer counselors with African-American populations in the literature as well, so we know that they work as well. (Key Informant, p12, 179)

Supportive Family/Home Environment. Supportive family and home environment was a sub-theme mentioned by some breastfeeding mothers and key informants. Both affirmed the critical importance of supportive family and positive affirmations about breastfeeding. Breastfeeding mothers shared that the absence of support in the home will likely result in a failure to continue or initiate breastfeeding. Additionally, the lack of family support encouraging African-American mothers to breastfeed or absence of affirmations, such as breastfeeding "is good" will also likely result in mothers not wanting to breastfeed at all. Key informants identified family as key influencers in the decision to breastfeed. One key informant shared her belief that family (and friends) are the most influential members in overcoming low breastfeeding initiation rates.

I didn't really have anybody telling me, you know, don't breastfeed and stuff like that. If anything they're telling me, oh, he don't want that bottle. Stop trying to give him that milk….He wants the good stuff…So I just give him the good stuff. (Breastfeeding Mother, p1, 277)

You really need a support system at times when you are breastfeeding. You need to be around other people who have breastfed, because if you're not, you will give in to powder-feeding fast or formula-feeding, whether it's the powder or it's the stuff that's already made up. (Breastfeeding, p2, 128)

And the support part… if you don't have people, like your prenatal care or your WIC office or even your family and friends, telling you that it's good to breastfeed or that you should do it, then you might not want to do it at all. And even if you have people that's

telling you not to do it, that… and you really want to do it… that can get into your ear and you might say well, I'm not doing it then because everybody else is saying that it's bad and stuff like that. (Breastfeeding, p1, 885)

I would definitely like more support and I know it's not too late. I don't want to give up. And um… but my grandmother came over and she gave me some positive feedback, you know, she would tell me about the oatmeal um… the raw stale oatmeal and she would tell me to add honey and, you know, just give me small little tips but I would appreciate more support rather than… you know, like they said, the African American community women, they don't breastfeed much and then from receiving the negative feedback that I get, I was like I understand why, so. (Breastfeeding Mother, p5, 130)

The community is very important because if you're going over to visit your mother-in-law and she's going, ewwhh, you don't give the baby a bottle? And you're going… no. Then you're gonna run into the other room and say let me breastfeed my baby, when you should be able to throw a blanket over your shoulder or a diaper, nurse your baby. Sit there and talk to your mother-in-law. Explain to her why you're doing this so that she understands… that your auntie understands. (Key Informant, p8, 073)

I definitely feel that it would be with the, um… the family. Like the peer and family support is where I see a lot of influence in decision-making purposes. (Key Informant, p9, 193)

Yeah, and I think, you know, uh… along with that, so if you are poor, if you do not have a good home situation and if you don't have many of these things but there are influences around you, such as your friends and family members all breastfeed and… or say, you know, it's a good idea to breastfeed or give you positive feedback, like good for you, you're breastfeeding. (Key Informant, p10, 132)

Baby-Friendly Hospital Influence. The influence of increasing Baby-Friendly Hospitals and the introduction of the ten-steps process was a sub-theme identified to have positively influenced breastfeeding in the African-American community. Although mostly discussed by key informants, some mothers identified the dramatic changes in hospital practices from as recent as three years prior. Subjects specifically discussed the lack of formula distribution, no pacifiers, and the encouraging environment to breastfeed. Key informants highlighted the important role that this initiative has played in increasing breastfeeding as well. Some discussed the increased focus on supporting hospitals through the process, while others highlighted the increased focus on prenatal education and resources associated with this initiative. While it has

been seen as overwhelmingly positive, two key informants focused on the importance of access to baby-friendly facilities and equity for African-American mothers. One key informant called for a "laser-focus" on baby-friendly in communities that are highly populated with African-Americans or that deliver a high volume of African-American infants.

> *…They were really… they were nice about it and they helped me a lot than what I thought I was going to get from the last time. 'Cause before…my son was turning three, but they were so pro-giving bottle and they were so pro-pacifier and with my daughter it's a big difference. They don't offer the pacifier any… I didn't even get formula, which is… 'cause… I guess 'cause I didn't want it they didn't give it to me, but it's a big difference my child… my son and my daughter and it's just three years at the same hospital, so. (Breastfeeding Mother, p5, 530)*

> *They're baby-friendly now. So they don't want you to pacify at all. They want you to go in there breastfeeding. They're not gonna give you no formula. They want you to breastfeed. So when I found that out, I was already with it because I breastfed my two daughters, so that wasn't nothing new to me. Don't give them no pacifier. (Breastfeeding Mother, p1, 641)*

> *And I don't know in terms of numbers, but I do believe that it really has increased the initiation rate and gotten women to just start thinking about it. I can say maybe ninety percent or ninety-five percent of my women that I see daily, when I ask the question have you considered breast feeding, their answer is yes. Uh, and that was very different three years ago, and so… yeah, I do feel that as we move towards becoming baby friendly and just the language… the nurses, we're talking about it. They're hearing it. Yeah, it has helped. (Key Informant, p11, 277)*

> *So I think initially for a large part it was not necessarily a good thing. A lot of the hospitals that were coming onboard with baby-friendly weren't in the areas where African American women were delivering. And I think just because we have policies in place doesn't necessarily mean that we're going to change the culture in how we care for our women of color and we know that often times at the bedside, that care is going to look different from a women of color versus someone who's not. And so I don't think that it was a positive thing initially. However, now what I'm seeing is because it's spreading more and more and more accessible for hospitals to achieve this, um, that it is helping to get to a better start. (Key Informant, p7, 116)*

> *Okay, um… so yeah, so that… I like uh… the baby-friendly process…I wish there was a way for them to um… be more um… laser-focused on um… communities that are um… like highly-populated or hospitals that have a high population of black babies being delivered…So, you know, I guess that's one of the caveats that I have, um… you know, like how are they targeting certain hospitals and um… helping them um… helping them to become um… baby-friendly? (Key Informant, p13, 564)*

WIC. WIC was identified by many mothers as a facilitator of breastfeeding initiation. Breastfeeding and non-breastfeeding participants alike affirmed the belief that WIC provides a strong, pro-breastfeeding message. Participants noted the consistent provision of information during visits and recognized the program's nutritional component as critical to adopting breastfeeding. They also discussed the positive environment provided during visits to carry out breastfeeding with their infants. While some key informants view WIC as a negative influencer of breastfeeding initiation with tremendous variation, others recognize the agency as a positive facilitator within the community. One key informant shared the perspective that WIC serves as a bridge, connecting the hospital and community for breastfeeding women. Supporters argued that WIC should not be negatively perceived as a barrier to breastfeeding initiation solely based upon their provision of formula to mothers.

> *I went three times, but all the times that I went, they was big on umm… breastfeeding. I did… I do have a pump. It didn't come from WIC, but they did give me information of, you know, if I didn't have one of, you know, where can I get one from… that they did offer a breastfeeding class and they offer breastfeeding support. So like if, you know… if I got… 'cause my last appointment I was like… you know, I was a little frustrated with the breastfeeding, but they offer support or they tell you that umm… different places you could go if you need to talk to somebody about breastfeeding. (Breastfeeding Mother, p1, 773*

> *My first day at WIC was after I had him and um… they definitely gave me the information on it. They actually had a breastfeeding area um… that you could go in the back and, you know, close the door with a little rocking chair… And um… they gave you this little breastfeeding blanket. Um… they give uh… you know, little packets of information, all of that. Um… and then there was a nurse also there also asking questions about me and my breastfeeding techniques, and how it was going, and stuff like that. (Breastfeeding Mother, p2, 723)*

> *Yeah, when I went to go get um… his WIC, the milk, 'cause I didn't get WIC while I was pregnant, so when I started with that after I had him to get the milk, the lady was like uh… once I told her I had started… I was breastfeeding, she was like, oh, you should start over again, you know, you still got it, just do this and do that and she was telling me about this medicine they got that you can take and it helps your milk or whatever, so she was… yeah, she definitely one for breastfeeding. (Non-Breastfeeding Mother, p6, 734)*

But we see a huge correlation and connection between the hospitals and the WIC program because we work together, and I think it built a really good bridge and a connection between the WIC program. (Key Informant, p9, 141)

We (WIC) talk about breastfeeding at… at the national conventions and at… even at local seminars, and we talk about it more in the classroom….We have residents and interns that rotate through the office from Jefferson, from Saint Chris, occasionally from CHOP, from Einstein… and so they spend like four hours with us, and of that four hours, about two of them are spent talking about breastfeeding. And it's… and it's important, you know, that we do that because my goal is to help people to understand that WIC supports breastfeeding, and just because we provide formula… we still support breastfeeding. (Key Informant, p8, 081)

Table 8. Emerging Primary Themes and Sub-Themes with Interpretations and Positions of Maternal Participants and Key Informants

Emerging Primary Themes	Sub-Themes, Interpretations and Positions of Maternal Participants and Key Informants
Cultural Context (Factors)	
Beliefs about Breastfeeding	Benefit to Baby and Mom/Healthier • Identification of the health benefits of breastfeeding • Highlighted by key informants, breastfeeding and non-breastfeeding mothers
	Increased Bonding • Positive identification of a heightened connection between the mother-child dyad • Highlighted by key informants, breastfeeding and non-breastfeeding mothers
	It's Natural • Recognition of breastmilk as a perfect creation by God, connected to spirituality; source of healthy nutrition absent additives and chemicals • Highlighted primarily by breastfeeding mothers
	Historic Cultural Events have Influenced Beliefs, Exposure and Perceptions of Breastfeeding (non-normalized) • Implications of slavery and its impact on the normalized experience and knowledge within the African-American community • Highlighted heavily by key informants; also discussed by breastfeeding and non-breastfeeding mothers
	Formula is as good as Breastmilk • Expressed skepticism regarding the benefits and superiority of breastmilk over formula • Highlighted heavily by non-breastfeeding mothers
	Racism/Community Disparities supporting African-American Maternal Breastfeeding • Underscored the issues of racism and disparities and their impacts on the approach and treatment of African-American women in breastfeeding support • Highlighted heavily by key informants; also discussed by breastfeeding and non-breastfeeding mothers
Issues of Sexuality	Breasts for both Nutrition and Sexuality • Identification of the dual purpose of the female breast for feeding and sexuality • Highlighted by breastfeeding and non-breastfeeding mothers
	Breastfeeding for Sexuality/Sexual Act • Belief that breasts are solely for the purpose of sexuality and/or breastfeeding as an act of sexuality • Highlighted primarily by non-breastfeeding mothers
	Over-sexualization of African-American Females • Described as an ignorance/short-sighted perspective of black males, the media, and the African-American community about the female body and breasts

Emerging Primary Themes	Sub-Themes, Interpretations and Positions of Maternal Participants and Key Informants
	• Highlighted by breastfeeding mothers and key informants
Social Environment (Factors)	
Familial/Network Influence	Self-Influence • Individual influence in breastfeeding decision • Highlighted by breastfeeding and non-breastfeeding mothers
	Matriarchal Influence • Critical influence of a maternal or paternal grandmother/great-grandmother of the unborn child on the final breastfeeding decision • Positive and negative matriarchal influence highlighted by non-breastfeeding and breastfeeding participants as well as key informants
	Paternal Influence • Critical influence of father of the baby (partner) on the final breastfeeding decision • Positive and negative paternal influence identified by breastfeeding and non-breastfeeding mothers with more positive paternal influence identified by breastfeeding participants in final breastfeeding decision • Highlighted by key informants, breastfeeding and non-breastfeeding mothers
	Sister Influence • Influence of sisters (of African-American mothers) in final breastfeeding initiation decision • Highlighted primarily by breastfeeding mothers (noting positive influence of role-modeling and support).
	Friend/Peer Network Influence • Influence of friends/peers/co-workers in the final breastfeeding initiation decision • Positive and negative friend/peer network influence and pressure was identified by non-breastfeeding and breastfeeding participants • Breastfeeding mothers and key informants stressed lack of friend/peer support as a significant barrier
	Religious Community Influence • Influence of the religious community (i.e. Christian, Muslim) and beliefs in final breastfeeding initiation decision • Discussed by breastfeeding and non-breastfeeding mothers; highlighted by breastfeeding mothers of Christian and Muslim faith as a primary rationale for initiating breastfeeding; key informants recognized faith communities as a significant venue for education
Informational Sources	Prenatal Clinics • Positive source for breastfeeding information and support during the pre-delivery period

Emerging Primary Themes	Sub-Themes, Interpretations and Positions of Maternal Participants and Key Informants
	• Highlighted by key informants, breastfeeding and non-breastfeeding mothers
	WIC • Positive source for breastfeeding information and support, primarily during the pre-natal period • Highlighted positively by breastfeeding and non-breastfeeding mothers; mixed support of program by key informants concerning role in supporting positive initiation
	Physicians • Critical source of breastfeeding information regarding breastfeeding initiation for African-American mothers • Highlighted by breastfeeding and non-breastfeeding mothers as providing positive and negative experiences around breastfeeding information and support
	Nurses • Positive informational resource for breastfeeding information in various encounters by breastfeeding and non-breastfeeding mothers • Highlighted by key informants for sometimes being inconsistent in delivery of culturally appropriate nursing care and subtle discrimination around breastfeeding initiation
	Lactation Consultants • Informational source consistently lacking the availability, time, and resources necessary to support breastfeeding initiation • Highlighted negatively by breastfeeding and non-breastfeeding mothers; key informants discussed concerns regarding lack of diversity and culturally relevant training
	Internet Sources • Positive alternative source of breastfeeding information or only source in some instances for African-American mothers (i.e. internet, social media, websites, web applications) • Highlighted by breastfeeding and non-breastfeeding mothers; discussed by key informants as culturally relevant and necessary to approach for reaching the African-American community
Breastfeeding Intention	
Intention	Positive Intention • Positive desire and interest of mother to initiate breastfeeding behavior • Highly influenced by modifiable and non-modifiable factors • Highlighted primarily by breastfeeding mothers with prior experience or exposure to breastfeeding or self-empowered

Emerging Primary Themes	Sub-Themes, Interpretations and Positions of Maternal Participants and Key Informants
	Negative Intention/Ambivalence • Absence of desire and interest or uncertainty of initiating breastfeeding behavior • Highlighted primarily by non-breastfeeding mothers during prenatal period regardless of educational support
Barriers and Facilitators	
Barriers	Competing Priorities • The challenge of juggling multiple responsibilities while attempting to initiate breastfeeding (i.e. additional children, work, home duties, school) • Highlighted by non-breastfeeding and breastfeeding mothers with non-breastfeeding mothers associating "stay-at-home" as a pre-requisite for successful initiation • Key informants discussed competing pressures as a social challenge
	Pain • Physical descriptors of discomfort during breastfeeding experience, both actual and anecdotal • Highlighted by non-breastfeeding and breastfeeding mothers, with breastfeeding mothers recognizing resolution of pain with proper technique and duration
	Embarrassment of Public Exposure • The sense of embarrassment and stigma associated with public breastfeeding • Highlighted primarily by non-breastfeeding mothers, with support articulated by key informants regarding the need for cultural acceptance for full resolution of this issue
	Lack of Knowledge and Support of Breastfeeding in African-American Community and Home • The nonexistence of knowledge and support due to absence of historical exposure within the African-American community for generations • Primarily highlighted by breastfeeding mothers and key informants
	Lack of Information and Education about Breastfeeding Prenatally • Deficit of adequately sharing the what, why, and how of breastfeeding prenatally with African-American women prior to delivery creating a gap in knowledge and behavior • Breastfeeding mothers and key informants support the increase of breastfeeding education earlier in the prenatal period and possibly earlier in the life course of young women
	Lack of Access to Equipment and Resources • Lack of adequate equipment and supplies (i.e. breastpumps and nursing bras) to effectively initiate breastfeeding among African-American women

Emerging Primary Themes	Sub-Themes, Interpretations and Positions of Maternal Participants and Key Informants
	• Highlighted by breastfeeding and non-breastfeeding mothers and key informants
	Aversions to Breastfeeding • Perceptions by African-American mothers regarding their dislike of the practice of breastfeeding • Highlighted by non-breastfeeding mothers
	Convenience of Formula and Bottle-Feeding • The ease and expediency of formula/bottle-feeding infants, particularly in relationship to obtaining childcare, time constraints, and acceptability in all environments • Highlighted primarily by non-breastfeeding mothers
	Self-Centeredness and Independence • Concepts highlighted by African-American mothers as critical in decision to not initiate breastfeeding due to the desire of "mommy time" and independence. Discussion raised critical focus on not creating spoiled or coddled infants in need of extra support and attention • Highlighted primarily by non-breastfeeding mothers
	National Policy • Recognized gaps in U.S. national policy regarding leave protection, provisions of the ACA, and professional reimbursement for breastfeeding support • Highlighted primarily by key informants; discussed by maternal subjects regarding paid leave provisions
Facilitators	Engaged/Involved Fathers • Influence of fathers/partners in breastfeeding decisions and criticalness of involving fathers early in discussions and education • Highlighted by breastfeeding mothers and key informants
	Prior Positive Experience/Exposure • Critical role of past personal experiences or exposure to family members with breastfeeding in positive initiation of behavior • Referenced primarily by breastfeeding mothers and key informants
	Cost and Convenience of Breastfeeding • Identified monetary savings and ease as two positive aspects of initiating breastfeeding behavior. Factors included: free cost, constant food availability, ease of travel and nighttime feeding • Highlighted by breastfeeding mothers
	Peer Counselors/Peer Support Groups • Identified as a desire to gain perspectives and support from the perspective of African-American mothers with breastfeeding experience and an understanding of cultural demands of the community. Viewed as foundation to role modeling and influencing behaviors.

Emerging Primary Themes	Sub-Themes, Interpretations and Positions of Maternal Participants and Key Informants
	• Highlighted by key informants, breastfeeding and non-breastfeeding mothers
	Supportive Family (home) Environment • Critical factor in positively affirming initial breastfeeding decisions and supporting continued behavior among African American mothers. • Highlighted by breastfeeding mothers and key informants
	Baby-Friendly Hospital • Introduction of designation/ten-step process that has influenced hospital and healthcare professional practices positively towards breastfeeding behaviors (i.e. no pacifiers, decreased formula distribution, education) • Of critical importance that organizations caring for African-American mothers and infants receive designation and adopt practices for equity in care • Highlighted primarily by key informants; discussed by breastfeeding mothers
	WIC • Identified as a provider of pro-breastfeeding messaging to African-American mothers. Positive environmental support, nutritional provisions, and consistent informational messaging was also highlighted as critical in the adoption of breastfeeding behavior • Recognized by breastfeeding and non-breastfeeding mothers as supporters of breastfeeding; mixed support of WIC noted by key informants

CHAPTER 5- DISCUSSION

In an effort to increase understanding of the cultural and social environment factors that positively and negatively influence breastfeeding among African-American mothers, this study had the following research aims:

1. Using focus groups and key informant interviews, identify perceptions associated with breastfeeding initiation among African-American mothers and key stakeholders.
2. A) Identify the cultural factors that promote (facilitate) or hinder breastfeeding initiation behaviors in African-American mothers.

   B) Identify social environment factors that promote (facilitate) or hinder breastfeeding initiation in African-American mothers.

3. Develop a tailored strategy to inform individual breastfeeding behavior, organizational practice, and community beliefs/perceptions to increase initiation rates of breastfeeding among African-American mothers for improved childhood outcomes (based on maternal focus group and key informant interviews).

Through the various phases of this research, literature review, focus groups, and key informant interviews, important insights were offered that address the research questions and aims of this study. The literature review sought to examine the current knowledge, gaps, and inconsistencies regarding factors influencing breastfeeding initiation among African-American mothers. While studies have explored barriers or facilitators of breastfeeding initiation in African-American mothers, this research is believed to be one of few studies that have explored both barriers and facilitators specific to breastfeeding initiation in this population. It fills a gap

in the literature by examining two perspectives in a single study- the perspective of mothers through focus groups and SMEs through key informant interviews.

While some of the results found in this research study are reflective of prior research, other issues raised were found to be novel in the literature. All results, however, play a critical role in framing the strategies essential for implementation of a "*Plan for Change*" within this population and community. Below, some of the most salient cultural and social environment factors, as well as important facilitators and barriers mentioned by participants and SMEs, are highlighted.

Cultural Context

Beliefs about Breastfeeding

An overwhelming majority of African-American mothers possessed beliefs consistent with the current evidence about breastfeeding in the literature. Benefits to infant and mother and increased bonding were commonly mentioned by mothers during focus groups. Many mothers spoke definitively and accurately of the positive benefits of breastfeeding for both mothers and infants, consistent with the report of Reeves and Woods-Giscombe indicating that African-American women have an excellent understanding of the health benefits of breastfeeding for mothers and infants.[19] Participants discussed the positive impact of breastfeeding on: the infant's immune system, protection from viruses (infants) and cancers (mothers), increased infant intellectual capacity, and maternal weight loss. Despite knowledge of the positive health benefits of breastfeeding by mothers, this research indicated that awareness of health information and benefits alone is likely inadequate to influence positive breastfeeding initiation. Literature suggests that provision of health information about breastfeeding, coupled with guidance about breastfeeding expectations and positive support by hospital/healthcare providers, is crucial in initiation.[11,18] This sentiment was also strongly reinforced by key informants, suggesting

culturally competent providers and anticipatory guidance about the breastfeeding experience are critical to adoption and a positive experience.

The phenomena of an increased maternal-child bonding experience was also referenced by mothers and key informants regarding mother-infant dyads that initiate breastfeeding. Overwhelmingly, key informants and mothers commonly referred to this bonding experience as an "exchange between the mother and child". Regardless of personal breastfeeding decision, participants within the study stated that breastfeeding creates a heighted connection between mothers and infants and may be influential in increasing the duration of breastfeeding. Prior studies validate this sentiment, suggesting a positive fostering of maternal-child bonding and healthier familial relationships among breastfeeding mothers.[6,19] Additional literature also suggests that increased bonding may also influence lower rates of abuse and neglect in breastfeeding mothers (compared to non-breastfeeding mothers).[10] For this reason, and many others, key informants stressed the importance of supporting African-American mothers in breastfeeding to increase the maternal-infant connection.

The historic evolution of breastfeeding in the African-American culture, racism and racial disparities were also passionately discussed by both mothers and key informants as significant determinants in breastfeeding initiation. Both parties shed light on the tremendous impact of slavery and its ramifications on beliefs of infant independence and spoiling. Many believed that slavery, coupled with a lack of historical knowledge and generational exposure, has culminated to create a non-normalized breastfeeding experience among African-American women and their communities. Key informants particularly discussed the historical issues of slavery, trauma, and survival, highlighting the belief that the current state of breastfeeding in the African-American community is largely impacted by their past as a people. Recent literature assessing the impact

of slavery on breastfeeding refer to it as the continued "negative generational legacy"; while other studies also focused on its implications have highlighted concerns of infant spoiling and independence. [19,31,53-55] All of these concerns are reported to have a direct impact on breastfeeding initiation based on both maternal and paternal fears related to independence and infant spoiling.

The topics of racial disparities and racism should also not be undervalued in this discussion. Mothers and key informants highlighted the realities of racism within health care organizations, among providers, and within communities concerning breastfeeding initiation among African-American mothers. Despite the "call to action" to support breastfeeding initiation in African-American women, accounts from mothers and key informants provide evidence regarding the continued presence of stereotyping, disparities in approaches to care based on culture, and lack of access/resources in specific communities and locations. While breastfeeding and non-breastfeeding mothers predominately highlighted a disparity in community resources (i.e. access to breastfeeding rooms in African-American communities compared to White communities), key informants overwhelmingly focused on the issues of provider stereotyping, judgment, disparities and racism in the provision of care. Prior research findings illustrate lower rates of breastfeeding initiation among African-American mothers related to disparities in positive support factors and unequal presence of providers. Conclusions from Gee and colleagues' Louisiana study also poignantly support this reality illustrating a presence of lower breastfeeding initiation among African-American women in the presence of dramatically different in-hospital experiences than their White counterparts.[34] Exploring effective methods to ensure the provision of consistent, comprehensive, and culturally-relevant

care practices to African-American mothers by providers is essential to increasing breastfeeding initiation rates.

Issues of Sexuality

Equally important in the discussion of increasing persistently low breastfeeding initiation rates among African-American women is the topic of sexuality. Issues of nutrition versus sexuality, over-sexualization of African-American females, and breastfeeding as a sexual act are central in this discussion. While some mothers from breastfeeding and non-breastfeeding groups identified the dual purpose of the female breasts for nutrition and sexual pleasure, a divide in perspective did exist among other participants. For some non-breastfeeding mothers, breastfeeding represented an act of sexuality and raised concerns related to breastfeeding based on infant gender. Many of these mothers were willing to breastfeed female infants, but vehemently opposed breastfeeding their male infants. They also shared great reservations about placing their breasts into the mouth of their infant, viewing this as an act of sexuality. Mothers also described disapproval of breastfeeding by partners due to interference with sexual intimacy and male infant gender.

Similar issues of sexuality in breastfeeding have been cited within the literature among African-American populations. Notable literature supporting this particular finding was the study conducting by Ware and colleagues' in Shelby County, Tennessee.[6] This study highlighted the prominent concerns of sexuality and breastfeeding, nipple sucking by infants, body image, and paternal and matriarchal apprehensions. These findings are also consistent with other literature supporting the perceptions of breastfeeding as a sexual act, particularly in relation to paternal concerns of breastfeeding as an act of sexuality. [6,19,56]

The topic of over-sexualization of the African-American woman was highlighted as having a significant impact in the normalization of breastfeeding within the black community. Breastfeeding mothers and key informants, alike, believe that there must be a transformation of self-image and body image among females in order to change this perception. Importantly, males in the African-American community must also recognize and embrace their critical role in shifting perceptions around this issue.

Due to the presence of strong convictions within the African-American community about issues of sexuality and breastfeeding among African-American women, actions must be taken to educate and normalize the behavior of breastfeeding within the African-American community. As highlighted by Reeves and Woods-Giscombe, the African-American culture must shift its cultural attitude regarding female bodies, breasts, and sexuality – divorcing these things from negative correlations of sex, alcohol, media, and other services.[19] Interventions should target African-American women; however, African-American males and community members must also be engaged in education and communication to dismiss the perception of breastfeeding as an act of sexuality and embrace it as a positive health practice. Additional research to explore the factors that contribute to these strong beliefs of sexuality with the African-American community are also necessary to transform this discussion.

Social Environment Factors

Familial/Network Influence

Although the final decision to initiate breastfeeding is determined by a mother, this study emphasized the critical influence of the familial and peer network on decision-making. The findings of this research concluded that the three most critical influencers in a mother's decision to breastfeed are the father, grandmother, and her peers, with some minor self and sisterly

influence. This is consistent with literature indicating that interpersonal relationships with the child's father, family, and friends are most central and critical. [7]

In this research, breastfeeding and non-breastfeeding mothers agreed that the father of the infant significantly impacts final breastfeeding initiation decisions. Mothers of breastfeeding and non-breastfeeding groups referenced the importance of "pleasing their partner" through adoption of the male's perspective on the practice of breastfeeding. In some instances, negative paternal influence ultimately resulted in negative breastfeeding initiation, despite positive maternal intention to breastfeed. This finding is strongly supported by the research of Alexander and colleagues, indicating that the opinion of the father of the baby about breastfeeding significantly affects a woman's decision about breastfeeding.[53] Breastfeeding mothers also highlighted the critical role of positive breastfeeding support by male partners. These mothers stressed a sense of pride in their relationship and the desire to initiate breastfeeding not only for themselves and their infant, but also for their partner. This is supported by prior findings in the literature indicating that African-American women who receive support for breastfeeding practices from their partners are much more likely to breastfeed. [7,19,53] Mothers and key informants emphasized the importance of involving partners early in education and the decision-making process, as consistent with prior findings.[44] This topic highlights the critical importance of helping African-American males to understand the benefits of breastfeeding and their role in influencing this decision.

Another familial factor critical in final breastfeeding initiation decisions is matriarchal influence. Matriarchal (grandmother) influence was mentioned most prominently by mothers when discussing their final breastfeeding decisions. Prior literature supports the critical influence of grandmothers, particularly maternal grandmothers, in feeding practice decision-

making. [19,56] Although not unanimous, many comments shared by participants regarding positive influence of grandmothers referenced prior exposure of breastfeeding by the maternal or paternal matriarch. This familiarity, based on literature of prior exposure to breastfeeding, indicates a significant positive impact on maternal perspectives and increases confidence and comfort with the practice of breastfeeding.[19,57] Key informants also recognized the critical influence of grandmothers on this decision and raised great concern regarding the lack of breastfeeding exposure of younger grandmothers. The negative perspectives of grandmothers, shared by some participants, validated key informant concerns regarding a lack of exposure to breastfeeding and unfamiliarity with the realities of breastfeeding practice (i.e. inappropriate focus on time and lifestyle constraints, access to the baby, breastfeeding challenges). Literature indicates that this issue can be overcome by increasing the level of exposure to breastfeeding. According to Reeves and Woods-Giscombe, "living with or near women who have breastfed can serve as "living proof" of the feasibility of breastfeeding and can provide access to practical support that contributes to successful breastfeeding."[19] This statement, in addition to the research findings of this study, supports the development of interventions focused on education and exposure for grandmothers within the African-American community. This may be one of the most critical interventions necessary to significantly increase the rates of breastfeeding initiation among African-American mothers.

Peer influence was identified as a third category of critical influence in the breastfeeding initiation process. Non-breastfeeding and breastfeeding participants highlighted the varying perspectives of friends concerning breastfeeding initiation and formula feeding. Although both groups identified having breastfeeding and non-breastfeeding peers, breastfeeding mothers and key informants more profoundly discussed the challenges related to breastfeeding initiation in

the absence or lack of network (peer) support. Key informants also stressed the social barriers created by the lack of peers within an immediate community and the discouragement faced by mothers with a limited or absent peer network. This topic of peer/social support is one of great importance to breastfeeding and is supported as a positive facilitator of initiation by several findings in the literature.[5,44] As peer support is critical to shaping beliefs and behaviors, community and public health leaders must determine how to create more opportunities for peer networks and support groups among young African-American women facing breastfeeding decisions through strategic implementation.

Although minimally discussed in prior literature, mothers and key informants identified the religious community as a significant influencer of breastfeeding initiation. Breastfeeding and non-breastfeeding mothers openly discussed religion and their personal beliefs regarding its involvement in their decision-making. Some non-breastfeeding mothers shared that despite religious teachings, ultimate determination of breastfeeding initiation should remain their personal choice. Self-determination was the primary argument raised in discussions, based on the ideology that what works for one may not work for others within the same community. Many breastfeeding mothers, conversely, challenged the argument of self-determination and recited doctrine from Christian and Islamic faiths. These women highlighted the rites of children to breastfeed and God's perfection of the process as primary rationales to initiate breastfeeding. While literature and key informants have recognized the church and religious community as a convenient place for education and information-sharing within the African-American community, minimal literature has emphasized the personal sentiments shared by participants discussing the influence of religious doctrine on their decision to breastfeed.[6,58] Additionally, many women of the Islamic faith referenced the tremendous amount of peer support found

within the Muslim community. These mothers expressed an overwhelming sense of comfort and normalcy with the practice of initiating breastfeeding, which was drastically different than identified by other participants in this research.

Informational Sources

The results of this study confirm the significance of professional breastfeeding education and support by healthcare professionals in breastfeeding decision-making. An array of professionals, such as physicians, nurses, and lactation consultants were specifically identified as critical resources of informational support. As noted in prior studies, many mothers and key informants acknowledged the critical influence of these professional roles in breastfeeding initiation during the pre and post-natal periods for African-American mothers.[11,18,34] Yet, it was evident that some professional interactions lacked the personal experience desired and necessary to fully engage mothers in breastfeeding initiation practices.

Consistent with the study published by Gee, this research confirms prior findings that some African-American mothers seeking support for breastfeeding may not receive adequate assistance from health care providers.[34] More specifically, the results indicate that breastfeeding and non-breastfeeding participants identified most (but not all) interactions with nurses as overwhelmingly favorable. Conversely, interactions with physicians and lactation consultants were perceived more negatively. Mothers re-counted numerous negative patient experiences, which included: closed-minded or absent physician discussions, hierarchical provider-patient discussions, inconsistent and culturally inappropriate nursing support, and unavailable or rushed lactation consultant support. Key informants were very prescriptive about the elements that significantly impact negative patient experiences and the connection between healthcare professionals and African-American mothers. Furthermore, they offered solutions to combat

these issues in an effort to positively influence initiation: removing hierarchical barriers in physician-patient interactions; creating consistent tailor-based, culturally relevant training for providers to work with African-American women; and training more lactation consultants of color or establishing culturally-appropriate training for non-African-American lactation consultants to address the overwhelming need within the African-American community. As prior literature has supported, enhanced healthcare provider knowledge is needed to ensure adequate breastfeeding information, education, and support for African-American mothers deciding to initiate breastfeeding.[19] This is critical based on the findings surrounding physicians and lactation consultants; however, this recommendation is also inclusive of nurses. Nurses must continue to seek out knowledge and training necessary to care consistently for African-American mothers desiring to initiate breastfeeding – and not abdicate this responsibility solely to physicians and lactation consultants.[59,60] Without intense focus on tailored training and education for healthcare providers with consistent delivery, national targets for breastfeeding initiation and duration will fail to be attained by mothers of the African-American community.

While other informational sources, such as prenatal clinics and social media were mentioned in dialogue, the most prominent alternative source of information beyond healthcare providers was WIC. WIC provided support for majority of breastfeeding and non-breastfeeding participants in this research. For many mothers, WIC was viewed as a positive and consistent source of breastfeeding information and support, particularly during the prenatal period. Key informants, however, verbalized skepticism consistent with findings in the literature regarding the WIC program. They identified concerns related to a lower incidence of breastfeeding initiation, the association of formula within the African-American community, and inconsistent programming and messaging for breastfeeding mothers. Prior literature by the CDC, Marshall

and colleagues, and Ma and Magnus similarly echoed these concerns related to positive initiation of breastfeeding in the presence of WIC enrollment.[18,19,42]

While WIC is a national program focused on safeguarding the health of low-income women and their children, the potential impact of this program on the state of breastfeeding initiation among African-American mothers bears mentioning. As the program has great potential to positively influence the state of breastfeeding initiation within this at-risk population, there is still debate regarding its effectiveness in promoting breastfeeding behavior in its current state. As shared within this research and the literature, WIC mothers are eligible to receive an array of benefits (food packages, electric pumps, bras/shields) and participate in educational programs (breastfeeding education and peer-counseling) that could dramatically enhance their breastfeeding knowledge and experience.[19] The key, however, is to ensure that these educational programs and resources are consistently provided to all enrolled mothers at the point of prenatal enrollment and during designated follow-ups. In addition, it may to be important to further examine the substantial subsidy of formula for women who choose not to breastfeed while enrolled in WIC and potential elimination of "dual breastfeeding and formula promotion".[19,61]

Key informants emphasized the importance of leveraging social media, technology, and web applications to educate African-American mothers and their surrounding community on the importance of initiating breastfeeding. This group believed that social media is the primary source of information for African-American women; therefore, they emphasized the need for organizations to think critically about culturally relevant methods and messages to "virtually" reach the African-American community. The thoughts of key informants did not deviate far from participants regarding this research or prior literature. Although sparsely mentioned in the literature review, Ware and colleagues mentioned the use of different kinds of media to reach

target populations.[6] This was also referenced in the Surgeon General's *Call to Action* and by Mattox in support of breastfeeding.[9,55] Similarly, breastfeeding and non-breastfeeding participants frequently referenced the use of internet sources, such as Google, and web applications. Their comments validated the strong beliefs of key informants regarding the imperative to further develop culturally relevant social media and technology accessible to African-American women via personal devices. The sentiments of mothers and key informants highlight the desire for "more out of the box" thinking through the Internet, Facebook, Twitter and other unconventional ways to reach African-American mothers and fathers about breastfeeding.[55]

Breastfeeding Intention

As identified by the research and prior literature, the issue of intention plays an important role in the final determination of breastfeeding initiation.[5,14,34] Supported by data from Spencer and Grassley, participants referenced positive attitudes about breastfeeding and prior exposure to breastfeeding/support as critically important in increasing breastfeeding intention among African-American mothers.[5] Mothers, as well as key informants, also acknowledged personal empowerment (referenced as prenatal confidence and self-efficacy in the literature) as another key element involved in increasing their intention to breastfeed.[5,14]

The critical importance of non-modifiable factors in the determination of breastfeeding intention, however, should not be disregarded in this discussion. This may be of great relevance when considering the comments of non-breastfeeding participants about breastfeeding intention and the impact of lower socio-economic status on infant-feeding beliefs. This may also help to explain multiple comments in this research indicating ambivalence or negativity towards initiating breastfeeding and promotion of early supplementation with formula. Prior research by Fischer and colleagues indicates that women of lower socio-economic status may have an

expectation of difficulty, creating a guarded, non-committed attitude towards breastfeeding initiation.[14] As such, it is important to recognize all of the elements that are essential in influencing positive breastfeeding intention. Efforts to increase exposure, support, and positivity about breastfeeding among African-American women will be invaluable in building foundational support that encourages initiation and increases intention early in the prenatal period. It would seem incumbent upon interventionists to also focus significantly on at-risk African-American women of lower socio-economic status given the profound data shared by Fisher and colleagues.

Barriers

Several common barriers of breastfeeding initiation among African-American mothers were identified as: competing priorities, pain, embarrassment of public exposure, and lack of support. These barriers were also identified frequently in the literature. Other barriers emerged in this research, however, were less prevalent in the literature, although present. Some of these included: convenience of breastfeeding, self-centeredness and independence, and aversion to breastfeeding.

The theme of competing priorities was identified as a significant barrier when discussing the initiation of breastfeeding. Participants stressed the impact of multiple demands and priorities when highlighting the additional responsibilities of children, work, lifestyle, and time. Mothers referred to breastfeeding as "time-consuming", often referencing the amount of time and energy needed to breastfeed and pump on demand. Key informants similarly echoed the concern of mothers in this study, stressing the importance of recognizing that other challenges exist beyond social and societal barriers in breastfeeding initiation.

These research findings are not unique to this study, as several articles in the literature have cited competing priorities as a significant barrier. In addition to children and lifestyle, discontinuing breastfeeding often occurs due to employment or school demands.[5-7,13,19]

According to Fischer and Olsen, return to work was one of the most frequently expressed barriers to breastfeeding and increased formula supplementation.[16] Additionally, Alexander and colleagues indicated that women who identified as low income often reported the need to return to work as one of the most common rationales for discontinuation of breastfeeding.[53] While all mothers highlighted competing priorities as a key barrier to breastfeeding, many non-breastfeeding mothers focused specifically on the principles of support and "staying at home" as a necessity to breastfeeding. These findings indicate the need for increased education and support to African-American mothers on methods to effectively breastfeed while not diminishing the importance of other activities critical to their personal lives. It would also be important to expose African-American mothers of various socio-economic and marital/family statuses to breastfeeding peers of similar circumstance in an effort to dispel invalid beliefs and perceptions.

Most participants in the breastfeeding and non-breastfeeding groups reported pain as another significant barrier of initiation. They described breastfeeding as painful and used descriptors such as discomfort, soreness, and hurting to discuss their personal experiences. In some circumstances, mothers reported that the anecdotal experiences of others' pain was powerful enough to deter them from attempting to initiate breastfeeding. These finding are consistent with prior studies, which identify pain and fear of pain as significant barriers to initiating breastfeeding among African-American women.[5,6,11,13,19] Some literature further indicates that the fear of pain associated with breastfeeding is reported by African-American women as one of the most common deterrents to breastfeeding.[53,56,62]

Although not a novel finding, this information regarding pain is of significant importance as it sheds light on the mismatch between knowledge versus action in this population. Despite African-American women having strong knowledge regarding the health benefits of

breastfeeding for their infants and their personal health, they lack great practical knowledge about breastfeeding and ways to manage pain challenges.[19] This absence is a leading cause of why African-American mothers choose not to breastfeed, despite knowing breastfeeding is best for their infant. Challenges with techniques (i.e. improper latch) and breastfeeding difficulties (i.e. management of engorgement) are also found to be deterrents or reasons why this population stops breastfeeding.[53,62] Many of these issues were highlighted by a few key informants who stressed the importance of: 1) discussing breastfeeding and what to expect when initiating, 2) reviewing techniques and practices, and 3) conducting anticipatory guidance in preparation for pain and discomfort with African-American mothers. Future focus on educational interventions with this population must have a dual focus on general information and benefits of breastfeeding coupled with practical knowledge for effective breastfeeding initiation and management. This will be critical to increasing initiation and influencing duration of breastfeeding behavior among African-American mothers.

Embarrassment related to public exposure while breastfeeding surfaced as an additional barrier for African-American women within this study. While non-breastfeeding participants primarily highlighted strong feelings of discomfort and self-consciousness related to feeding infants in public settings, some breastfeeding mothers also shared this sentiment. Prior literature validates this as a common barrier among black mothers, indicating that most African-American women report great reluctance to breastfeed in public or in front of others.[19]

Additionally, non-breastfeeding mothers described breastfeeding as an intimate experience, referencing the need for a private space (such as a bedroom) for seclusion or an act for "stay at home" mothers. These comments mildly emulate some of the stronger sentiments described or experiences in prior literature regarding public breastfeeding in African-American

mothers: women in low-income inner city neighborhoods being criticized by young men; perceptions of public disrespect and threatening behavior exhibited by those around these women who are publicly breastfeeding; and belief that breastfeeding in public attracts attention and may provoke rape.[6,19,61] This data sheds light on a significant cultural barrier faced by African-American women attempting to initiate breastfeeding. Without true cultural transformation of the community, African-American women will continue to report great reluctance to breastfeeding in public and in front of others.

The barrier of lack of knowledge and support of breastfeeding in the African-American community also has relevance to the issue of public breastfeeding raised by key informants and breastfeeding mothers. Key informants expressed great concern about the influence of the African-American cultural perspective on overall initiation, breastfeeding practices, and public breastfeeding. A grassroots advocate and key informant highlighted the critical need for a shift in culture, to transform the social norms of the African-American community and to highlight the relevance of breastfeeding for this population. Without this shift, she believed that the misperceptions of breastfeeding and the stigmas linked with breastfeeding behavior will never be dispelled within the minds of African-Americans. This will continue to have a profound impact on behavior, initiation rates, and health outcomes of African-American women and children. Literature by Kaufman echoes the concern regarding non-normalization and acceptance of breastfeeding practice among the African-American community, stating that women almost exclusively breastfed at home in private areas, isolating themselves from other family members and communal spaces".[61] These authors specifically highlighted that the realities of this practice make it difficult for women to integrate breastfeeding into their lives and often makes them feel ostracized among their own family and within their own space. Reeves and Woods-Giscombe

further emphasize this in literature by indicating that the lack of discussion about breastfeeding may contribute significantly to the inability to shift perceptions and intention within the community. In order to remove the barrier of lack of knowledge and support, the cultural perceptions and myths about breastfeeding among African-Americans must be debunked; the community must be educated; the behavior of breastfeeding must be normalized; and African-American women must be supported by their community.

Lack of information and education prenatally surfaced as the final barrier frequently mentioned by several mothers within this research. As mentioned in the informational sources section, mothers highlighted the desire for more informational support and education from physicians and lactation consultants. Mothers also recognized the prenatal clinic as a positive source of information during the prenatal period; however, they strongly emphasized the need for earlier and additional provider support. This is consistent with literature by Kaufman and colleagues, which highlighted that African-American women reported positive views of prenatal clinics and prenatal clinic nurses; however, reported clinic physicians and pediatricians as doing little or nothing consistently to promote breastfeeding.[61]

Mothers from both breastfeeding and non-breastfeeding groups expressed concern related to the "swarm" of post-delivery breastfeeding information, fearing that this approach is ineffective and too delayed to influence behavior within the African-American community. Overwhelmingly, participants emphasized that women may be more impressionable during the prenatal period while they are attempting to make informed decisions about their pregnancy. Key informants agreed with mothers concerning the need for earlier education for women during pregnancy. Some argued that educating earlier in the life course may also be a better option, introducing breastfeeding through the sex education curriculum and normalizing the behavior

early for young African-American women and men. This discussion sheds considerable light on the need for a focused educational approach by healthcare providers regarding breastfeeding information and education to support this population prenatally. This discussion should also raise into question the practice of formula distribution to African-American mothers prenatally by providers and its potential interference in advocating for breastfeeding as the best source of nutrition for African-American infants.

The value and importance of national policy in this discussion cannot be underestimated. Key informants primarily recognized national policy as a topic of critical concern, particularly when discussing maternity leave guidelines, detailed provisions of the Affordable Care Act (ACA), and reimbursement structures for breastfeeding support services. Informants believe that all of these elements, particularly our nation's lack of a paid maternity leave policy, has a direct influence on the willingness and perceived ability of African-American mothers to initiate breastfeeding. Several articles have also cited the importance of policies on breastfeeding initiation (and duration), including the Surgeon General's *Call to Action*.[9] The *Call to Action* supports the concerns of key informants stating that rates of initiation are higher among women who have longer maternity leaves and higher incomes. Reeves and Woods-Giscombe further validate these concerns indicating that low-income African-American women working in blue-collar industries may have difficulty incorporating breastfeeding practices into their daily routine due to their difficulty with negotiating hours, shifts, and leaves with employers.[19] Additionally, despite the ACA provision requiring employers to provide reasonable break time for mothers to pump in a private location (others than a restroom), this time remains unpaid for many mothers in this research population.[9] The compounded realities of an inadequate national paid time off policy, unclear and inadequate ACA provisions for workplace accommodations, and

reimbursement structures for support services increase the likelihood that mothers most at risk for not initiating breastfeeding are least likely to initiate the behavior. Maternal participant comments also highlighted the barriers related to return to work and lack of paid leave, despite the desire to initiate breastfeeding, due to the need to provide for their family. Improvements in national policy regarding maternity leaves and ACA workplace guidelines are essential in reducing the barriers and decreasing the disparities in breastfeeding initiation among African-American women.

Topics of aversion to breastfeeding, convenience of formula/bottle-feeding, self-centeredness/independence, and lack of access to equipment and resources surfaced as additional barriers to breastfeeding initiation. These issues were shared in discussion primarily by non-breastfeeding mothers and are similar to findings of a prior study conducted by Ware and colleagues. In their Memphis, Tennessee study, Ware and colleagues reported similar findings of laziness, lack of supplies, "it's nasty", and personal desires (i.e. drugs and partying) as barriers to breastfeeding among African-American participants.[6] While mothers in this research did not specifically reference negative behaviors of taking drugs or "partying", they relayed similar desires for personal time for self (i.e. "mommy time" or "to do me") independent of the needs and demands of their infant as deterrents to breastfeeding. Ware's findings support these factors as hindrances to breastfeeding initiation among African-American women, independent of location. Additionally, many of these topics continue to shed light on the critical nature of cultural influence and how non-normalization of breastfeeding behavior within the African-American community impacts perceptions of women and the macro-system surrounding them.

Facilitators

Mothers and key informants identified positive factors that influenced their decision to breastfeed, as well as general facilitators critical to breastfeeding initiation among African-

American mothers. These facilitators included: prior exposure to breastfeeding, engaged/involved fathers, peer support groups/peer counseling, and supportive family in the home environment. Some topics identified in discussion received inconsistent endorsement as a facilitator by mothers and key informants, however. The WIC program represented the most prominent example of this, receiving mixed perceptions about positive facilitation from mothers versus key informants. Most of the findings regarding positive facilitators of African-American maternal breastfeeding are consistent with prior research and have been recognized in the literature as critical elements of breastfeeding initiation.

Many breastfeeding mothers identified engaged/involved fathers as one of the most critical facilitators when discussing the topic of breastfeeding initiation in African-American mothers. Aligned with the commentary of key informants, mothers relayed the importance of getting African-American males involved early in the discussion, education, and decision-making due to their level of influence on feeding choices. Mothers also relayed a heightened sense of pride in the ability to breastfeed for their partners in cases where fathers wanted them to breastfeed. As some literature reports, the father's opinion about breastfeeding affects a woman's decision more than the opinion of other family members and peers. Therefore, ensuring that African-American fathers are participants in the prenatal breastfeeding education experience is necessary and powerful. Alexander and colleagues believe positive paternal attitudes have the potential to influence breastfeeding choices and shift rates of initiation significantly.[53] Maternal statements throughout this research, such as "if he's not with it, we're not with it" validates this sentiment and implores practitioners to ensure inclusion of fathers in early breastfeeding discussions. This will require a shift from our current practice which solely focuses on the needs

and desires of the mother, to a practice that engages fathers on their current knowledge, attitudes and beliefs, prior experiences, desires, and fears regarding breastfeeding.

Prior exposure and experience were also highlighted as positive facilitators in the decision to initiate breastfeeding. Several breastfeeding mothers recounted their personal encounters or the witnessing of others' breastfeeding as the motivation for initiation. Some also specifically discussed breastfeeding as being a natural instinct and wanting it for all of their children after a prior positive experience. Nommsen-River and colleagues discussed the power of prior exposure in the literature, highlighting its ability to increase confidence, comfort, and ability to successfully breastfeed.[57] Other literature also supports prior exposure as a facilitator, indicating that women who have observed family members breastfeeding or were breastfed as infants are more likely to breastfeed.[19,56]

As exposure and experience is a foundational premise for increasing desire and confidence to initiate, there is an imperative to expose more African-American women to other African-American women who are breastfeeding. Unfortunately, as previously shared, a negative historical legacy has created several generations of women who have not been exposed to breastfeeding practices.[55] This is where it becomes crucial to examine research that has explored interventions focused on exposing African-American populations to breastfeeding practices with positive initiation outcomes. Perhaps even more critical in this exploration is the implementation of interventions that are deemed effective among low-income African-American women.

Peer counselors and peer support, as discussed earlier, is another subject critically important in breastfeeding initiation.[5,31,39,44] This topic is highlighted as a significant facilitator by breastfeeding and non-breastfeeding mothers and key informants throughout discussion.

Mothers overwhelmingly voiced interest in more opportunity to convene and garner support from other African-American women with breastfeeding experiences "who have been down that road". It was made clear in focus group discussions that African-American women identified less with healthcare providers that lacked experiential knowledge and cultural insight into the African-American lifestyle. Key informants echoed these sentiments and shared that appropriate peer-to-peer support can negate the perceived barriers associated with the challenges of breastfeeding within a community. Green's literature also highlights this, sharing that peer support is most effective when mothers share similar sociocultural status and background.[63] These results indicate the need and desire for targeted peer counseling and support groups within the African-American community.

The peer counseling model has been noted in the literature to have a number of strengths and offers an attractive solution to the aforementioned needs of this target population. Given the known effectiveness of this intervention among African-American females, it is imperative to seek opportunities to expand and implement effective peer counseling models within communities. Throughout Pennsylvania, only 14 of the 24 WIC agencies have some version of a peer counseling program, predominately modeled after the *Loving Support Model* framework. In the county where this research occurred, Philadelphia County, a peer counseling model does currently exist. It is critical to mention, however, that no participants within the breastfeeding or non-breastfeeding groups could speak to involvement with peer counseling or peer counselors when asked about this resource explicitly during focus groups (91% of all mothers were WIC enrolled and served in Philadelphia County). It may be possible that mothers were unfamiliar with the term "peer counseling" when asked, despite the fact that each WIC-enrollee is

theoretically introduced to a breastfeeding counselor during their initial enrollment visit and 2 subsequent WIC follow-ups.

Currently, Philadelphia County WIC enrolls approximately 5,000 pregnant women, 2,200 breastfeeding mothers, and 5,900 non-breastfeeding post-partum mothers. These enrollees are spread among 11 Philadelphia County WIC sites, with peer counseling focused staff of: 4 breastfeeding peer counselors (3 who rotate among 3 sites each), 1 lactation educator, and 1 breastfeeding coordinator. Each site is also staffed with a nutrition manager, who is trained as a certified lactation consultant (CLC). Philadelphia County WIC offices currently operationalize an independent breastfeeding peer support program that was established in 1990 and does not utilize the *Loving Support Model* framework (or obtain the non-competitive grant funding associated with the model). And, although, key leaders of the Philadelphia County WIC agency shared many successes of their model, they identified the need for more consistent engagement, support, and personnel (including additional peer counselors) as vital to increasing breastfeeding knowledge and success among their population. Intense focus on raising awareness of peer counseling programming and resources among African-American mothers, ensuring adequate peer counseling programming across PA WIC offices, and facilitating consistent engagement in peer counseling beyond initial WIC enrollment are critical to narrowing the breastfeeding disparity gap. Opportunities for considerable improvement in these areas remain on both the local and state levels for the PA WIC program.

In contrast to the lack of knowledge and support within the community and home lies another positive facilitator for African-American mothers, supportive family environment. Breastfeeding mothers and key informants expressed great concern regarding the absence of support and stressed the influence of positivity in initiation and continuation. Although

mentioned in prior discussion regarding familial/network influence (i.e. paternal, matriarchal), the importance of positive family support within the home cannot be overstated. Gross and colleagues identified family support as an element critical in enabling mothers to initiate and breastfeed for six months or longer.[31] Reeves and Woods-Giscombe echoed the importance and overall effectiveness of support, stating that the availability and quality of social support for breastfeeding in new mothers can remarkably influence their decision to breastfeed.[19]

Based on the results of this research, African-American mothers are emphatically seeking more support within their homes (and communities). The ability of one's family to offer this support, however, relies significantly on knowledge and exposure to breastfeeding behavior. Efforts to expand services to educate and expose families, particularly matriarchs and partners, is critical to increasing acceptance and support of breastfeeding within the African-American home and community environment.

The WIC program resurfaced in this research as a positive facilitator of breastfeeding initiation for mothers. Despite the overwhelming skepticism offered by many key informants debating the program's positive contribution to breastfeeding practice, maternal participants recognized WIC as a supporter of breastfeeding practice. Participants' responses from breastfeeding and non-breastfeeding groups reflected an overwhelming recognition of WIC as a pro-breastfeeding entity, offering consistent informational support and a supportive breastfeeding environment among Philadelphia WIC offices. Maternal reports of positive WIC breastfeeding promotion and education in this research are also consistent with maternal accounts in the literature according to Murimi and colleagues and Kaufman and colleagues.[13,61]

Despite the commentary calling for WIC to be "blown up" by some critics in this research, key informants affiliated with the WIC program (at local and state levels) insisted that

WIC is becoming the bridge for mothers in the community beyond the hospital experience. These informants were adamant about WIC's positive support of breastfeeding and emphasized that the provision of formula to enrollees should not negate WIC's position as a breastfeeding supporter.

National and state WIC officials must recognize and own their responsibility in influencing and shaping a women's decision to initiate breastfeeding. As the primary or sole source of breastfeeding education among many low income African-American women, WIC plays a significant role in shaping attitudes and behaviors of this maternal community.[31] Positive influence through WIC programs can occur in African-American communities with 1) consistent education and promotion of breastfeeding during the prenatal period, 2) peer-counseling engagement beginning in the prenatal period, and 3) resource support for breastfeeding equipment (pump assistance). WIC also has the opportunity to increase their positive influence on breastfeeding initiation through examination of program practices regarding "dual breastfeeding and formula promotion", which is sometimes confusing to enrollees.[61]

Baby-Friendly Hospital influence and cost/convenience of breastfeeding were two additional topics that surfaced in discussion with key informants and breastfeeding participants. While the discussion of cost and convenience was far less profound, maternal and key informant accounts regarding the influence of a Baby-Friendly Hospital on breastfeeding behaviors garnered some attention. As mothers highlighted the environmental transformations away from pro-pacifier and pro-bottle to skin-to-skin and non-nutritive sucking in hospitals (not always referring to the formal term "baby-friendly), key informants specifically discussed the idea that "Baby-Friendly Hospital Initiatives" have increased initiation rates and maternal thoughts of

initiation in this population. Key informants also positively voiced the influence of this initiative on providers that may have previously shied away from discussions, particularly with African-American mothers.

As the literature has indicated, Baby-Friendly Hospital initiatives 1) have shown documented increases in initiation among minority populations and 2) can influence equalization of breastfeeding initiation rates across the U.S.[5,43] Grassroots advocates stressed that implementation of this initiative in hospitals serving at-risk, low-income African-American expectant mothers will be necessary. One key informant emphasized the need to be "laser-focused" on communities and hospitals that are highly-populated with African-American mothers and infants. This will require the attention and advocacy of grassroots community members in partnership with Pennsylvania and Philadelphia public health officials, healthcare providers, policy makers, and health institutions to ensure steps in this positive direction.

Discussion Conclusion

Results of this research indicate that there are a number of complex issues that influence the state of breastfeeding initiation among African-American mothers. These issues are vast, inclusive of: beliefs on culture and sexuality, familial and network influencers, informational sources, intentions, barriers, and facilitators. The ability to positively increase rates of breastfeeding initiation among this population will require focused strategies at various levels of the SEM to influence African-American mothers and the community surrounding them. Specific approaches and strategy development will be presented in the *Plan for Change* (Chapter 6) based upon the following broad recommendations from the research findings: 1) development of multi-level educational programming to meet the needs of expectant and post-partum mothers (individual), fathers, and grandmothers (interpersonal/community), and larger African-American community (community); 2) creation of peer counseling strategies that target African-American

mothers as the focus of education and support (individual); 3) integration of breastfeeding educational programming and materials in "sacred" locations within the African-American community (i.e. churches, barbershops, hair salons) (interpersonal and community); and 4) introduction of consistent approaches by healthcare providers regarding breastfeeding initiation for African-American mothers across Philadelphia and PA birthing hospitals (organizational). These strategies will require considerable investment by a large number of key stakeholders, including mothers and fellow members of the African-American community, to improve rates of breastfeeding initiation and increase duration among African-American mother-infant dyads.

Although policy changes were not highlighted as a specific area of focus, grassroots advocates and local officials must continue to advocate for changes in national policy focused on maternity leave, ACA, and reimbursement provisions. Current policy guidelines are likely to limit achievement of elevated breastfeeding initiation rates among African-American mothers despite successful implementation of strategies in the aforementioned areas of focus. The introduction of a paid, national maternity leave and well-defined, expanded ACA provisions would be invaluable in boosting rates of initiation and duration among African-American mothers in Philadelphia, PA, and throughout the U.S.

CHAPTER 6- PLAN FOR CHANGE

The findings of this research study suggest that achieving increased rates of breastfeeding initiation among African-American mothers will require a multi-level, comprehensive approach. This reinforces the premise of the Social Ecological Model (SEM), supporting the realization that the decision to initiate breastfeeding by African-American mothers is not solely determined by one level, the individual; but instead is contingent on multiple levels and factors external to the individual. Several other factors, including a mother's family, peer network, community, and health care organizations/providers play a critical role in the decision to initiate breastfeeding behavior. As such, this *Plan for Change* will propose a multi-level approach to address the current gaps in knowledge and behaviors critical to breastfeeding initiation existing in the community and among providers. It will also address the cultural misperceptions and deficits in knowledge existing among African-American mothers and the multiple individuals critical to influencing this behavior on the interpersonal level.

This multi-pronged strategy is designed with the goal of achieving increased rates of breastfeeding initiation among African-American women in the short term. The long-term goal is to achieve normalization of this behavior and increase breastfeeding duration among African-American women within the Philadelphia region, and within African-American communities over generations. This plan will utilize a targeted approach to introduce strategies to address the barriers (cultural and social) identified on multiple levels within the African-American community. As such, some of the suggested interventions have been introduced based upon evidence of prior effectiveness in health promotion activities within the African-American

community. The hope is that this plan will serve as the guide for achieving the shifts in cultural perception, acceptance, and knowledge necessary to attain these desired short and long term goals.

Plan for Change Development

The foundation for this proposed *Plan for Change* has been informed by literature focused on effective interventions among African-American mothers in breastfeeding initiation. Additionally, literature focused on facilitators and barriers, increasing health literacy, decreasing health disparities, and facilitating effective health education and promotion within the African-American community also informed this strategic plan. The plan takes into account the numerous insights and suggestions offered by mothers and key informants during focus groups and interviews conducted for this research, respectively. A causal loop diagram created from these groups and interviews further supported the development of the proposed interventions.

As discussed in Chapter 2, the SEM provided an ideal framework for the design of this research and *Plan for Change*. Due to its recognition that both the individual and environmental factors influence health behaviors of African-American mothers, the SEM was an appropriate framework for organizing the proposed multi-pronged strategy for relevance at multiple levels within the community. As emphasized by Golden and Earp, the levels of the SEM will help to organize the interventions that are crucial to influence behaviors and change perceptions of breastfeeding initiation necessary at the multiple levels within the African-American community.[48] This model will also assist in demonstrating the realities of the fluid interaction between the individual and environmental factors on various levels in the decision to initiate breastfeeding.

Four of the five SEM levels will be addressed through this *Plan for Change*: individual, interpersonal, community and organizational. The ultimate goal is to create change in

determinants, intentions, and behaviors by producing a synergistic effect through education and support of African-American mothers, while educating and influencing fathers, grandmothers, networks (peer and community), and health providers within the community.

Despite exclusion of the fifth level from the proposed strategy, public policy, multiple opportunities also exist for local, state, and national officials to address the gaps as identified in Chapter 5 surrounding regional and national policy.

Causal Loop Diagram

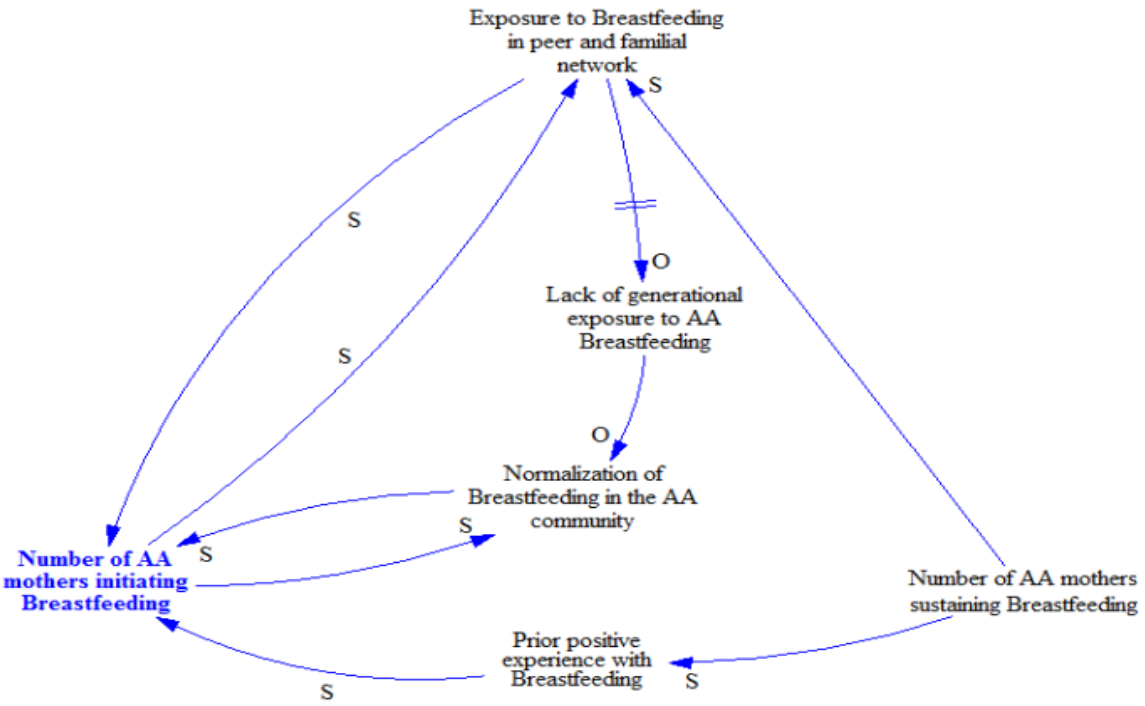
The creation of a causal loop diagram from the results of this research has assisted in the development of *Plan for Change* interventions. A causal loop diagram offers an effective tool for qualitative analysis of complex systems.[64,65] The diagram provides a visualization of how different variables in the system are inter-related and the connection of the relationships between multiple variables within the system. Causal loops offer a structure to assist in the interpretation of dynamics, cause and effect variables, directionality, and relationships that shape outcomes in breastfeeding initiation decisions.[64]

This causal loop diagram offers the opportunity to understand the impact of positive and negative influencers within the breastfeeding initiation decision through reinforcing and balancing loops. The reinforcing and balancing loops provide a visual depiction of the actions that support and contradict the cycle of breastfeeding initiation in African-American mothers. These loops indicate directionality, which helps to shape an explanation and determine exponential growth or collapse within the system. This ultimately causes a decrease or increase in the number of African-American women who initiate breastfeeding.[65]

Based upon the maternal focus groups and key informant interviews, sub-themes identified as most critical to influencing breastfeeding initiation among African-American mothers were organized to demonstrate the non-linear relationships within this system. This

causal loop diagram highlights the prioritized sub-themes and showcases the issues of most concern to mothers and key informants in the discussion of breastfeeding initiation among African-American mothers. The core of this diagram illustrates some critical components that are fundamental to normalizing breastfeeding and increasing initiation within the African-American community. *Exposure to breastfeeding in peer and familial networks* leads to *generational exposure of breastfeeding in African-American communities* creating *normalization of breastfeeding in the African-American community. Normalization of breastfeeding in the African-American community* leads to *an increase in the number of African-American mothers initiating breastfeeding.* As this cycle continues, the number of African-American mothers initiating breastfeeding and having prior experience/exposure with breastfeeding will increase, leading to positive change in African-American community cultural behaviors, beliefs/norms, and sustained breastfeeding. This feedback loop is demonstrated below in Figure 4.

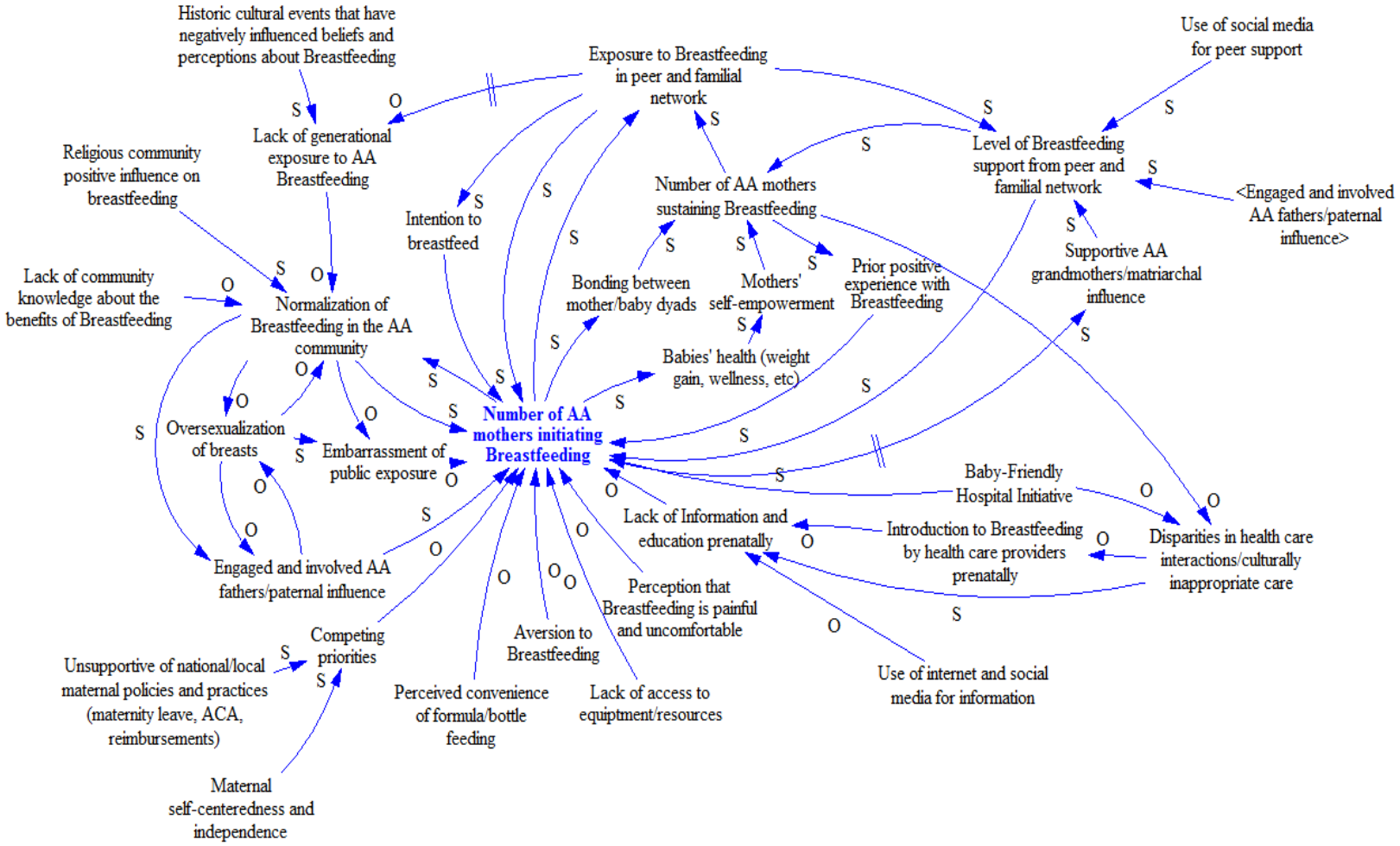
Figure 4. Central Relationships in Improving Breastfeeding Initiation among African-American Mothers



(***Note**: Arrows indicate that a change in the first variable leads to a change in the second variable when all else is equal. Arrows are labeled with "O"s and "S"s, to describe opposite directional movement and same directional movement, respectively. For example, increased exposure to breastfeeding in peer and familial network leads to a decreasing lack of generational exposure to African-American (AA) breastfeeding over time. Increased normalization of breastfeeding in the AA community leads to an increased number of AA mothers initiating breastfeeding.* ***O*** *= variables move in opposite direction;* ***S****=variables move in the same direction).*

These core components are at the center of a more detailed causal loop diagram (shown below in Figure 5), which illustrates the numerous non-linear, systemic relationships that exist within this issue. As the feedback loops show the role of each variable in supporting or obstructing breastfeeding initiation among African-American women, the necessity for targeted interventions on multiple layers of the system is reinforced.

Figure 5. Causal Loop Diagram of Improving Breastfeeding Initiation in African-American Mothers



(***Note**: *Arrows indicate that a change in the first variable leads to a change in the second variable when all else is equal. Arrows are labeled with "O"s and "S"s, to describe opposite directional movement and same directional movement, respectively. For example, increased exposure to breastfeeding in peer and familial network leads to a decreasing lack of generational exposure to AA breastfeeding over time. Increased normalization of breastfeeding in the AA community leads to an increased number of AA mothers initiating breastfeeding.* ***O*** *= variables move in opposite direction;* ***S****=variables move in the same direction).*

Plan for Change Strategies

The proposed *Plan for Change* is comprised of four major strategies focused on various layers critical in the decision to initiate breastfeeding: 1) Implementation or enhancement of state-wide peer counseling programs through standard adoption of the *Loving Support Model* across all PA WIC agencies and satellite offices (individual level); 2) Creation and deployment of breastfeeding health promotion programs in trusted, non-traditional cultural institutions of the African-American community (interpersonal and community level); 3) Engagement of African-American faith-based leaders in breastfeeding promotion and community education efforts (community level); and 4) Adoption and implementation of tailored healthcare provider training among obstetrical and community health professionals (organizational level).

Strategy 1: Individual (African-American Mothers)

Implementation or enhancement of state-wide peer counseling programs through standard adoption of the Loving Support Model as a framework across twenty-four local WIC agencies and satellite offices throughout PA.

In 2004, the Food and Nutrition Service (FNS) introduced a national peer counseling initiative specifically for WIC entitled *Using Loving Support to Implement Best Practices in Peer Counseling*.[66] This program was implemented due to recognition that peer counseling was one intervention that has shown effective progress in breastfeeding initiation and duration through positive impact on maternal knowledge, confidence, and support against microsystems (i.e. family) and exosystem (i.e. employers and healthcare system) challenges.[31,38]

The goal of the *Loving Support Model* framework was to develop new or enhance existing peer counseling programs to achieve the aforementioned improvements and increase rates of initiation and duration among WIC participants.[28] Early assessments in support of this program development recognized many issues plaguing the successful implementation of peer

counseling programs. Although many peer counseling programs had been initiated nationally prior to the introduction of the *Loving Support Model*, several programs had been largely unsuccessful due to: lack of consistent, sufficient, and/or specific funding; minimal state support and guidance; insufficient resources for peer counseling program initiation; lack of a consistent WIC program peer counseling model; lack of a standardized training model; sparse educational materials; and a lack of support for field staff.[67] The *Loving Support Model* grant funding helps to address some of these issues; however, the required program components and extensive written guidance to local agencies from states help to maximize the effectiveness of peer counselors for WIC participants. Some of these components offering tremendous guidance for peer counseling program success include: prescribed qualifications and roles/responsibilities of peer counselors; necessary documentation by peer counselors; direction regarding types of contact (i.e. telephonic, in-person), timing, and frequency of peer counseling with program participants; timing of first contact with pregnant women or new mothers; and setting where and when peer counseling should occur.[66] Although agencies may not have all 17 areas of guidance implemented, 90% of all states reported guidance on 11 or more of the suggested 17 areas for program implementation in the 2010 Implementation Report.[66]

Training is also offered as a fundamental component of the *Loving Support Model*, with standard curricula for peer counselors and program managers focused on current science in breastfeeding management and best practices. *Loving Support Model* training and facilitator materials detail the core competencies and learning objectives for 14 sections, with handouts, activities, facilitator notes, presentation platforms, and equipment needs explicitly outlined. Training modules for peer counselors include: The WIC Peer Counseling Program, Counseling and Communication Skills, Getting Started with Breastfeeding, and Talking with Mothers about

Breastfeeding.[68] A 2010 Implementation Report of the *Loving Support Model* indicated positive outcomes of the peer counseling model based on a small sub-set of local agencies that reported outcome results. Breastfeeding outcome data for surveyed program participants in 2010 indicated that: approximately 76% initiated breastfeeding; 48% breastfed exclusively at one month post-partum; 32% exclusively breastfed at 3 months post-partum; 23% exclusively breastfeed for 6 months postpartum; and 30% breastfed for six months or more postpartum.[66] As these 2010 data indicate positive outcomes 6 years post-implementation and current breastfeeding initiation rates remain considerably lower (almost 20%) among WIC-enrolled participants compared to non-WIC enrolled ineligible participants, the *Loving Support Model* framework must be implemented across all WIC agencies to address the many aforementioned issues.[1]

Within the U.S and PA respectively, 451,325 Black/African-American U.S. women (20.5% of 2,199,461 U.S. WIC-enrolled women in 2014) and 15,456 Black/African-American PA women (of 59,901 PA WIC-enrolled women in 2012) are impacted by the absence or lack of consistent implementation of WIC peer counseling programs.[30,69] The Pennsylvania State Breastfeeding Coordinator recognized a lack of network support as one of the most influential barriers and verbalized the critical importance of reviving and resurrecting peer counseling and network support programs in WIC and PA hospital-based settings. Additionally, she cited the need for increased provision of programming due to its key role in influencing breastfeeding decision-making among African-American women. Despite this recognition and reported positive outcome of peer counseling programs in the literature and metrics, the state coordinator shared that only 58% (14 of 24) PA WIC agencies have active peer counseling programs. This reality leaves many WIC agencies and satellite offices without current programming for pregnant

and post-partum women. Even among WIC agencies that have implemented peer counseling programs across Philadelphia and Pennsylvania, tremendous opportunities exist due to statewide program variation and implementation.[66]

The implementation or enhancement of current peer counseling programs through standard adoption of the *Loving Support Model* framework offers a viable solution for state-wide implementation. Consistent adoption would ensure peer counseling programming across the 24 WIC local agencies, while enhancing established programs through provision of non-competitive grant funding, standard science-based educational and training materials, and state standards for program implementation, benchmarking, and outcomes measurement. While some may argue that requiring the implementation of the *Loving Care Model* framework across the state may eliminate innovation and independence among agencies (although the guidelines are fairly broad), focus should be directed towards what could be gained through adoption of the model.

Funding support leads the list when considering the positives of participation in the FNS program. As inconsistent funding streams have been noted as a historic barrier to implementing and sustaining quality peer counseling programs and personnel, the presence of national funding through the federal government two year grants for the *Loving Support Model* offers tremendous support to overcome this barrier. Since 2004, national support of peer counseling has grown tremendously in size and funding supporting such programming. In FY 2010, the Agriculture Appropriations Act (Public Law 111-80, 111th Congress) increased funding from $15 to $80 million annually for the WIC *Loving Support* peer counseling, spanning funding for 51 states and the District of Columbia.[66] Most recently in FY 2015, $60 million of WIC's $6.623 billion dollar budget was designated specifically for breastfeeding counselors. Several agencies, including local DC WIC, highlighted FNS funds through the *Loving Support Model* and its influence on

the expansion of the peer counseling program of 15 years. Other *Loving Support Model* peer counseling programs in the 2010 Implementation Report reinforced the importance of the grant funding and tools offered, sharing that original peer counseling programs were more informal, offered less training, and less structure and services.[66] While it is recognized that grant funding is often accompanied with a great amount of "red tape", "bureaucracy" and reporting requirements, federal funds have been credited with the onboarding of additional breastfeeding peer counselors, expansion of peer counselor services and hours to clients, provision of increased training for counselors, and agency policy changes.

Secondary to funding, numerous resources outlined for the *Loving Support Model*, including instructional tools, social media materials, and curriculum, ensure a consistent foundation for adequate program support for state officials and local program managers, peer counselors, and WIC clients. Lastly, the *Loving Support Model* framework offers the opportunity to standardize the metrics measuring outcomes data among statewide WIC agencies. As indicated in the 2014 WIC Breastfeeding Peer Counseling Study Phase II Implementation Report, over 90% of the local agencies surveyed collected information on program implementation data.[70] Commonly monitored data included: capacity (overall WIC participants served), number of pregnant and postpartum WIC participants in program, type of peer counseling received and duration of peer counseling services, frequency of peer counseling, and demographic information. Universal data collection and monitoring guidelines by states offer a tremendous opportunity for PA to evaluate program effectiveness by agency throughout PA and other states. It also offers across the board objective data to recognize progress and "best practices" among local agencies to partner with newly developing or floundering programs for mentorship.

The implementation of the *Loving Support Model* framework across PA WIC agencies would represent a step towards ensuring that all African-American, WIC-enrolled mothers are consistently introduced and engaged in this source of unquestionable, positive support for breastfeeding initiation. Ideally, this exposure would begin as a compulsory introduction during the first trimester of pregnancy (consistently structured during enrollment) with continuation through at least the 4th postpartum week. Grant funding would serve as an important resource for increasing prenatal and postnatal education and support across state WIC programs, inclusive of telephonic counseling contact and group breastfeeding class instruction. The goal is that early, consistent peer breastfeeding support during the prenatal period will address maternal concerns of the breastfeeding barrage that occurs during the late prenatal and early post-partum period. It would also ensure continuous support during the first challenging weeks of post-partum initiation and life integration. Additional enhancements to peer counseling programming after initial adoption should focus on socio-cultural and background alignment of peer counselors with WIC mothers. This offers a tremendous opportunity to maximize effectiveness of this strategic implementation and should be a top priority for regions heavily populated by African-American women, such as Philadelphia County.

Ultimately, the goal of this peer counseling strategy is to: 1) establish a state-wide system that will provide consistent support for enrollment, engagement, and programming to African-American mothers making decisions about or initiating breastfeeding; 2) increase maternal knowledge and understanding about breastfeeding initiation, benefits, and facilitators/barriers through science-based instruction of peer counselors; 3) assist mothers in identifying community-based agencies, professionals, and resources that support breastfeeding; 4) provide instruction, encouragement and support for effective management of breastfeeding early in the

prenatal period through immediate post-natal period; 5) build a network of breastfeeding support to listen and provide experientially-based advice for African-American mothers within the community through various telephonic and classroom encounters; and 6) provide a method for consistent monitoring, measurement, and mentorship of breastfeeding peer counseling programs among local Philadelphia and PA WIC agencies.

In an effort to achieve these goals, it is critical that the PA state breastfeeding coordinator leads the way in elevating the importance of this peer counseling model across PA WIC agencies and makes this a top priority. While it does not require a 100% cookie cutter approach, it will take tremendous commitment of all state and local coordinators, administrators, and staff to adopt the philosophy and framework of the *Loving Support Model* to improve the current state of peer counseling in PA for WIC-enrolled women.

Future opportunities for increasing WIC peer counseling may also exist through raising awareness and political support around the known financial expenditures by WIC nationally on formula use compared to breastfeeding initiatives. These expenditures are approximately 25 fold with a spending rate of $850 million on formula versus $34 million on breastfeeding support initiatives.[27] Securing additional funding could help support additional peer counseling programming for minority communities, such as *Community Transformers*. *Community Transformers* is a tailor-based training offered through Reaching Our Sisters Everywhere (R.O.S.E.).[71] This evidenced-based curriculum and training for peer professional breastfeeding supporters would offer Philadelphia County and other PA WIC agencies an additional level of training and access to resources to initiate targeted breastfeeding support through the development of breastfeeding clubs (support groups) and community-based outreach events (a.k.a kindred settings) in African-American communities.[71]

Due to the known positive impact of peer counseling, an effort to spread programming beyond WIC-enrolled, African-American mothers within Philadelphia County and PA communities must also be a priority. Opportunities to create additional peer counseling programs may be achieved through hospital-based maternity clinic, pediatric primary care, and other community health peer counseling programming and partnerships. Health care leaders, community-based site administrators, and local and state public health officials can seek program grants and resource support from national agencies, such as the Centers for Disease Control and Prevention (CDC) and AAP for program development. Through agencies such as the CDC, researchers affiliated with the Associations of Schools of Public Health and Association of American Medical Colleges can support funding, implementation, and evaluation of breastfeeding peer counseling programs in Philadelphia County and Pennsylvania African-American communities.[72]

Strategy 2: Interpersonal and Community (Fathers, Grandmothers, and the African-American Community)

Creation and deployment of breastfeeding health promotion (education) programs in trusted non-traditional, cultural institutions of the African-American community (i.e. barbershops and beauty salons).

As prior research findings, focus groups with African-American mothers, and interviews with key informants suggest fathers, grandmothers, and the community network significantly influence final breastfeeding decisions. As such, an effective strategy must be created within an appropriate setting to introduce education and transform the perceptions, beliefs, and actions of African-American adult men and women about breastfeeding. Within Philadelphia and across the nation, a number of health promotion programs focused on a range of health issues (i.e. asthma, diabetes, cancer, sexual health, smoking, and nutrition) have successfully influenced

positive change in the African-American community when partnered with barbershops and beauty salons.[73] The acceptance of health information in these two environments has been attributed to the recognition of these establishments as historically trusted cultural institutions and contextually appropriate settings to receive health promotion messages.[73,74] With these documented reports of success and cultural acceptance (particularly among African-American men), this approach offers an ideal way to reach men and women for breastfeeding education.

A breastfeeding education program must be created and deployed in African-American barbershops and beauty salon sites within Pennsylvania (with specific focus on those located in Philadelphia County) to debunk the myths, cultural misperceptions, and knowledge deficits that wrongly influence men and women within this community. The goal of this education strategy will be to: 1) highlight the historical relevance of breastfeeding within the African-American culture and clarify misperceptions, 2) emphasize the benefits of breastfeeding for African-American infants and mothers, and 3) promote the importance and methods of supporting breastfeeding among partners and daughters within the African-American community to increase health benefits and bonding. Current national campaigns, national reports, and grass-root advocacy groups should serve as key resources for curriculum development and creating social marketing and media materials for this target audience. These resources should include (but not be limited to): *It's Only Natural – Mother's Love. Mothers Milk (*national campaign focused on breastfeeding in African-American women); *Surgeon Generals' Call to Action to Support Breastfeeding; Fathers Support Breastfeeding* (national Food and Nutrition Service project targeting African-American males and breastfeeding*); and Black Mothers Breastfeeding Association and Reaching Our Sisters Everywhere (i.e. Daddy Duty)* literature. Resources

highlighting the role of family and support persons in breastfeeding, such as *Ten Steps for Partners/Families to help with Pumping*, should also be included in this effort.[75]

The establishment of collaborative partnerships with African-American business owners in the Philadelphia community will be critical for effective implementation. These relationships are crucial to informing and promoting this health education strategy created to target "hard-to reach, historically underserved populations" in their own language and environment.[73] It will also be important to engage researchers from the Philadelphia region who have implemented similar health promotion interventions, such as Dr. Loretta Sweet Jemmot and Dr. Bridgette Brawner, to identify key stakeholders (i.e. shop owners, barbers/stylists) who have shown prior interest and engaged in health promotion partnerships within the African-American community.

Strategy 3: Community

Engagement of African-American faith-based leaders in breastfeeding promotion efforts to spread knowledge and education among congregants and African-American communities.

For centuries, African-American faith-based organizations have been at the core of supporting and addressing issues disproportionately affecting members of its community. These issues have been numerous, ranging from struggles of social justice to serving as a conduit for services to disseminating information.[76] In recent years, faith-based organizations have been recognized for their effective establishment of partnerships concerning issues of health in multiple cities, with particular focus on the reduction of transmission of HIV/AIDs among African-Americans.[76] Successful engagement of African-American faith-based leaders in the development of community and congregant educational programs focused on HIV/AIDs include (but are not limited to) YOUR Blessed Health (Flint, Michigan) and The Beautiful Gate Outreach Center (Wilmington, DE).

The adoption of a strategy to engage Philadelphia African-American faith-based organizations in breastfeeding promotion offers a unique approach to spread knowledge and education to the African-American community. As faith-based organizations such as churches and mosques are seen as trusted institutions among their members, congregants are more willing to listen and adopt breastfeeding practices and norms introduced by faith-based leaders and their religious doctrine.[76] Additionally, this approach offers a unique method to reach young African-American girls and boys about the topic of breastfeeding before child-bearing ages. This premise is based upon the idea that African-Americans are more trusting of religious institutions and the delivery of sensitive issues in a way that is consistent with their own personal and community beliefs.[76]

This approach will allow for the transformation of beliefs and perceptions across the age continuum while promoting the practice of breastfeeding as normal, acceptable, and positive according to biblical and religious doctrine. The goal of this faith-based intervention should focus on: 1) increasing knowledge and education of breastfeeding practices within African-American religious institutions and the community through trainings, workshops, and breastfeeding peer support groups; 2) increasing capacity and interest in grassroots advocacy efforts to raise awareness about the breastfeeding disparity among African-American women; 3) increasing support, access, and resources for expectant and post-partum African-American mothers and infants desiring or initiating breastfeeding; and 4) re-establishing breastfeeding as a normalized behavior within African-American religious institutions and the community. As shown throughout history, the African-American church and other faith-based organizations have always reached beyond the "bricks and mortars" of their buildings and congregations to ignite passion in the community about social injustices, community issues, and epidemics

infecting/affecting the black community. In order to achieve an increase in initiation among African-American mothers and influence the breastfeeding continuum (i.e. duration and exclusivity), faith-based leaders and congregants must work collectively to promote the positive message of breastfeeding initiation and disseminate this into their communities through programming and outreach.

Within the city of Philadelphia and Tri-State region, a number of key faith-based organizational partners should be engaged in the development and deployment of this intervention. Some partners include (but are not limited to): Black Clergy of Philadelphia and Vicinity, Inc., African-Methodist Episcopal Ministerial Alliance of Philadelphia, Harrisburg & Vicinity, African-American Interdenominational Ministry, Inc., Enon Tabernacle Baptist, and Sharon Baptist Church. The Wafa House, Inc. and Islamic Society of North America (ISNA) should also be engaged to ensure inclusion of the Muslim community. It will also be critical to seek the guidance of other religious leaders, such as Pastors Alyn Waller and Marshall Mitchell, Bishop Keith Reed and local Imams of various mosques, who have had extensive experience in engaging the Philadelphian Christian and Muslim communities around issues infecting and affecting African-American men, women, and children.

Strategy 4: Organizational (Healthcare Professionals)

Adoption, implementation, and standardized utilization of R.O.S.E.'s tailored Healthcare Provider training and/or the American Academy of Pediatrics' EPIC BEST (Breastfeeding Education, Support, and Training) for obstetrical and community health medical professionals of the Philadelphia Multi-Hospital Task Force, Keystone 10, Annual Breast Milk Assembly, and Philadelphia hospital-based prenatal clinics serving African-American mothers.

The results of this study confirm the critical importance of knowledgeable, culturally-trained health care professionals when engaging in breastfeeding initiation discussions with African-American mothers. Despite professional and medical training, African-American mothers overwhelmingly reported a significant number of challenges when communicating with healthcare professionals regarding breastfeeding initiation or the general breastfeeding experience. Many of the accounts highlighted by mothers and key informants strongly support the introduction of a tailor-based approach to guide breastfeeding discussions with African-American mothers and members of their families.

The Atlanta-based breastfeeding organization, Reaching Our Sisters Everywhere (R.O.S.E), has designed a training tailored specifically for supporting healthcare providers working within underserved communities and families of color.[71] Deployed in the U.S. among regions with some of the highest health disparities within the nation, such as Mississippi, Alabama, and Louisiana, this training is focused on transforming the practice and approaches of physicians, nurse midwives, nurses, lactation consultants and other professionals. Additionally, the American Academy of Pediatrics has implemented a state-wide education program for health providers, EPIC BEST, focused on promoting breastfeeding initiation and exclusivity.[77] This curriculum focuses on topics critical to provider-based care, such as the misconceptions of healthcare professionals that create barriers to breastfeeding initiation and developing practices that support breastfeeding.[77] The PA Chapter of American Academy of Pediatrics recognizes the critical importance of this program and currently assumes the funding and on-site administration of the curriculum at private practices, hospital grand rounds, monthly meetings, and staff meetings.

The content and materials developed by R.O.S.E. may need to be adapted or modified following an initial assessment to address some of the socio-cultural, temporal, economic, and education demographics, norms/behaviors and beliefs of mothers, families, and providers within the Philadelphia and Pennsylvania region, as compared to variations in the Deep South. Despite the need for minor adjustments, R.O.S.E's tailor-based training will address one of the core concerns raised by African-American mothers participating in this research - the imperative for providers to consider families and mothers as partners and not recipients of care.[71] Mastery of this concept by health professionals, particularly physicians, is critical in shifting the hierarchical dynamic often described by African-American mothers as demeaning and demoralizing.

Both of these programs offer a significant opportunity for transforming the experience of African-American mothers within the Philadelphia community. By focusing on healthcare provider development, the goal is for these mothers to experience care that adequately supports: 1) culturally appropriate breastfeeding educational material and informational discussions with all health care professionals; 2) consistency in pre- and postnatal breastfeeding discussions in offices and hospitals despite race/ethnicity; 3) consistent hands-on supportive care and involvement during pre and postnatal periods by providers; and 4) two-way partner dialogue with health care providers focused on success in breastfeeding (avoiding promotion of formula and bottle feeding).

Table 9. Strategies for Increasing African-American Breastfeeding Initiation

SEM Domain	Target Audience	Research Findings	"Plan for Change" Recommendation	Initial Steps for Introducing "Plan for Change" Strategies
Individual	African-American mothers in the Philadelphia and surrounding regions in Pennsylvania	African-American mothers desire more knowledge and support within the African-American community. Inexperienced AA mothers desired this particularly from other African-American mothers with breastfeeding experiences. The lack of network (peer) and familial support creates profound social barriers related to adopting breastfeeding behaviors. Peer counseling offers an attractive solution to confront this barrier.	-Implement or enhance state-wide peer counseling programs through standard adoption of the *Loving Support Model* framework across 24 agencies serving the Philadelphia county and Pennsylvania state region. -Utilize non-competitive grant funding to increase peer counseling program support (i.e. increase number of counselors, expand hours and services, increased training). - Provide consistent foundation for adequate program support (educational/instructional tools, curriculum, practice parameters, and management support). -Focus on standardized metrics to measure outcomes data and progress across state agencies; determine best practices and develop mentoring relationships.	-Raise awareness and establish a sense of urgency by sharing the results of research findings at the PA State Coordinator quarterly meeting and annual breastfeeding workshop. -Engage state coordinator and agency coordinators in discussion regarding key opportunities based upon perceptions of AA mothers in Philadelphia county, national key informants, and prior research. -Discuss and encourage strategies to standardize peer counseling program through *Loving Support Model* framework, pairing local agencies without programming with those with the peer counseling framework to provide a supportive and collaborative statewide team environment.

SEM Domain	Target Audience	Research Findings	"Plan for Change" Recommendation	Initial Steps for Introducing "Plan for Change" Strategies
Interpersonal/ Community	African-American fathers, grand-mothers, and community networks in the Philadelphia region	African-American fathers, grandmothers, and community networks are strong influencers of final breastfeeding initiation decisions among mothers. Due to prevalent negative perspectives and comments by men and women to AA expectant mothers, it is important to educate these groups about the importance of breastfeeding for maternal and infant health, change their misperceptions, and increase acceptance of this behavior.	-Create and deploy health promotion programs in non-traditional AA cultural institutions, such as barbershops and beauty salons. -Develop curriculum/ social marketing materials focused on debunking cultural myths, clarifying misperceptions, increasing knowledge, and promoting importance of breastfeeding support. -Establish collaborative partnerships with African-American business owners and stylists as key stakeholders in implementing strategy.	-Identify key stakeholders (i.e. owners, barbers, hair stylists) with prior interest and engagement in other Philadelphia health promotion initiatives (through support of nurse and public health colleagues). -Engage each group of stakeholders separately to discuss this issue facing the African-American community and findings from research data. Discuss strategy and identify initial barriers to effective implementation. -Engage a group of barber and beauty salon clients to assess their thoughts, concerns, ideas regarding participation in this type of health promotion within salon/barbershop settings. -Determine which barbers and stylists would be best to facilitate pilot sessions and communicate health education to empower clients/community members to adopt and model new perceptions about breastfeeding.
Community	Philadelphia African-American community at large	The African-American community demonstrates low and inadequate levels of support for African-American mothers initiating breastfeeding. This is due to a significant lack of knowledge and education about breastfeeding behavior, over-sexualization of African-American women, the perceived sexual act of breastfeeding, and non-	-Engage faith-based leaders in partnerships to promote breastfeeding behavior and initiation. -Establish educational programs, support groups, and grassroots advocacy efforts in faith-based institutions/ congregations to raise awareness, increase support and access, and normalize behavior for African-	-Identify and engage key health ministry leaders at each faith-based organization. Request to include relevant community-based partners in discussion. -Outline the severity of the current breastfeeding crisis in the African-American community and the long-term health implications for African-American infants/children. -Share data from the CDC and Healthy People 2020 re: vision and future state if breastfeeding initiation, duration, and exclusivity can be achieved. -Offer to provide services at wellness fairs; family ministry groups; and community outreach events as initial

SEM Domain	Target Audience	Research Findings	"Plan for Change" Recommendation	Initial Steps for Introducing "Plan for Change" Strategies
		normalization of breastfeeding behavior within the community. The African-American community at-large must be engaged and educated to dismiss misperceptions of breastfeeding and normalize the act as an acceptable and desired practice within the community.	American women and communities. -Partner with key Philadelphia faith-based leaders (i.e. Pastors Waller, Mitchell, Reed) and organizations (i.e. Black Clergy of Philadelphia and Vicinity, Inc., AME Ministerial Alliance of Philadelphia, African-American Inter-denominational Ministry, Inc., the Wafa House, Inc. and Islamic Society of North America (ISNA) etc.) to catalyze movement and raise awareness within African-American Christian and Muslim communities.	steps in developing multiple strategies to promote health behavior and communicate vision of increasing initiation.
Organizational	Pre and postnatal obstetrical/ community medical professionals serving African-American mothers in the Philadelphia region	Healthcare professionals are identified as critical resources of informational support regarding breastfeeding initiation. African-American mothers and key informants have identified a need for increased provider knowledge and enhanced training to ensure culturally-appropriate, unbiased, consistent care in breastfeeding for African-American	-Adopt, implement, and standardize the use of *R.O.S.E.*'s tailor-based Healthcare Provider training among medical providers treating African-American mothers in Philadelphia birthing hospitals and prenatal clinics. -Introduce AAP's EPIC BEST education into healthcare provider curriculum.	-Identify key leaders (i.e. physicians, nurses, lactation consultants) of Philadelphia Multi-Hospital Task Force, Keystone 10 and Maternity Care Coalition (through support of Dr. Diane Spatz) to present research findings at local venue/conference and Annual Breast Milk Assembly. -Engage providers using data-driven approaches to highlight current rates of breastfeeding and disparities and the long-term health implications for African-American infants. Also, present research findings regarding the perceptions of key informants and African-American mothers about breastfeeding interactions with physicians, nurses, and lactation consultants, and the absence of culturally-sensitive/timely breastfeeding care.

SEM Domain	Target Audience	Research Findings	"Plan for Change" Recommendation	Initial Steps for Introducing "Plan for Change" Strategies
		mothers pre and postnatally.	-Integrate two educational programs to ensure cultural appropriate breastfeeding education and discussions, consistency among African-American mothers, and supportive provider hands-on care and dialogue	-Implore leaders from the Maternity Care Coalition, Multi-Hospital Task Force, and Keystone 10 to implement a strategy to take action to transform the challenges presented and experienced by AA mothers in Philadelphia. -Explore, adopt, and implement the R.O.S.E tailor-based healthcare training as a group goal in FY 18. Introduce key R.O.S.E. leaders if desired. -Present information to the groups about PA Chapter AAP EPIC BEST trainings. Encourage multi-disciplinary partners to schedule grand rounds, staff meeting, or practice presentations as an FY 17 goal.

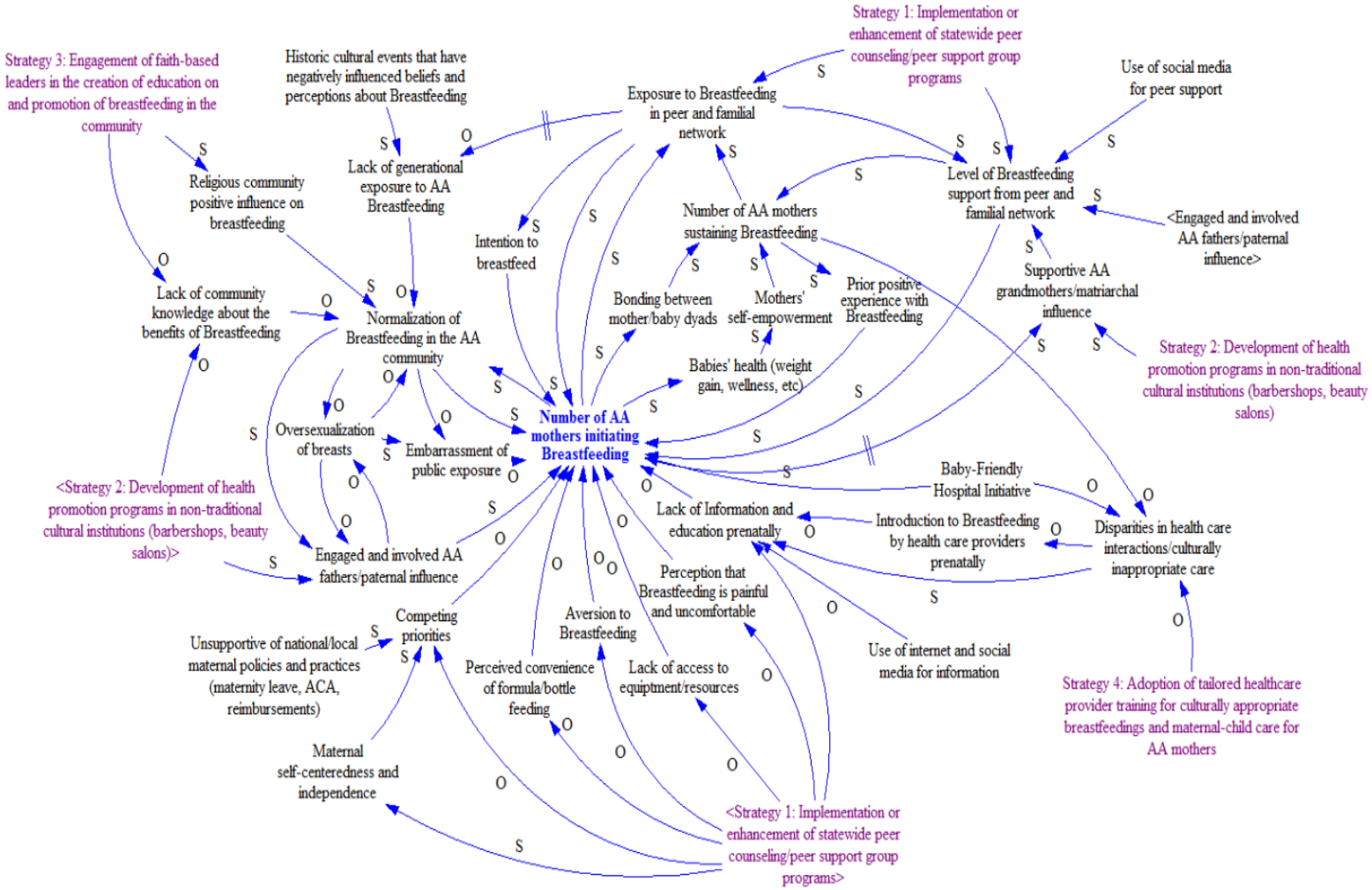
While the combination of proposed strategies offers tremendous promise towards transforming the current state of breastfeeding among African-American mothers, the implementation of each individual strategy is crucial to making incremental progress. As identified in Table 9, each strategy will utilize various steps to introduce the key elements necessary for change, including: 1) raising awareness to establish urgency among PA State breastfeeding coordinator and 24 agency coordinators; 2) identifying key stakeholders (i.e. owners, barbers, and stylists) with prior interest and engagement in other Philadelphia health promotion initiatives through nursing and public health colleagues; 3) identifying and engaging key health ministry leaders at each faith-based organization of interest to share the severity of the breastfeeding disparity crisis in the African-American community; and 4) utilizing data-driven approach with identified leaders of Philadelphia Multi-Hospital Task Force, Keystone 10, and Human Milk Assembly to establish urgency and implore action for tailor-based healthcare training. These identified steps introduce the initial phases of action necessary for implementation of each strategy; however, successful implementation of each will require long-term focus through multiple phases and years to achieve sustained progress in initiation and improve duration.[78]

Integration of Causal Loop Diagram with Plan for Change Interventions

Effective implementation of this four-pronged strategy presents a compelling start to address several factors in the feedback loops of the original causal loop diagram. Figure 6 highlights the four strategies (in purple) and illustrates the relational sub-themes targeted by each intervention. Some strategies, as highlighted by the diagram, have been deemed effective in addressing several sub-themes and are represented more than once (in brackets). Overall, this illustration demonstrates the relationship between each introduced strategy and the sub-themes that could be impacted by implementation. The goal of each strategy is to positively influence

any relationship in this feedback loop obstructing breastfeeding initiation among African-American mothers and increase capacity, understanding, and support for this behavior within the community. As the relationships and systems within this loop strengthen from sustained implementation of strategies, positive change will result in increased breastfeeding initiation among African-American mothers.

Figure 6. Causal Loop Diagram of Improving Breastfeeding Initiation in African-American Mothers with Multi-Level Interventions



(**Note*: *Arrows indicate that a change in the first variable lead to a change in the second variable when all else is equal. Arrows are labeled with "O"s and "S"s, to describe opposite directional movement and same directional movement, respectively. For example, increased exposure to breastfeeding in peer and familial network leads to a decreasing lack of generational exposure to AA breastfeeding over time. Increased normalization of breastfeeding in AA community leads to an increased number of AA mothers initiating breastfeeding.* ***O*** *= variables move in opposite direction;* ***S****=variables move in the same direction).*

For the African-American community, progress cannot be measured by sole achievement of rate increases in breastfeeding initiation. True progress will be defined by actualizing improvement across the continuum, through the achievement of increased numbers of African-American mothers sustaining breastfeeding. As indicated by the causal loop diagram, increasing the number of mothers continuing to breastfeed over time will have a positive influence on exposure in peer and familial networks. Positive exposure within these networks and the community will lead to generational exposure, ultimately increasing normalization of breastfeeding and public acceptance of breastfeeding behavior. As this cycle continues and these elements increase (i.e. generational exposure, normalization, public acceptance), the number of African-American mothers initiating breastfeeding will rise as a direct result of this reinforcing loop.

As previously shared, NIS data indicates that only 39.1% of African-American mothers continue to breastfeed at 6 months, while 19.3% continue to 12 months. While these numbers also fall well below the Healthy People 2020 target for White and Hispanic mothers, rates for African-American mothers are lower than peers by more than 6 percentage points at 6 and 12 months.[1] This data is highly reflective of the low number of African-American role models within the community to serve as public figures of sustained breastfeeding, share positive experiences, or function as direly needed breastfeeding peer counselors. More importantly, however, these low duration percentages represent the dearth of African-American mothers that can serve as change agents in altering the perceptions, stereotypes, and negative beliefs while normalizing the behavior of breastfeeding within today's African-American community.

Breastfeeding initiation undoubtedly represents a necessary step in the journey towards transforming breastfeeding within the African-American community. However, the focus must

continue on positively influencing all elements of the breastfeeding continuum, even exclusivity. This is the only way to truly normalize and significantly increase breastfeeding within African-American communities.

Leadership Approach for Plan for Change

The challenge of transforming this significant public health crisis within the African-American community requires a leadership approach that speaks to the realities and complexities of this social issue and resonates with the people of this community. African-American mothers and the African-American community at large possess many uncertainties, misperceptions, insecurities, and fears about breastfeeding. Additionally, the Philadelphia African-American community is lacking the presence of relatable role models that can passionately appeal to their hearts and minds about the importance of breastfeeding to improve the lives of African-American infants. Therefore, this "burning platform" calls for a long-term leadership approach that can transform the perspectives and behaviors of mothers and members of the African-American community about breastfeeding initiation through authenticity, relationship-building, influence, and trust.[79,80]

An *Authentic Leadership* approach lends itself naturally to this *Plan for Change* as it is well-suited to address "real life" practical issues of community and society. A leadership approach utilized previously in situations of social cause and turmoil (economic/social) in the U.S., authentic leaders would demonstrate the critical competencies necessary to transform this issue of low breastfeeding initiation within the African-American community.[79-81] Authentic leaders possess consistent passion for their purpose and values, lead with their hearts and heads, and establish long-term meaningful relationships with constituents and stakeholders on various levels within the community.[80] More importantly, these leaders genuinely care about members and stakeholders within their community and often desire to make a difference in the world.[80,81]

Also, similar to the multi-layered SEM that demonstrates influence of breastfeeding initiation decisions at various levels, *Authentic Leadership* recognizes the importance of various levels beyond the leader in leadership. The multiple layers in the *Authentic Leadership* approach, characterized by intrapersonal, interpersonal, and developmental, offer insight into the importance of focusing on followership, teams, and interactions/relationships beyond individual leadership or traits.[79] This is key in the transformation of social issues because the *Authentic Leadership* model supports empowering at all levels. *Authentic Leadership* believes in the potential of all to lead – not those solely at the top or formally recognized by title, office, or appointment.[80]

Lastly, *Authentic Leadership* theorists, such as Robert Terry, raise critical questions of leaders that are not foundational in other leadership theories. These core, practical questions help leaders to frame, define, and do the "right thing" in "real" leadership situations: 1) What is really going on? and 2) What are we going to do about it? *Authentic Leadership* then calls for leaders to be committed to identifying authentic, moral actions that are needed to transform the issue(s) and commit to actions that best serve others and ignite change.[79,80] This research study has similarly aimed to question and started to answer "what is really going on" in the African-American community related to breastfeeding initiation. It is now up to authentic leaders within the Philadelphia community, driven by compassion, integrity, intrinsic motivation and the desire to positively impact a cause greater than themselves, to determine what exactly will be done.

While the absence of a prominent breastfeeding advocate within the African-American community exists, the emergence of several authentic leaders in the Philadelphia area can be propelled through partnering around these *Plan for Change* strategies. Currently, these authentic leaders may not be well known or even seen as possessing this potential by themselves or others.

They were likely not born as leaders, however, their life circumstances, race, religion, socioeconomic status, and professions have created the traits and passion to lead strategies focused on this critical issue.[80] The stories of these authentic leaders are women who have served in the helping profession (often as social workers, nutritionists, nurses, etc.) and worked with the underprivileged, young, and minorities. They possess great passion for breastfeeding based on their own personal struggles and experiences and share their love of breastfeeding with the women and communities where they work and live. These authentic leaders are young and old; but, regardless of age have worked relentlessly to increase knowledge, exposure, and the number of African-American women breastfeeding in Philadelphia. These are the leaders needed to partner with the African-American Philadelphia community to achieve strategies identified in this *Plan for Change.*

Overall, this *Plan for Change* offers the strategies to address this "burning platform"; however, it will take the hallmark qualities of *Authentic Leadership* to move these actions forward. Increases in rates of breastfeeding initiation will not occur overnight, single-handedly by one individual, or by the mobilization of one strategy. Conversely, consistent focus on the short- and long-term goals, strong community partnerships, and commitment to all elements of the four-pronged strategy will be key to mobilizing to achieve increases in initiation rates. It will also require strong *Authentic Leadership* to create the vision and passion for this platform highlighting breastfeeding initiation as the "best" and "right" thing for African-American mothers and the health of African-American children in Philadelphia, Pennsylvania, and across the U.S.

APPENDIX A- BREASTFEEDING FOCUS GROUPS SAMPLE CHARACTERISTICS

Demographic Variables (*N* =22)	*Number (%)*
Maternal Age – M 26.5	
18-21	4 (18.2%)
22-25	6 (27.3%)
26-29	5 (22.7%)
30-35	6 (27.3%)
36-40	1 (4.5%)
Number of Children	
1	10 (45.5%)
2	4 (18.2%)
3	3 (13.6%)
4	4 (18.2%)
5+	1 (4.5%)
Prenatal Care Site	
Hospital of University of Pennsylvania Maternity Clinic	7 (31.8%)
Pennsylvania Hospital Maternity Clinic	4 (18.2%)
Other (Hahnemann; Parkview; Temple; Private)	11 (50%)
Delivery Hospital	
Hospital of University of Pennsylvania	8 (36.4%)
Pennsylvania Hospital	5 (22.7%)
Einstein Hospital	2 (9.1%)
Abington	0 (0%)
Other	7 (31.8%)
Previous Breastfeeding Experience	11 (50%)
Initiation of Breastfeeding with this baby	22 (100%)
Employment Status	
Working 0-20 hrs	0 (0%)
Working 21-40+ hrs	13 (59.1%)
Non-Working	9 (40.9%)
Monthly Income	
$0 – $833	12 (54.5%)
$834 – $1,666	5 (22.7%)
$1,667 – $2,449	2 (9.1%)
Non-disclosed	3 (13.6%)
School Status	
Enrolled	6 (27.3%)
Non-Enrolled	16 (72.7%)

Highest Level of Education	
Some High School	3 (13.6%)
High School Graduate/GED	6 (27.3%)
Some College/Vocational School/Associates Degree	9 (40.9%)
Bachelor's Degree	1 (4.5%)
Other (Masters)	3 (13.6%)
Enrolled in WIC	19 (86.4%)

APPENDIX B- NON-BREASTFEEDING FOCUS GROUPS SAMPLE CHARACTERISTICS

Demographic Variables (*N* =12)	*Number (%)*
Maternal Age – M 24.7	
18-21	4 (33.3%)
22-25	2 (16.7%)
26-29	4 (33.3%)
30-35	2 (16.7%)
36-40	0 (0%)
Number of Children	
1	7 (58.3%)
2	1 (8.3%)
3	2 (16.7%)
4	1 (8.3%)
5+	1 (8.3%)
Prenatal Care Site	
Hospital of University of Pennsylvania Maternity Clinic	7 (58.3%)
Pennsylvania Hospital Maternity Clinic	0 (0%)
Other (Lankenau; Bryn Mawr; Drexel Women's Health)	5 (41.7%)
Delivery Hospital	
Hospital of University of Pennsylvania	7 (58.3%)
Pennsylvania Hospital	1 (8.3%)
Einstein Hospital	0 (0%)
Abington	0 (0%)
Other	4 (33.3%)
Previous Breastfeeding Experience	2 (16.7%)
Initiation of Breastfeeding with this baby	7 (58.3%)
Employment Status	
Working 0-20 hrs	2 (16.7%)
Working 21-40+ hrs	5 (41.6%)
Non-Working	5 (41.6%)
Monthly Income	
$0 – $833	8 (66.7%)
$834 – $1,666	2 (16.7%)
$1,667 – $2,449	0 (0%)
Non-disclosed	2 (16.7%)
School Status	
Enrolled	2 (16.7%)
Non-Enrolled	10 (83.3%)

Highest Level of Education	
Some High School	2 (16.7%)
High School Graduate/GED	6 (50%)
Some College/Vocational School/Associates Degree	4 (33.3%)
Bachelor's Degree	0 (0%)
Other (Masters)	0 (0%)
Enrolled in WIC	12 (100%)

APPENDIX C- FOCUS GROUP RECRUITMENT SCRIPT

Good morning/afternoon Ms. XXXXX-

My name is Tyonne Hinson. I am a second year Health Policy and Management Doctoral (DrPH) candidate at the University of North Carolina at Chapel Hill in the Gillings School of Global Public Health. Thank-you for agreeing to talk with me today about my research study about the perceptions of breastfeeding initiation among African-American women.

I am currently collecting data for my dissertation entitled "Perceptions of facilitators and barriers to increasing breastfeeding initiation among African-American mothers". I would like to invite you to participate in focus groups to help me to learn more about your experience with breastfeeding and the things that helped you to decide whether or not to breastfeed your baby.

Breastfeeding and human milk is identified as the best form of nutrition for infants during their first year of life. It is one of the best protections against premature deaths, health risks, and morbidities in infancy through adult years. Despite this, rates of breastfeeding initiation in African-American mothers are significantly lower when compared to White and Hispanic counterparts.

Your participation would provide insight regarding a number of issues critical to the gaps in rates of African-American breastfeeding initiation. In the focus groups, we will discuss questions related to: 1) personal and familial breastfeeding beliefs, 2) issues of sexuality, 3) network interactions, 4) social support and social influence, and 5) informational sources. With your help, I hope to learn more about the reasons for low breastfeeding initiation and how to influence the creation of tailored, practice-based and community interventions to positively influence initiation within this community.

Your participation in the focus group session is completely voluntary and confidential. To help ensure confidentiality, you will select a pseudonym (alias) to be used throughout the interview session. The information shared will be released in summary and will not be linked to your identity in any way.

The focus group sessions will include 6-8 mothers from the West Philadelphia community. Each session will be about 120 minutes in length, with 90 minutes allotted for the group discussion on the questions. For participation in the focus group, each participant will be offered a small incentive ($25 Visa Gift Card) at completion of the session. Additionally, a meal and transportation fare will be offered to each participant on the day of the focus groups. Additionally, a pediatric nurse or nursing student will be onsite to assist with childcare of older children.

There will be no direct benefit to you from taking part in this study. This research study has been designed to gain knowledge about the disparity gap in breastfeeding initiation within the African-American maternal community. The goal is to provide benefit to African-American mothers and infants, increasing the overall rates of initiation and ultimately exclusivity during the first six months of African-American infant lives. Study participants, however, may

personally enjoy the opportunity to share about their breastfeeding experiences with others in the focus groups.

There are no anticipated risks to you from participating in this study. Breach of confidentiality, however, may be associated with minimal risk due to sharing within the small group setting despite requests for confidentiality. Every precaution will be taken to remind focus group participants of confidentiality agreements and to secure your personal information to ensure confidentiality. Also, no physical risks associated with the focus group interviews. However, you may experience moments of discomfort, embarrassment, and anxiety related to information shared within the group setting. You are not required to answer any question that makes you extremely uncomfortable.

For participation, you must meet the following criteria to participate: U.S. born African-American woman, English speaking (primary language), a mother of a healthy, term newborn within the past 3 months (neonatal intensive care admission excluded), maternal age of at least 18, negative for Human T-cell lymphotrophic virus type II or II, brucellosis, active tuberculosis, HIV, and illicit drugs.

If you are interested in participating, I will need you sign a consent form that indicates your willingness to participate in the study. The form states that you have been informed about the study, its risks and benefits. Please know that you can choose to stop participation at any time. Again, the study is completely voluntary and you are not obligated to participate in the study to receive care.

What questions do you have about the study or what I have shared with you? Do you have other questions regarding this research?

APPENDIX D- KEY INFORMANT RECRUITMENT SCRIPT

May _, 2015
Good morning/afternoon XXXXX-

My name is Tyonne Hinson. I am a second year Health Policy and Management Doctoral (DrPH) candidate at the University of North Carolina at Chapel Hill in the Gillings School of Global Public Health. I'm inviting you to participate in a study about the perceptions of breastfeeding initiation among African-American women. This June, I will begin collecting data for my dissertation entitled "Perceptions of facilitators and barriers to increasing breastfeeding initiation among African-American mothers". This research has been approved by the Institutional Review Boards of The Children's Hospital of Philadelphia and the University of North Carolina at Chapel Hill.

Breastfeeding and human milk is identified as the best form of nutrition for infants during their first year of life. It is one of the best protections against premature deaths, health risks, and morbidities in infancy through adult years. Despite this, rates of breastfeeding initiation in African-American mothers are significantly lower when compared to White and Hispanic counterparts.

Your participation would provide insight regarding a number of issues critical to the disparity in rates of African-American breastfeeding initiation. These interviews will gather critical information regarding: 1) policy/legislation creation and programming informing breastfeeding initiation, 2) direct influences on African-American mothers and breastfeeding practices, and 3) organizational or independent programs/projects that may inform breastfeeding initiation rates among African-American mothers. With your assistance, I hope to influence the creation of tailored, practice-based and community interventions to positively influence initiation within this community.

Your participation in this interview is completely voluntary. If you are interested in participating, please respond to this message. Informed consent will be emailed and an interview session scheduled based on your availability. Interview sessions will be approximately 45-60 minutes in duration. The interview will be confidential.

If you have any questions about this research, please feel free to contact me at thinson@live.unc.edu or 215-206-6403. You may also contact my principal investigator, Dr. Diane Spatz, at spatz@nursing.upenn.edu. I hope that you will strongly consider participating in this research.

Sincerely,

Tyonne D. Hinson, MSN, RN, NE-BC
Doctoral Candidate, Health Policy and Management
The University of North Carolina – The Gillings School of Global Public Health
Perceptions of Facilitators and Barriers to Increasing Breastfeeding Initiation among African-American Mothers

APPENDIX E- FOCUS GROUP INFORMED CONSENT

The Children's Hospital *of* Philadelphia®

Informed Consent Form

Study Title: Perceptions of the Facilitators and Barriers of Breastfeeding Initiation: Increasing Initiation through a Tailored Approach of Practice Interventions and Policy for African-American Mothers

Version Date: Month, Day, 2015

Principal Investigator:	Diane L. Spatz, PhD, RN-BC, FAAN	Telephone: (215) 898-8100
Lead Investigator:	Tyonne D. Hinson, MSN, RN, NE-BC	Telephone: (215) 206-6403

.

Why are you being asked to take part in this study?

You are being asked to take part in this research study because you are an African-American mother of an infant (aged 0-3 months) and you have made a decision about whether or not to breastfeed your baby.

What is the purpose of this research study?

The purpose of this research study is to explore the perceptions of barriers and facilitators influencing breastfeeding initiation among African-American mothers in an effort to decrease the disparity gap in overall rates of initiation with African-American infants.

How many people will take part?

About 32 mothers will take part in this study.

What is involved in the study?

If you choose to participate in this study, you will be interviewed one time with a group of 6-8 mothers. This group session will last approximately 120 minutes, with 90 minutes for the interview session. The interviewer will ask you to share your experience about cultural, social, and environmental factors that influenced your decisions on breastfeeding. Questions will be asked about your personal family beliefs on breastfeeding, issues of sexuality, social support, community support, and sources of information.

How long will you be in this study?

If you agree to take part, your participation will end after the completion of this one focus group session.

What are the study procedures?

The study involves the following:

Focus Group Interviews: The lead investigator will be interviewing a group of 6-8 mothers together in a group. The group session will be 120 minutes in length, with 90 minutes planned for the interview. You will be asked to share your personal experience about cultural, social, and environmental factors that influenced your decision to breastfeed your infant with the lead investigator.

Audio recordings: The group interview sessions will be recorded. You will be asked to select a pseudonym (alias) to protect your identity during the interview. No personal identifiers will be mentioned on the interview recordings. Interviews will be professionally transcribed and the interview data will be maintained until completion of the research in a locked filing cabinet. The information can only be accessed by the lead investigator.

Medical Record: Your baby's medical record will not be examined.

Interview Schedule

The table below provides a description of the purpose and duration of each interview.

Visit	Purpose	Main Procedures	Duration
Visit 1	Demographics and focus group interviews	Demographic form completion Audiotaped focus group interview	2 hours
End of Study			

What are the risks of this study?

Taking part in a research study involves inconveniences and risks. If you have any questions about any of the possible risks listed below, you should talk to your study doctor or your regular doctor.

Breach of confidentiality: We do not anticipate any significant risks to you from being in this study. Breach of confidentiality, however, may be associated with minimal risk due to sharing within the small group setting despite requests for confidentiality. Therefore, we encourage you to be as honest and open as you can, but remain aware of the possibility of breach of confidentiality of data. Additionally, breach of confidentiality of data is a possibility in any study involving data collection. Every precaution will be taken to remind focus group participants of confidentiality agreements and to secure your personal information to ensure confidentiality.

Interview: There are no physical risks associated with the focus group interviews. However, you may experience moments of discomfort, embarrassment, and anxiety related to information shared within the group setting. You are not required to answer any question that makes you extremely uncomfortable.

Are there any benefits to taking part in this study?

There will be no direct benefit to you from taking part in this study. This research study has been designed to gain knowledge about the disparity gap in breastfeeding initiation within the African-American maternal community. The goal is to provide benefit to African-American mothers and infants, increasing the overall rates of initiation and ultimately exclusivity during the first six months of African-American infant lives. Study participants, however, may personally enjoy the opportunity to share about their breastfeeding experiences with others in the focus groups.

Do you need to give your consent in order to participate?

If you decide to participate in this study, you must sign this form. A copy will be given to you to keep as a record. Please consider the study time commitments and responsibilities as a research subject when making your decision about participating in this study.

What happens if you decide not to take part in this study?

Participation in this study is voluntary. You do not have to take part in order to receive care at CHOP.

If you decide not to take part or if you change your mind later there will be no penalties or loss of any benefits to which you are otherwise entitled.

Can you stop your participation in the study early?

You can stop being in the study at any time. You do not have to give a reason.

What about privacy and confidentiality?

As part of this research, information about your personal experiences regarding breastfeeding will be collected during an interview period. We will do our best to keep your personal identity and interview responses private and confidential. However, we cannot guarantee absolute confidentiality. Your personal information may be disclosed if required by law.

The results of this study may be shown at meetings and published in journals to inform medical personnel, public health officials, and other professionals. We will keep your identity private in any publications or professional presentations.

Several people and organizations may review or receive your identifiable information. They may need this information to conduct the research, to assure the quality of the data, or to analyze the data or samples. These groups may include:

- Members of the research team and other authorized staff at The Children's Hospital of Philadelphia and the University of North Carolina at Chapel Hill;
- People from agencies and organizations that perform independent accreditation and/or oversight of research; such as the Department of Health and Human Services, Office for Human Research Protections.

By law, CHOP is required to protect your personal identify and information shared. The research staff will only allow access to your demographic information and personal responses to the groups listed above. By signing this document, you are authorizing CHOP to use and /or release your information for

this research. Some of the organizations listed above many not be required by law to protect your information under Federal privacy laws. If permitted by law, they may be allowed to share it with others without your permission.

Your personal identifiers and information will be removed from all study materials as soon as possible. Your permission to use and share the information and de-identified data from this study will continue until the research study ends and will not expire.

Financial Information

While you are in this study, the cost of your usual medical care – procedures, medications and doctor visits – will continue to be billed to you or your insurance.

Will there be any additional costs?

There will be no additional costs to you by taking part in this study.

Will you be paid for taking part in this study?

You will receive a $25 Visa Gift card as reimbursement for your time and participation in this research at completion of the session. Additionally, a meal and full Septa transportation fare will be offered to each participant on the day of focus groups.

Additionally, a junior nursing student or professional nurse, trained in basic life support, will be onsite to assist with childcare of older children of participating mothers.

Who is funding this research study?

This research study is self-funded by the lead investigator, Tyonne D. Hinson, for completion of an academic requirement.

What if you have questions about the study?

If you have questions about the study, call the Principal Investigator, Diane Spatz, or lead researcher Tyonne Hinson at 215-206-6403. The Institutional Review Board (IRB) at The Children's Hospital of Philadelphia has reviewed and approved this study. The IRB looks at research studies like these and makes sure research subjects' rights and welfare are protected. If you have questions about your rights or if you have a complaint, you can call the IRB Office at 215-590-2830.

Consent to Take Part in this Research Study

The research study and consent form have been explained to you by:

Person Obtaining Consent	Signature of Person Obtaining Consent
	Date

By signing this form, you are indicating that you have had your questions answered, you agree to take part in this research study and you are legally authorized to consent to your child's participation. **NOTE:** *A foster parent is not legally authorized to consent for a foster child's participation.*

Name of Subject	
Signature of Subject (18 years or older)	Date
Name of Authorized Representative (if different than subject)	Relation to subject: ☐ Parent ☐ Legal Guardian
Signature of Authorized Representative	Date

APPENDIX F- KEY INFORMANT INFORMED CONSENT

The Children's Hospital *of* Philadelphia®

Informed Consent Form

Study Title: Perceptions of the Facilitators and Barriers of Breastfeeding Initiation: Increasing Initiation through a Tailored Approach of Practice Interventions and Policy for African-American Mothers

Version Date: Month, Day, 2015

Principal Investigator:	Diane L. Spatz, PhD, RN-BC, FAAN	Telephone: (215) 898-8100
Lead Investigator:	Tyonne D. Hinson, MSN, RN, NE-BC	Telephone: (215) 206-6403

.

Why are you being asked to take part in this study?

You are being asked to take part in this research study because you have professional experience that has influenced breastfeeding policy, programming, organizational practices, or maternal communities and can provide insight regarding a number of issues critical to the disparity in rates of African-American breastfeeding initiation.

What is the purpose of this research study?

The purpose of this research study is to explore the perceptions of barriers and facilitators influencing breastfeeding initiation among African-American mothers in an effort to decrease the disparity gap in overall rates of initiation with African-American infants.

How many people will take part?

About 8 national Subject Matter experts will take part in this study.

What is involved in the study?

If you choose to participate in the study, you will be interviewed one time and this interview will last approximately 45-60 mins. The interviewer will ask you to discuss your professional experience regarding: 1) policy/legislation creation and programming informing breastfeeding initiation, 2) direct influence on African-American mothers and breastfeeding practices, and 3) organizational or independent programs/projects that may inform breastfeeding initiation rates among African-American mothers. You will also be asked to share your opinion regarding critical gaps within practice and policy influencing the prevalence of low breastfeeding initiation among African-American women.

How long will you be in this study?

If you agree to take part, your participation will end after the completion of this one interview.

What are the study procedures?

The study involves the following:

Key Informant Interviews: The lead investigator will be interviewing you one time. The interview will last approximately 45-60 minutes in length. You will be asked to provide insight regarding your professional experiences related to policy, programming, organizational practices within African-American maternal communities and how these factors have been critical to disparity in rates of breastfeeding initiation.

Audio recording: Your interview will be recorded. You will be identified by your professional descriptor to protect your confidentiality on recordings. Interviews will be professionally transcribed and the interview data will be maintained until completion of the research in a locked filing cabinet. This information can only be accessed by the lead investigator.

Interview Schedule

The table below provides a description of the purpose and duration of each interview.

Visit	Purpose	Main Procedures	Duration
Visit 1	Key Informant Interview	Audiotaped interview	45-60 minutes
End of study			

What are the risks of this study?

Taking part in a research study involves inconveniences and risks. If you have any questions about any of the possible risks listed below, you should talk to your study doctor or your regular doctor.

Breach of confidentiality: We do not anticipate significant risks or discomfort to you from being in this study. Breach of confidentiality, however, may be associated with minimal risk due to the limited number of professionals focused on breastfeeding advocacy regionally and nationally. Additionally, breach of confidentiality of data is a possibility in any study involving data collection. Therefore, we encourage you to be as honest and open as you can, but remain aware of the possibility of breach of confidentiality of data. Every precaution will be taken to secure your personal information to ensure confidentiality.

Are there any benefits to taking part in this study?

There will be no direct benefit to you from taking part in this study. This research study has been designed to gain knowledge about the disparity gap in breastfeeding initiation within the African-American maternal community. The goal is to provide benefit to African-American mothers and infants, increasing the overall rates of initiation and ultimately exclusivity during the first six months of African-American infant lives.

Do you need to give your consent in order to participate?

If you decide to participate in this study, you must sign this form. A copy will be given to you to keep as a record. Please consider the study time commitments and responsibilities as a research subject when making your decision about participating in this study.

What happens if you decide not to take part in this study?

Participation in this study is voluntary. You do not have to take part in this study if you desire not to do so.

If you decide not to take part or if you change your mind later there will be no penalties or loss of any benefits to which you are otherwise entitled.

Can you stop your participation in the study early?

You can stop being in the study at any time. You do not have to give a reason.

What about privacy and confidentiality?

As part of this research, information about your professional experiences and personal thoughts will be collected during an interview period. We will do our best to keep your personal identity and interview responses private and confidential. However, we cannot guarantee absolute confidentiality. Your personal information may be disclosed if required by law.

The results of this study may be shown at meetings and published in journals to inform medical personnel, public health officials, and other professionals. We will keep your identity private in any publications or professional presentations.

Several people and organizations may review or receive your identifiable information. They may need this information to conduct the research, to assure the quality of the data, or to analyze the data or samples. These groups may include:

- Members of the research team and other authorized staff at The Children's Hospital of Philadelphia and the University of North Carolina at Chapel Hill;
- People from agencies and organizations that perform independent accreditation and/or oversight of research; such as the Department of Health and Human Services, Office for Human Research Protections.

By law, CHOP is required to protect your personal identify and information shared. The research staff will only allow access to your information to the groups listed above. By signing this document, you are authorizing CHOP to use and /or release your information for this research. Some of the organizations listed above many not be required by law to protect your information under Federal privacy laws. If permitted by law, they may be allowed to share it with others without your permission.

Your personal identifiers and information will be removed from all study materials as soon as possible. Your permission to use and share the information and de-identified data from this study will continue until the research study ends and will not expire.

Financial Information

Will there be any additional costs?

There will be no additional costs to you by taking part in this study.

Will you be paid for taking part in this study?

You will not receive any payments for taking part in this study.

Who is funding this research study?

This research study is self-funded by the lead investigator, Tyonne D. Hinson, for completion of an academic requirement.

What if you have questions about the study?

If you have questions about the study, call the Principal Investigator, Diane Spatz, or lead researcher Tyonne Hinson at 215-206-6403. The Institutional Review Board (IRB) at The Children's Hospital of Philadelphia has reviewed and approved this study. The IRB looks at research studies like these and makes sure research subjects' rights and welfare are protected. If you have questions about your rights or if you have a complaint, you can call the IRB Office at 215-590-2830.

Consent to Take Part in this Research Study

The research study and consent form have been explained to you by:

Person Obtaining Consent	Signature of Person Obtaining Consent
	Date

By signing this form, you are indicating that you have had your questions answered, you agree to take part in this research study and you are legally authorized to consent to your child's participation. **NOTE:** *A foster parent is not legally authorized to consent for a foster child's participation.*

Name of Subject	
Signature of Subject (18 years or older)	Date
Name of Authorized Representative (if different than subject)	Relation to subject: ☐ Parent ☐ Legal Guardian
Signature of Authorized Representative	Date

APPENDIX G- FOCUS GROUP QUESTIONNAIRE

Perceptions of Facilitators and Barriers to Increasing Breastfeeding Initiation among African-American Mothers

Icebreaker questions

1. What made you decide to attend this focus group?
2. Tell me what you have heard about breastfeeding and what are you feelings?

Transition questions

3. When I say the word "breastfeeding", what do you say or think about?

Key Questions

4. When you first found out you were pregnant, did you think about breastfeeding?
    a. If so, why? If not, why not?

5. Who was the most important (or significant) member of your family in your final decision to breastfeed?
    a. Describe the things this person said about breastfeeding your baby?

6. Did friends or people in your community influence your decision to breastfeed?
    a. If so, how?
    b. In what ways were your friends like or unlike you in feeding their babies?

7. What do you believe are the supporters of breastfeeding initiation in the Black/African-American community?
    a. Follow-up: What supports do you believe are the most important before birth and after birth?

8. What do you believe are barriers of breastfeeding initiation in the Black/African-American community?
    a. Follow-up: What barriers do you believe are the most important before birth and after birth?

9. In the United States, some African-American mothers view the primary purpose of breasts as "objects for sex and not nutrition". What do you believe about this? **OR** (In the United States, the primary purpose of breasts are sexualized and not thought of being a way to deliver nutrition. What do you believe about this?)

10. What information did you receive about breastfeeding while you were pregnant?
    a. From whom and where was this information given to you?
    b. How often was information brought up to you (i.e. Once, multiple times, not at all)?

11. What support or services were offered in the hospital that were most supportive or barriers to breastfeeding?

12. In the United States, about 50% of women receive support from the WIC program. Do any of you have any experience with WIC?
    - **a.** If so, what was your experience with getting breastfeeding information or support from the WIC program?
    - **b.** Did you receive a pump, participate in peer counseling, or any other programs benefits?

13. ***For breastfeeding groups:*** What things made it hard to breastfeed overall? **OR** What obstacles made it hard to breastfeed?
    For non-breastfeeding groups: What stopped you (prevented you) from breastfeeding?

    Probe: This could be a community program/resource, a law, or parts of your home/work/life situation.

14. ***For breastfeeding groups:*** What things made it easy to breastfeed overall?
    For non-breastfeeding groups: What things made it easy not to breastfeed?

    Probe: This could be a community program/resource, a law, or parts of your home/ work/life situation.

15. ***For breastfeeding groups:*** What education, services, or programs would have better supported your breastfeeding experience?
    For non-breastfeeding groups: What education, services, or programs would have convinced you to start breastfeeding?

Wrap up

16. Is there anything else you would like to share with the group on breastfeeding initiation in African-American women that has not been covered in this discussion?

Thank-you!

APPENDIX H- KEY INFORMANT INTERVIEW QUESTIONNAIRE

Perceptions of Facilitators and Barriers to Increasing Breastfeeding Initiation among African-American Mothers

Key Informant Interviews

1. Please tell me about your specific role within your organization.
2. Please tell me about any additional work with local, national, or international organizations to promote breastfeeding practices.
3. How has/have your role(s) influenced the state of breastfeeding practice in Pennsylvania, Philadelphia, or nationally?

Perceptions of Barriers and Facilitators

4. What do you see as the most influential barriers of breastfeeding initiation among African-American women? Please describe.
5. What do you see as the most influential facilitators of breastfeeding initiation among African-American women? Please describe.
6. What cultural factors have been most prominent in decision-making for African-American mothers concerning breastfeeding initiation?
    a. To clarify, cultural factors pertain to African-American perceptions/beliefs about breastfeeding, African-American cultural perceptions/issues of sexuality.
7. What social/environment factors have been most influential in decision-making for African-American mothers concerning breastfeeding initiation?
    a. To clarify, social environment factors pertain to network interactions, social support/influence, and informational sources within the African-American or professional community.

Policies, Legislation and Organizational Practices

8. What national policies have been most influential in supporting or hindering AA mothers in breastfeeding initiation?
9. What local laws have been most influential in supporting or hindering AA mothers in breastfeeding initiation?
10. What federal, state, county, or local community programs have been most influential in supporting or hindering AA mothers in breastfeeding initiation?
11. What professional or organizational healthcare practices have been most influential in supporting or hindering AA mothers in breastfeeding initiation?

Now, I would like to transition our discussion to focus on next steps for breastfeeding initiation improvements within the African-American Community.

12. Are there any laws that if implemented on a national or local (community) level could help to successfully achieve improvements in breastfeeding initiation among African-American mothers? Any laws that should be amended that could help increase breastfeeding initiation?
13. Are there any federal, state, or county community programs that if implemented could help improve cultural and social environment perceptions of breastfeeding for African-American mothers? Any federal, state, or county community programs that should cease or be amended that could help increase breastfeeding initiation?
14. Within your community, what positive facilitators or negative barriers of breastfeeding initiation can be related to the Women, Infants, and Children's Program (WIC)?
    a. As a reminder, cultural factors pertain to African-American perceptions/beliefs about breastfeeding, African-American cultural perceptions/issues of sexuality.

Social environment factors pertain to network interactions, social support/influence, and informational sources within the African-American or professional community.

Are there any organizational/hospital practices that if consistently implemented could improve breastfeeding initiation rates among African-American mothers? Any organization/hospital practices that should be suspended or amended that could help increase breastfeeding initiation?

Barriers of Implementation

15. What role, if any, do you believe racism plays in the ability of African-American mothers to initiate breastfeeding or receive the support they need to breastfeed?
16. What are the most significant obstacles in getting these laws, policies, programs/practices implemented? Nationally? Within the community?
17. What are the most significant obstacles in getting these laws, policies, programs/practices amended or suspended? Nationally? Within the community?
18. In your opinion, who or what will be most influential in overcoming these barriers to achieve increased rates in breastfeeding initiation among African-American mothers?

Miscellaneous

19. Are there any additional thoughts you would like to share regarding increasing breastfeeding initiation among African-American mothers?

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