

African American Women's Infant Feeding Choices: Analyzing Self-Efficacy and Narratives from a Black Feminist Perspective

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Recommended Citation

Robinson, Karen Marie, "African American Women's Infant Feeding Choices: Analyzing Self-Efficacy and Narratives from a Black Feminist Perspective" (2010). *Dissertations (2009 -)*. Paper 49.
http://epublications.marquette.edu/dissertations_mu/49

AFRICAN AMERICAN WOMEN'S INFANT FEEDING CHOICES:
ANALYZING SELF-EFFICACY & NARRATIVES FROM
A BLACK FEMINIST PERSPECTIVE

by

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A Dissertation submitted to the Faculty of the Graduate School,
Marquette University,
in Partial Fulfillment of the Requirements for
the Degree of Doctor of Philosophy

Milwaukee, Wisconsin

May 2010

ABSTRACT
AFRICAN AMERICAN WOMEN'S INFANT FEEDING CHOICES:
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Breast milk is the optimal form of nutrition for infants up to six months of age. Commercial formula is unequal to breast milk nutritionally, economically, and psychologically. African American women (AAW) continue to breastfeed the least compared to other populations. Few researchers conducting research related AAW's infant feeding preferences have employed the Black Feminist philosophy or the theory of self-efficacy. This philosophy and theory may offer insight into factors that influence AAW's infant feeding choices.

The purpose of this mixed-method study was to examine prenatal breastfeeding self-efficacy (confidence) and actively listen to and analyze AAW's reports of factors influencing their infant feeding choice. Fifty-nine AAW in their 3rd trimester of pregnancy completed a Prenatal Self-Efficacy questionnaire. Three to four weeks postpartum, 17 women were re-contacted and participated in individual narrative interviews.

Prenatal self-efficacy scores for women who intended to breastfeed were significantly higher ($M = 82.59$, $SD = 12.53$) than those intending to bottle-feed ($M = 70$, $SD = 15.45$), $p = .001$. Prenatal self-efficacy was predictive of intended feeding method ($p = .004$). During the individual postpartum interviews, women disclosed various reasons and personal explanations of how they arrived at their infant feeding choices. Four of the themes from the narrative were parallel to Bandura's (1977) four sources of self efficacy: performance accomplishments, verbal persuasions, vicarious experiences, and physiological responses. Two additional themes were identified: social embarrassment and feelings of regret. Women's actual feeding method was not always reflective of their feeding intention. Of the 11 women interviewed planning to breastfeed, seven were actually breastfeeding at 3-4 weeks postpartum. The levels of breastfeeding varied among the women. Seventy-one percent of the breastfeeding mothers reported using < 1 bottle of formula per day. In previous studies, self-efficacy has been shown to have an effect on infant feeding initiation, and duration among AAW. The current study examined prenatal self-efficacy during the prenatal period. The prenatal period is a favorable time for providers to evaluate breastfeeding self-efficacy. Then appropriate teaching may begin based on the mother's confidence. The Black Feminist perspective revealed there is more to learn from AAW regarding their infant feeding decisions.

ACKNOWLEDGEMENTS

Karen Robinson, PhD(c), MSN, RN, CNM

I thank God for whom this journey would not have been possible. It is through Him that all things are attainable. I have been blessed to have three extraordinary scholar/teacher/mentors who were my guides as I traveled through this unfamiliar territory; each bringing their own uniqueness without forcing me to compromise my own.

Dr. VandeVusse, my Dissertation Chair thank you for encouraging me to focus on research that was of importance to me. The countless hours of being joined at the hip paid off. Thank you for keeping up with my rapid pace and also gently reminding me to slow down every once and a while to enjoy and savor the ride.

Dr. Hanson, my zodiac comrade, thank you for your deep insight. You helped me think outside-the-box. Thank you for your constant encouragement and praise. I admire your passion for midwifery and life, in general.

Dr. Millon-Underwood, thank you for saying, “Yes.” You will never truly know how much it has meant to me to have you in my corner. It is an honor and privilege having you as a part of my committee. Thank you for your perspective and always giving it to me straight.

Lastly, I want to thank my husband, Jason. How could I have done it without you by my side? Thank you for being “Mr. Mom” when I was deep in the trenches. You never complained but always encouraged and supported me. I love you!!! Now it’s your turn!!!

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CHAPTER ONE

Introduction

Breast milk has been shown to be the most valuable form of infant nutrition. In fact, there is no artificial formula that has replicated its unique properties. The literature is replete with evidence that breastfeeding is the healthiest and preferred infant feeding choice. Nationally, breastfeeding has been associated with being nutritionally, immunologically, psychologically, socially, and economically advantageous (U. S. Breastfeeding Committee, 2002). The American Academy of Pediatrics (2005), American College of Nurse-Midwives (2004), and American College of Obstetricians and Gynecologists (2003), all have position statements in support of breastfeeding as the best feeding method. For example, the American Academy of Pediatrics (2005) asserted that “breastfeeding ensures the best possible health as well as the best developmental and psychosocial outcomes for the infant” (p. 501). In spite of this, in the 20th century, the U. S. had shifted to a formula-feeding country (Philipp & Jean-Marie, 2007).

Because of the overwhelming evidence regarding breastfeeding benefits, many public agencies have set initiatives in motion to bring awareness of the importance of breastfeeding and the need to increase breastfeeding rates nationwide. For example, *Healthy People 2010*, a program developed by the U.S. Department of Health and Human Services (USDHH), has set national breastfeeding objectives as follows: 75% initiation, 50% continuation for at least six months, and 25% for one year (USDHH, 2000). In 2006, these objectives were broadened to incorporate breastfeeding exclusivity (no introduction of solid foods to the infant’s diet) goals (USDHH, 2006). The exclusivity goals were

revised a year later and are as follows: 40% exclusivity at 3 months and 17% at 6 months (Boscoe, 2007).

In 2000, the U. S. Surgeon General, Dr. David Satcher, requested assistance from the Office of Women's Health, a division of the USDHH, to develop the *Blueprint for Action on Breastfeeding*, establishing a comprehensive breastfeeding policy for the country (USDHH, 2000). This was the first governmental manuscript of its kind to address breastfeeding. Moreover, the U. S. Breastfeeding Committee (USBC), through the Health Resources and Services Administration's (HRSA) Maternal and Child Health Bureau, developed a strategic plan to promote, protect, and support breastfeeding in the nation (USBC, 2001).

On a global scale, in 1991, the World Health Organization (WHO) and the United Nations Children's Fund collaborated to develop the Baby-Friendly Hospital Initiative (BFHI) to promote and recognize hospitals and birthing centers that offer the most advantageous level of care for lactation (BFHI USA, 2006). In 1997, the U. S. Healthy Children Project, Inc. undertook the initiative and has created Baby-Friendly USA as the non-profit organization to implement the hospital program nationally (BFHI USA, 2006). Merewood et al. (2007) studied the effects of a designated Baby-Friendly Hospital in Boston on breastfeeding duration (at 6 months postpartum) where the majority of the sample was low-income African American women. The researchers found that at 6 months, 37% of the women ($n = 248$) were breastfeeding. These rates were equivalent to the total U.S. population (36%) in 2003, the time study was conducted. Unfortunately, as of December 2009, there are only 86 Baby-Friendly Hospitals and Birth Centers in the U.S. Even so, these national efforts are intended to provide a synergistic approach to

promoting and normalizing breastfeeding in the U. S.

Breastfeeding Benefits

The benefits of breastfeeding have been well researched and documented over time. For example, in term infants, breastfeeding has been shown to decrease otitis media (Duncan, Ey, Holberg, Wright, Martinez, & Taussig, 1993; Chanty, Howard, & Auinger, 2006). In addition, breastfeeding reduces the risk of respiratory infections (e.g., Respiratory Syncytial Virus & asthma) (Barber, 2005; Riordan, 2005; Chanty et al., 2006). Furthermore, colostrum contains immunoglobulins which coat the infant gut acting as a barrier to bacteria, thus, decreasing the risk of diarrhea (Bick, 1999; Barber, 2005; Riordan, 2005; Philipp & Jean-Marie, 2007). Owen, Martin, Whincup, Smith, & Cook (2005) conducted a systematic review of literature that examined infant feeding method and obesity and found that breastfeeding has protective properties against childhood obesity. Most recently, Italian researchers reported that breastfeeding has a more analgesic effect on term infants than oral sucrose when administered to infants during routine heel pricks for newborn blood sampling (Codipietro, Ceccarelli, & Ponzzone, 2008). In a randomized controlled trial ($n = 50$ in each group), these researchers found that infants who received 1 mL of 25% sucrose had a shorter duration of onset of crying, higher heart rate, and lower oxygen saturation after heel lancing, than infants who were breastfed during blood collection (2008).

Additionally, in preterm infants, breastfeeding not only provides health benefits, but contributes to saving lives (Philipp & Jean-Marie, 2007). For example, breast milk provides several immunological protective factors that ameliorate necrotizing enterocolitis, a gastrointestinal disease causing infection and inflammation that can

destroy the bowel of infants born prematurely (Riordan, 2005). Also, breastfed premature infants have shorter hospital stays, thus reducing hospital expenditures (Philipp & Jean-Marie, 2007). Breastfeeding has been shown to have a positive effect on lowering infant mortality rates as well. Chen and Rogan (2004) assessed the impact of breastfeeding on postneonatal death beyond the first month of life in the U. S. using data from the 1988 National Maternal and Infant Health Survey. They found that postneonatal infant mortality rates were reduced by 21% in breastfed infants in the U. S. As noted above, breast milk and breastfeeding have unique properties that help prevent potential major health issues in infants. Furthermore, these benefits continue into childhood.

Breastfeeding has health advantages for the mother as well. Mothers who breastfeed instantly reap the benefits. For example, decreased postpartum bleeding has been associated with immediate breastfeeding initiation (Labbok, 2001; Riordan, 2005). The process of lactation is an active metabolic process; it may use up to 500 calories a day (Blincoe, 2005). Therefore, breastfeeding has maternal weight-loss properties. Studies have reported that breastfeeding mothers return to pre-pregnancy weight sooner the longer they nurse. For example, Dewey, Heinig, and Nommsen (1993) found that women who breastfeed for at least 6 months ($n = 46$) lost weight quicker than those who breastfeed for less than 3 months ($n = 39$). Additionally, long term benefits of breastfeeding include reduced risks of osteoporosis, obesity, and ovarian and premenopausal breast cancers (USBC, 2002a; Blincoe, 2005; Philipp & Jean-Marie, 2007). Immediate and long term maternal benefits add to the value of breastfeeding.

Economically, infant formula is more expensive than breastfeeding. The formula industry is a lucrative business. In fact, it is reported that annual formula sales generated

in the U. S. total approximately \$3 billion (Philipp & Jean-Marie, 2007). Additionally, WIC, the Special Supplemental Nutrition Program for Women, Infants and Children, is the biggest consumer of formula in the U. S., purchasing approximately 40% of all formula sold (Weimer, 2001). Every 10% increase in breastfeeding among women who participate in WIC would save the program \$750,000 per year in formula expenses (USBC, 2002b). These monies could be allocated for improved maternal nutrition. Finally, because of increased morbidity rates among formula-fed infants compared to breastfed infants, healthcare costs are increased for those who bottle-feed. Ball and Wright (1999) determined that the cost of excess office visits, hospitalizations, and prescriptions due to three major childhood illnesses (otitis media, gastrointestinal and lower respiratory illnesses) were estimated to cost the managed health care system between \$3.6-7 billion dollars the first year of life for formula fed infants. Therefore, breastfeeding's benefits are not only health-promoting but economically advantageous as well.

Health Disparities and Breastfeeding Benefits

There is a wide range of health disparities specific to perinatal health that exists between African Americans and Caucasians in the U.S. Furthermore, the causes of these long-term disparities are unknown (Lu & Halfon, 2003). These health inequalities make African American women and infants more vulnerable to higher incidences of deaths and diseases. In a statement addressed to the USBC, Dr. Phyllis Sharps, National Black Nurses Association's Representative, reported that "the low breastfeeding rates among women and infants of color further increase risk for health disparities" (NBNA.org, p. 17). For example, in 2005 infant mortality rates for African American infants were more

than double those of Caucasians, 13.63 per 1,000 live births compared to 5.76, respectively (MacDorman & Mathews, 2008). In 2004 of the 35 states that reported infant mortality rates by race, Wisconsin ranked 35th (University of WI School of Medicine & Public Health, 2009). In fact, Kenosha County has the largest infant mortality disparity between African American and Caucasian infants at a rate of 5 to 1 (University of WI School of Medicine & Public Health, 2009). Infant mortality is also more prevalent among low birth weight babies (less than 2500 grams) which occur more commonly among infants born to African American women (Mathews & MacDorman, 2007). On the other hand, among all low birth weight babies, mortality is reduced when they are breastfed (Smith, Durkin, Hinton, Bellinger, & Kuhn, 2003) yet fewer African American women have chosen breastfeeding.

Distressing facts such as these have health disparities in the national spotlight. For instance, a national goal of *Healthy People 2010* (USDHHS, 2000) was to eradicate health disparities including infant and child health outcomes. Below further examples are provided that demonstrate racial disparities amenable to the beneficial effects of breastfeeding in infants.

Relative to infants, several morbidities occur with higher rates in African Americans. These conditions are associated with better outcomes if the infants are breastfed. For example, in the past two decades the rate of SIDS (Sudden Infant Death Syndrome) among African American infants has been more than twice that of Caucasians (Hauck et al., 2003). In this study the majority of the sample (75%) was African American, the researchers found that any amount of breastfeeding reduced the risk of SIDS among this at-risk population.

Furthermore, African American children and other children from low-income households have high rates of dental caries. Related to infant feeding practices, dental caries have been associated with prolonged and improper use of bottles, such as propping and using juices in the bottle (American Dental Association, 2009). Iida, Auinger, Billings, and Weitzman (2007) found that infants who had ever been breastfed had lower incidence of dental caries than those who are bottle-fed (25% v. 32%, $p = .03$).

In the face of the poorer health outcomes of African American infants, the advantages of breastfeeding would provide significant improvements. However, the outcomes have worsened in the last several years and disparities have further widened the racial gap. African American women and their infants are being disproportionately affected. Increasing breastfeeding rates among this population would be just one approach in an attempt to reduce the disparities that exist.

Statement of the Problem

Although breastfeeding rates nationwide were close to reaching *Healthy People 2010* goals (CDC, 2009), these statistics are not consistent among all women. African American women in particular continue to be the population least likely to breastfeed, as shown in Table 1. National averages of breastfeeding initiation, continuation, and exclusivity, including rates for Hispanic, Caucasian, and African American women, were compared to the *Healthy People 2010* goals noted earlier. Between birth and 6 months, a period considered the most precarious for an infant's well-being (Child Health, USA, 2003), breastfeeding rates for all women dropped dramatically. Even more disappointing was the fact that the proportion of African American women who initiated and continued breastfeeding was well below *Healthy People 2010* goals for breastfeeding target rates.

Furthermore, exclusivity rates among African American women are far from the national goals. Despite the known advantages of breastfeeding, African American women, a population that consistently endures the highest infant mortality rate and other incidences of childhood illnesses (e.g., asthma and obesity) have continued to opt for bottle feeding more than any other ethnic group.

Table 1

National Breastfeeding Initiation, Continuation, and Exclusivity Rates

	<i>Healthy People 2010 Goals</i>	National Average Rates	Hispanic Women	Caucasian Women	African American Women
Initiation	75%	74%	82%	77%	60%
Exclusive thru 3 months	40%	33%	36%	35%	20%
Exclusive thru 6 months	17%	14%	15%	15%	6%
Continuation (6 months)	50%	43%	49%	46%	29%
Duration (1 year)	25%	23%	27%	24%	13%

Note. Adapted from “Breastfeeding among U.S. Children Born 1999—2006, CDC National Immunization Survey,” by Centers for Disease Control and Prevention, 2009, & U.S. Department of Health and Human Services (2000). *Healthy people 2010*. Washington, DC: Author.

Former U. S. Surgeon General, Dr. David Satcher, identified racial and ethnical disparities in breastfeeding rates specifically among African American women as problematic (USDHHS, 2000). In the *Blueprint for Action on Breastfeeding*, he also recognized that in order to connect to African American women culturally appropriate methods to promote breastfeeding must be established (USDHHS, 2000). One response to this challenge was the establishment of the African American Breastfeeding Alliance (AABA) in 2000. To date, AABA is the only non-profit organization solely committed to educating and promoting breastfeeding among African American women. AABA’s goals

are to provide information to African American women and their families regarding the benefits of breastfeeding and to provide support to breastfeeding mothers (2009).

Volunteers from AABA work with women during their second trimester and continue to provide breastfeeding support and resources through the postpartum period. The website identifies several satellite offices in particular geographic areas where they focus their efforts.

Levels of Breastfeeding

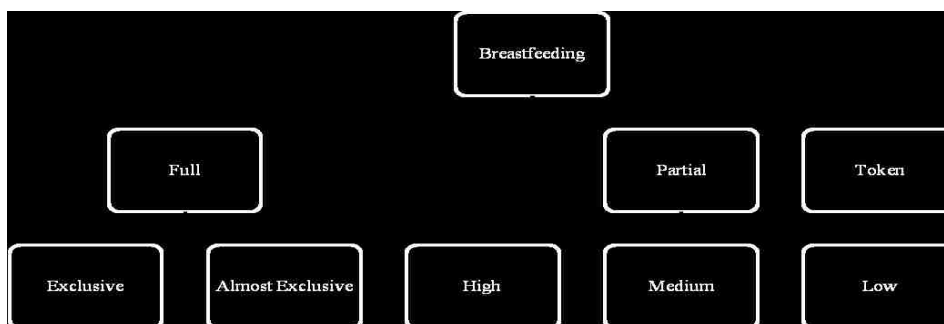
WHO (1996) defined breastfeeding as receiving breast milk straight from the breast or expressed. However, it is important to establish levels of breastfeeding. Homogeneity in defining breastfeeding levels is needed to more accurately and comparably evaluate data nationally and globally, enhance communications between programs, increase the utility of research findings, and communicate findings to the public (Labbok & Krasovec, 1990). Chapman and Perez-Escamilla (2009) reviewed national datasets that assessed breastfeeding in the U.S. They looked at 11 federally subsidized datasets and found that one of the problems with these tools was the lack of consistency when defining breastfeeding (2009). Levels of breastfeeding had not been well-defined until Labbok and Krasovec (1990) collaborated to clarify its classification. Figure 1 is an illustration of the schema for the levels of breastfeeding they developed.

Labbok and Krasovec (1990) identified five levels of breastfeeding: *exclusive* (no other liquids or solids), *almost exclusive* (water, vitamins, and/or other liquids given infrequently in addition to breast milk, but no formula), *high partial* (less than one bottle formula/day), *medium partial* (at least one full bottle of formula/day), and *low partial* (at

least half of the feedings are formula). The five levels are related to two broader categories that indicate overall amount of breastfeeding, which the authors characterized as *full* for the essentially exclusive breast-feeders and *partial* for those introducing varying amounts of formula. They also have a *token* category indicating non-nutritive sucking. The authors did not distinguish at what infant ages, in months, that this schema was relevant, which somewhat limited its utility. Yet, they contended that their framework should be universally functional when defining breastfeeding behaviors. As a consequence, if researchers used these levels “comparisons would be improved and conclusions strengthened” (Labbok & Krasovec, 1990, p. 229). However, these levels have not been widely adapted in the literature since then, so exacting comparisons in meanings are rare between studies. For the purposes of this study, the schema developed by Labbok and Krasovec (1990) was used to operationalize amount of breastfeeding when interviewing women who identified as breastfeeding at 3-4 weeks postpartum.

Figure 1

Breastfeeding Definition Chart



Note. Adapted from “Toward consistency in breast-feeding definitions,” by Labbok & Krasovec, 1990, *Studies in Family Planning*, 21(4), p.227.

Purpose of the Study

The purposes of this study were two-fold: (a) to determine if there is a difference in breastfeeding self-efficacy during the prenatal period between African American women who intended to breastfeed and those whose intention was to bottle-feed and (b) to listen to African American women individually in an attempt to gain insight into their infant feeding choices through analyzing their personal narratives. To date, no study has examined prenatal breastfeeding self-efficacy exclusively among African American women and used personal narrative interviewing to inquire about their feeding choices.

Significance to Nursing Practice

Healthcare providers (HCPs) are in an optimal position to encourage and motivate women to breastfeed. However, the influence of HCPs has been shown to be both positive and negative for women by various researchers (Corbett, 2000; Raisler, 2000; Beal, Kuhlthau, & Perrin, 2003; Cricco-Lizza, 2004 & 2006; Stolzer & Zeece, 2006). For example, using focus groups, Raisler (2000) noted that many women (number and ethnicity not specified) described instances where their certified nurse-midwife (CNM) or physician discussed and encouraged breastfeeding. They also noted that their HCPs praised them for their decisions to breastfeed. On the other hand, in a survey conducted by Beal et al. (2003), 48% of all African American women surveyed ($n = 4,791$) reported receiving no breastfeeding advice from their HCPs. The literature showed that all HCPs, particularly those who provide care to women and infants such as nurses and CNMs, are in ideal situations to provide women with infant feeding options in order for them to make informed choices. A need exists for amicable discussions between women, their support systems, and providers addressing the pros and cons of breastfeeding (Robinson & VandeVusse, 2009). The results of this current study were intended to disclose African

American women's stories regarding their infant feeding choices, including factors that influenced their decision making and self-efficacy. The information obtained directly from the target population in this study will help HCPs better understand how African American women chose their infant feeding method. To the extent that HCPs can improve their practice approaches in the future to promote and support breastfeeding, analyzing the data from the women who participated will result in their perspectives and suggestions used as contributions to quality improvements in care.

Significance to Nursing Research

The benefits of breastfeeding, specifically to African American women and their infants are well documented in the literature. Yet, health disparities in breastfeeding, infant mortality and morbidity continue to exist between African Americans and Caucasians. Nurse researchers need to continue to conduct research to close these disparity gaps.

To aid in the research, the development and use of valid and reliable instruments are needed that are specific to identify factors that influence African American women's infant feeding choices. Tools used postpartum, such as the Breastfeeding Self-Efficacy Scale-Short Form (Dennis, 2003), have been found to be reliable and valid among Caucasian women only. In fact, the Prenatal Breastfeeding Self-Efficacy Scale (Wells, Thompson, & Kloeblen-Tarver, 2006) is the only scale related to this construct that has been shown to be reliable and valid among a sample of predominately African American women.

Furthermore, the use of positivistic methods (e.g., an exclusively quantitative approach) was considered insufficient because these one-sided studies fail to include the

voices of the vulnerable population studied. Once influential factors are identified, it is imperative that nurse scholars also examine how African American women make their infant feeding decisions based on these factors. By studying African American women's infant feeding viewpoints, their voices can be heard. Through the use of qualitative methods (e.g., narrative interviews), African American women were listened to allowing for an understanding of their decision-making processes. The findings from this study can be used to examine factors found in the literature and search for new themes expressed by the African American women in the sample. There needs to be a better understanding of whether African American women identify the factors reported in the literature as influences on their infant feeding choices. Until then, it is difficult to move forward to develop and test programs aimed at increasing breastfeeding rates among the group who, currently, are the least likely to breastfeed.

Significance to Nursing Education

In order to be effective advocates for breastfeeding, nurses need to be knowledgeable about breastfeeding. It has been identified that nurses receive inadequate training from their undergraduate programs in breastfeeding support (Dennis, 2002; Marzalik, 2004; Tillett, 2007). This insufficiency in training may be attributed to the lack of standardization in curriculum regarding breastfeeding education (Chen, 2001). It is crucial that breastfeeding preparation begins at the undergraduate period as entry level staff nurses on labor and delivery and postpartum units have immediate access to mothers who need their expertise and support when initiating breastfeeding. Having received uniform, basic breastfeeding education during their undergraduate training may increase confidence in teaching breastfeeding by nurses and reduce inconsistencies in

breastfeeding information they convey to childbearing women (Fooladi, 2001).

Furthermore, bedside nurses and advanced degree practitioners, such as Pediatric Nurse Practitioners (PNPs), CNMs, and Women's Health Nurse Practitioners, need to have a continued commitment to and emphasis on lifelong learning about breastfeeding updates to integrate into their practices. In one study of PNPs (Hellings & Howe, 2004), the researchers reported they were supportive of breastfeeding, however these HCPs provided inconsistent information that was based more on personal experiences (three-fourths of them had breastfed) than current evidence. By attending conferences and reading research related to breastfeeding, nurses can remain informed about current breastfeeding trends and implement best practices.

This study is intended to contribute to nurses' understanding of cultural influences on infant feeding choices made by African American women. As women participants revealed their processes of infant feeding decision-making during interviews, nurses can also learn more about educational methods that are helpful and those that are not, to use to improve the quality of future education on this topic. At all levels of nursing education, cultural differences among African American women and women from other racial and ethnic backgrounds in regard to infant feeding choices need to be identified. Without these data, nurses cannot learn the preferred interventions to better promote and support breastfeeding among varied groups of women. One approach does not work for all women. Educators need to enhance their teaching by including new information, such as that which acquired by this study, to help nurses learn to provide culturally relevant care.

Organization of the Study

In this chapter, breastfeeding has been identified as the healthiest form of infant feeding. This finding has been supported in the literature and has received national and global attention. Despite modest national increases in breastfeeding rates, African American women have continued to be the population most likely to bottle-feed.

Chapter One has presented the background; statement of the problem; identified levels of breastfeeding; purpose of this research; and the significance of this study to nursing practice, research, and education. Chapter Two provides the philosophical and theoretical underpinnings that guided this dissertation, a comprehensive and critical review of the literature, gaps in the literature, purposes of the dissertation, and assumptions regarding the study. In Chapter Three, an introduction of a pilot study conducted, the methodology, instruments and procedures that were used to gather data, the method of analysis, and the limitations are presented. Chapter Four, is the publication from the pilot study conducted. Lastly, Chapter Five is the summary and results of the study.

CHAPTER TWO

Review of the Literature

Research pertaining to African American women's newborn feeding choices, particularly breastfeeding, has spanned over three decades; yet, the rate of breastfeeding for this population remains the lowest of all races according to the last reported data from 2006 (CDC, 2009). To better understand the factors that influence the rate of breastfeeding among African American women, an extensive review of the literature is provided to identify what is known and uncover gaps. In the process, known differences between breastfeeding and bottle feeding were examined, as well as the current national context aimed at encouraging higher breastfeeding rates in documents such as *Healthy People 2000* and *2010* (USDHHS, 1990, 2000).

To comprehend the context, the philosophy that underpinned this dissertation is presented. Black Feminism was chosen to explain the focus on African American women's infant feeding choices. Self-efficacy was used as the theoretical framework, which also respects the views of the African American women who participated in the study.

Philosophical Underpinning: Black Feminism

In nursing, philosophy is concerned with the nature of knowing (epistemology). There are various ways of knowing. For example, empirical knowing is based on logic; more specifically, what is observed (Carper, 1978). This type of knowing is reliant on the observer (the researcher) believing that he or she is objective about the phenomenon being studied. There is also a belief that numbers will provide truthful information. The

ultimate goal of empirical knowledge is to predict and control natural phenomena (Guba, 1990). This type of philosophy can dehumanize the research process by losing focus on the individuals.

On the other hand, constructivism is an epistemological approach that is based more on relativist ontology, meaning knowledge is socially created, therefore, various realities and interpretations exist (Newman, 1999). A constructivist approach to research involves the researcher interacting with the participant about the phenomenon under study, in this case participants, to create knowledge (Guba & Lincoln, 1994). Thus, the researcher and the participants can be viewed in the center of the research enterprise together. While this philosophy may give voice to the participants, it could also be greatly influenced by the researchers' perspectives on the phenomena. In constructivist research, the background of the researcher can greatly influence his or her interpretations which may contribute to misinterpreting subtle meanings in the data.

Caution needs to be exercised when a researcher seeks to give voice to a group who has historically been silenced. Therefore, Black Feminism was chosen as the philosophical standpoint for this research. African American women need to be moved from the margins of research to the center by placing them as the central focus of this study. As historiographer Morton (1991) stated:

“Afro-American women have long continued to be portrayed from the outside, with little attention to their inner lives. The shaping of Black woman’s story has revealed much more about the pictures in the minds of its shapers than about the diversity and complexity of her realities (p.154)”

Despite the fact that nurse researchers have become engaged in feminist research and theory development, few have embraced the perspective of African American Feminism (Barbee, 1994; Taylor, 1998). The emergence of Black Feminism surfaced as a

much needed response to the “theoretical invisibility” (Taylor, 1998, p. 53) and lack of direct attention to African American women and their views. According to Black Feminist thought, African American women and other women of color are more marginalized than Caucasian women because of social oppression that exists in multiple factors: race, gender, and socioeconomic class (Collins, 1990). This narrowed view of humanity and women that frequently ignores class, race, and gender lacks inclusivity and fails to provide an expansive analysis that would encompass more diverse experiences and viewpoints.

Barbee (1994) contended that “the exclusion of Black women’s experience obscures both the special insights of Black women and the moral fallibility of White women in the contemporary women’s movement” (p.498). The Black Feminist epistemology seeks to know the varied perspectives of African American women who likely experience living differently than their Caucasian counterparts. Black Feminists developed theoretical dialogues that addressed these intricate experiences of African American women, occurrences that had been previously ignored by general feminist theorist.

In the review of the literature on African American women’s infant feeding decisions, no author has used the Black Feminist perspective. McKinley and Hyde (2004) and McCarter-Spaulling (2008) have discussed feminism and breastfeeding. They argue that breastfeeding is gender specific and it contests the liberal feminist principle of gender-neutral childbearing (McCarter-Spaulling, 2008). McKinley and Hyde (2004) noted that the subject of breastfeeding has been overlooked by feminist researchers for various reasons. They stated that “reproductive behaviors, such as pregnancy, childbirth,

and breastfeeding all pose a challenge to the concept of equal treatment espoused by ‘U.S. feminist’” (p. 388). Additionally, because 93% of their sample was Caucasian, it is hard to conclude that the authors incorporated Black Feminist thought under the umbrella of ‘U.S. feminist.’” Therefore, the need for the epistemological basis for this study was highlighted.

The perspective of the Black Feminist was selected for this dissertation because it offers a more suitable examination of the lives of African American women than the general feminist view. At its crux, the Black Feminist standpoint values and centers the experience of African American women and empowers them with the opportunity to interpret their realities as they see them (Taylor, 2005). Collins (1990), a pioneer of the Black Feminist movement, contended that “at the core of the Black feminist thought lie [ideas] created by African American women which clarify a Black woman’s standpoint” (p. 15). An attempt was made to learn directly from African American women how they came to their infant feeding choices. By recording and analyzing their views and acknowledging personal views during the process, subjective and objective ways of examining the data for meanings was included.

Furthermore, it is imperative to progress “beyond dichotomous thinking as it relates to African American women and think more critically about the range of unique experiences within groups of African American women” (Gentry, Elifson, & Sterk, 2005, p.249). Barbee (1994) reported African American women face multiple pressures that involve multiplicative relationships. For example, “in the United States, the multifaceted influences of race, gender, and often social class interact in ways that render Black women vulnerable” (Barbee, 1994, p. 498). When relating these concerns to African

American women and their infant feeding decisions, recognizing that various influential factors had impacts on decision making is insufficient. Researchers need to investigate how and when these aspects affected the decision making process. By using a Black Feminist standpoint throughout this study, the results can be used to inform those who may live outside the realities of African American women about their life experiences related to infant feeding.

Theoretical Framework: Self-Efficacy

Developing from the Black Feminist standpoint which honors each woman's uniqueness and recognizes the group's marginalization, a theoretical framework which is based in an individualistic viewpoint was chosen. The theory that guided this study was the theory of self-efficacy. Self-efficacy is also related to the concept of empowerment. Jones (1990) contended that confidence in one's ability to achieve a certain goal was a necessary quality in becoming empowered.

The theory of self-efficacy was developed from Bandura's (1977) social cognitive theory. According to the theory of self-efficacy, an individual assesses his or her ability to carry out a specific behavior. This self-perceived competence greatly influences one's preference for and diligence in such actions. According to Bandura, a highly efficacious person will most likely initiate a new activity (e.g., breastfeeding) and preserve it (e.g., continuation of exclusive breastfeeding) until mastery is accomplished. On the other hand, a less efficacious individual will avoid this new activity or give up more hastily.

The theory of self-efficacy has been studied in the context of breastfeeding. Several authors (O'Campo, Faden, Gielen, & Wang, 1992; Dennis & Faux, 1999; Blyth, Creedy, Dennis, Moyle, Pratt, & De Vries, 2002; Noel-Weiss, Cragg, Bassett, &

Woodend, 2006; McCarter-Spaulding & Gore, 2009) have examined breastfeeding during the postpartum period and found that breastfeeding women with high self-efficacy (confidence) are more likely to continue to breastfeed for an extended amount of time. These authors operationalized breastfeeding self-efficacy using the Breastfeeding Self-Efficacy Scale (BSES) (Dennis & Faux, 1999) or BSES-Short Form (Dennis, 2003). Wells, Thompson, & Kloeblen-Tarver (2006) examined breastfeeding during the prenatal period and found similar results. They used a prenatal self-efficacy tool they developed. Wells et al. (2006) and McCarter-Spaulding and Gore (2009) were the only researchers who studied this concept with high percentages (> 50%) of African American women in their samples.

Bandura (1977) asserted that self-efficacy was situation specific and not necessarily related to the individuals' personality attributes that function independently from the situation. He identified four sources of information that shaped self-efficacy: performance accomplishments (previous experience); vicarious experience (previous exposure to the specific behavior); verbal persuasion (support from external sources); and physiological states and stressors (body's reaction to the behavior). Each information source identified by Bandura is described in more detail below.

Performance Accomplishments

When using this particular source of information, the individual's reflection on and perception of his or her successes and failures with previous experiences effected self-efficacy (Bandura, 1986). For example, if an individual was unsuccessful in the past with a specific behavior (e.g., breastfeeding), then they are less likely to believe in their ability to perform this task in the future. Furthermore, cognitive appraisal of one's

performance is equally important. According to Bandura (1997), cognitive appraisal is influenced by person's perception of how difficult the act was perceived to be, the amount of assistance needed, and the amount of time exhausted to achieve the task. Studies have shown that previous breastfeeding experience increased the likelihood that a woman would breastfeed again (Sullivan & Jones, 1986; Humphreys, Thompson, & Miner, 1998; Wiemann, DuBois, & Berenson, 1998; Hannon, Willis, Bishop-Townsend, Martinez, & Scrimshaw, 2000; Raisler, 2000). Therefore, it was important to examine previous experiences when studying this population.

Vicarious Experiences

In the absence of personal experience, observing others carry out specific behaviors (role modeling) can impact perceived self-efficacy (Bandura, 1986). Observing others master a particular skill can be influential to those who have experienced failures on the same task in the past. This observational learning is usually more effective when the observer has similar attributes as the role model (Bandura, 1997). There has been evidence in the literature that whether or not women have been exposed to breastfeeding through family, friends, peer counselors, or the media will have an effect on their infant feeding choices (Cricco-Lizza, 2004, 2005, 2006; McCarter-Spaulding, 2007; Meier, Olson, Benton, Eghtedary, & Song, 2007). For example, in a study by Cricco-Lizza (2004), some of the informants for whom bottle-feeding was the norm reported never observing anyone (family or in the media) breastfeed. Through the use of focus groups, Meier et al. (2007) found that mothers noted lack of public support for breastfeeding as a barrier. Therefore, it is important to determine if having role models influenced infant feeding choices among African American women.

Verbal Persuasions

Information that is given from someone deemed reliable and/or knowledgeable is more likely to have an effect on an individual's perception of whether they are capable of carrying out a task successfully or not. HCPs, as well as persons close to a woman, who offer infant feeding advice have been shown to have an effect on maternal infant feeding preferences (Corbett, 2000; Hannon et al., 2000; Cricco-Lizza, 2004, 2005, 2006). Using unstructured interviews, Corbett (2000) noted that of the 5 women ($n = 10$) who chose some form of breastfeeding (exclusive or mixed breast-and bottle-feeding), all reported deciding to do so because of the advice from their HCPs. Hannon et al. (2000) found similar results among African American and Latina adolescent mothers. Their data from semi-structured interviews and focus groups revealed that adolescent mothers' ($n = 35$) infant feeding choices were influenced by advice from their own mothers, friends, and HCPs. For example, girls whose mothers or friends discouraged breastfeeding were more likely to opt to bottle-feed. Furthermore, receiving verbal support from others in regards to one's ability to perform tasks may positively affect self-efficacy (Bandura, 1986).

Physiological States and Stressors

While engaging in various behaviors, individuals make note of physiological and stressors associated with physiological changes that arise (Bandura, 1997). If negative stressors, such as pain, occur initially when performing a task, then self-efficacy is most likely decreased. The opposite is true when positive signals are triggered (e.g., bonding when breastfeeding). According to Bandura (1997), individuals interpret physiological challenges as indications of vulnerability. So, it is important to examine if the physical

demands and associated physiological responses with of breastfeeding are factors in infant feeding decisions among African American women. If negative physiological states and stressors are influential in a woman's preference to opt to bottle-feed, then interventions need to be developed and implemented to eliminate circumstances.

Theoretical Framework Related to Philosophical Underpinning

Self-efficacy was an appropriate theoretical framework from which to examine African American women's infant feeding choices. It complemented the Black Feminist philosophical standpoint forming the basis of the inquiry when searching for the dynamics that arose in the lives of individual African American women regarding their infant feeding choices. Therefore, extending Black Feminism by applying a specific theory that can recognize potential empowerment was intended to more fully examine the phenomenon of study, African American women's infant feeding choices.

Outline of the Literature Review

Presented in this review of the literature, is an initial chronological approach by decade to critically analyze research on infant feeding preferences of African American women over the past thirty years. Data was collected using database and ancestral searches. *Cumulative Index to Nursing and Allied Health Literature (CINAHL)* was the primary database used. Keywords used to focus the search were: African American women, Black women, breastfeeding, and infant feeding. Inclusion criteria included studies that included large percentages (over 30%) of African American women and focused on infant feeding or breastfeeding. In a few cases, studies in which race was not identified were included. Limiting the review to research that has been published,

dissertations and theses were excluded. The search concentrated on the time period from the 1980s to the present, when the health benefits of breastfeeding were increasingly being promoted in the U.S. To detect any studies that may have been overlooked during the database search, an ancestral search was employed using the original articles retrieved. Thus, the search yielded 58 research articles, all of which were analyzed.

To facilitate the analysis of the literature, categorization of the studies by primary method was utilized. For example, the uses of quantitative and/or qualitative methodologies are noted and discussed. Additionally, the discipline of the primary author and total sample size are provided for each study; these are important facts that can influence the interpretation of the findings. Tables are used throughout the literature review to summarize the data in each study to allow for ease of comparison. After presenting these key details in the examination of the literature by decade, the studies were re-categorized in a variety of ways to further enhance the analysis by examining them from multiple perspectives. For example, after the chronological analysis characterized by primary method, exploration of the study purposes to examine the areas that had been covered to date were added and consideration was given to what might be missing in this body of research. Next, the various factors that were identified in studies as recurring influences on African American women's infant feeding decisions were categorized. Subsequently, the conceptual frameworks that appeared in the literature were identified and grouped. Finally, a synthesis across the multiple perspectives used to examine the studies to identify gaps in the literature that formed the basis for the study was employed.

Chronological Review of the Literature

Breastfeeding Research: 1980s

In the U.S., there had been a decline in breastfeeding initiation and continuation rates until the 1970s when the national rates began to rise (Martinez and Nalezienski, 1981; Rassin, Richardson, Baranowski, Nader, Guenther, Bee, et al., 1984; Biegelson, Cowell, & Goldberg, 1986). The rise in breastfeeding rates was attributed to increasing community and professional consciousness of the benefits of breastfeeding (Rassin et al., 1984). Despite that fact that rates were on the incline, breastfeeding rates were not consistently differentiated between races/ethnicities at that time.

In the 1980s, not many researchers differentiated breastfeeding rates by race. From this critical analysis of breastfeeding research in the 1980s, it is noted that the research was conducted using one of two methods of basic data collection. Thus, the research was divided into two subgroups: those conducting surveys and those using retrospective record reviews. The basic facts on the research studies in this decade are presented in Table 2. Critiques of the literature in these two sub-groups are described in the order presented in the table which is chronological according to type of data collection.

Survey research. During this era, the majority of the researchers (Martinez & Nalezienski, 1981; Martinez, Dodd, & Samartgedes, 1981; Rassin, et al., 1984; Feinstein, Berkelhamer, Gruszka, Wong, & Carey, 1986; Kurinij, Shiono, & Rhoads, 1988; Parraga, Weber, Reeb, & Lerner, 1988) used various types of surveys to collect data on infant feeding. The survey method facilitated the relatively large sample sizes that were derived from existing datasets. Therefore, quantitative analyses predominated.

For example, Martinez and Nalezienski (1981) reported results of surveys

conducted from 1955–1979. The researchers focused their report on the period from 1971-1979. Mail questionnaires were sent to a sample that was considered to be representative of the national population of mothers who delivered infants up to age 6 months. The surveys of this unknown sample asked the women to identify what type of feeding methods they had used at 3 points (in-hospital, and then at 5 & 6 months postpartum). In 1979, Martinez and Nalezienski (1981) found that 51% of the respondents reported breastfeeding in the hospital; this was a 26% increase from 1971. There were also increases in breastfeeding duration in 1971 and 1979 at 5 and 6 months (from 5.5 to 23% respectively). However, when describing the demographics of the samples, the racial distributions were not identified and neither stated sample sizes for comparison. Thus, it was not possible to ascertain if breastfeeding disparities existed between races or verify if the samples were truly representative of the U. S. population.

Martinez et al. (1981) further expanded on the previous study by examining infant feeding patterns during the first year of life. They conducted bi-monthly phone interviews at 8, 10, and 12 months. Martinez et al. found that only 12% of infants, ages 8 – 12 months, were breastfed. Once again, demographic data was not differentiated between races and sample size not reported. The authors reported that phone surveys had advantages over mail surveys, such as feasibility of clarifying data and increased response rates. On the other hand, Martinez et al. (1981) also noted the limitations of conducting phone interviews as a method of data collection: the interview was restricted to women who had phone access and was more expensive than mail surveys.

Table 2

Summary of Research Related to African American Women and Infant Feeding Choices: 1980s

1st Author & Year	Discipline of 1st Author	Purpose of the Study	Type of Study	Total <i>n</i>	% of AAW^a in Sample	Data Collection
Data Collection Type: Surveys						
Martinez (1981)	Marketing	Determine the trend in breastfeeding from 1955-1979 with emphasis on period between 1971-1979	Quantitative	DNS ^b	RND ^c	Mail-surveys by Ross Laboratories
Martinez et al. (1981)	Marketing	Determine infant feeding patterns in the U.S. during the 1 st 12 months of life	Quantitative	DNS ^b	RND ^c	Mail- & phone- surveys by Ross Laboratories
Rassin (1984)	Medicine/ Pediatrics	Explain factors influencing feeding choice among low-income & low educated women	Quantitative	358	37	Self-completed questionnaires developed by the researchers
Feinstein (1986)	Medicine/ Pediatrics	Determine the effect of formula samples & other hospital-related factors on breast-feeding success	Quantitative	166	78	Survey instrument adapted from another study, monthly phone calls up to 4 months
Kurinij (1988)	Epidemiology	Evaluate the effect of ethnicity & other demographic variables as predictors of infant feeding choice; determine the time in which major decreases in breastfeeding occur, & determine the effect of SES on duration	Quantitative	1,179	57	In-hospital & follow-up home questionnaires
Parraga (1988)	Nutrition	Obtain infant feeding patterns of urban black infant through 6 months	Quantitative	116	100	Diet history format patterned after previous dietary histories, food frequency checklist all developed by researchers
Data Collection Type: Retrospective Review of Records						
Beigelson (1986)	Nutrition	Document breastfeeding practices among low-income women	Quantitative	2,801	RND ^c	Child health clinic records
Sullivan (1986)	Nursing	Examine breastfeeding adoption by low-income AAW using the innovation decision process	Quantitative	181	100	Secondary analysis of larger study
Grossman (1989)	Medicine/ Pediatrics	Characterize low-income, high-risk breastfeeding women, determine if breastfeeding trend is increasing	Quantitative	2,124	66	Medical charts

^aAfrican American Women (AAW). ^bData not stated (DNS). ^cRace not differentiated (RND).

Another criticism found in the literature about the earlier studies was their use of surveys because of highly variable response rates. Response rates during the 1970s ranged from 50-70% (Rassin et al. 1984) and it was thought that this variation in responses may have affected the accuracy of reported breastfeeding rates during this era.

Although the researchers discussed some limitations to their own studies, additional limitations were found. For instance, self-reported measures may have revealed responses the participants felt were socially correct and not disclosed true perceptions (e.g., the Hawthorne effect). Recall bias is also of concern because of the amount of time that passed between women's feeding decisions and the survey (Sanderson, Placek, & Keppel, 1991). Most importantly, these earlier researchers (Martinez & Nalezienski, 1981; Martinez et al., 1981) included in this review were from the marketing department of a major healthcare company that manufactured nutritional products, including infant formula. Therefore, potential biases in the research due to a possible conflict of interest would raise questions about the motivations behind the research.

Other researchers during this era recognized that previous studies, like Martinez and Nalezienski (1981) and Martinez et al. (1981), used a variety of national surveys that illustrated a rise in breastfeeding initiation and continuation, but it was impossible to determine if they were representative of the total U.S. population. For example, Rassin et al. (1984) pointed out that respondents to previous surveys were from higher socioeconomic classes than the majority of the population. Kurinij et al. (1988) cited that previous studies failed to examine the effects of ethnicity and/or socioeconomic status. Thus, the survey researchers in the latter part of the 1980s tended to focus on factors such

as sampling and traits of populations that might affect breastfeeding decisions and feeding patterns among those not well represented in the literature (Rassin et al., 1984; Feinstein, et al., 1986; Kurinij et al., 1988; Parraga et al., 1988). Furthermore, these researchers conducted in-person surveys compared to previous studies that conducted mail or phone surveys.

For example, using surveys with a sample of 358 (37% of whom were African American), Rassin et al. (1984) gathered demographic and intended feeding choice data. Surveys were administered in the hospital by one of the researchers, within 48 hours post-delivery. This type of in-person surveying yielded a response rate of 95% (Rassin et al., 1984). Only 9.2% of African American women intended to breastfeed. After discharge, the researchers attempted to conduct follow-up phone surveys with breastfeeding mothers ($n = 98$) at 6 months post-discharge. Because contact information for many of the participants could not be obtained, only 64% of the breastfeeding mothers were able to be contacted after discharge. Of this percentage, 21% were still breastfeeding at the time of the follow-up survey. However, the researchers did not specify the race/ ethnicity of the breastfeeding mothers; thus, it is not known how many African American women actually initiated and/or continued to breastfeed.

While Rassin et al. (1984) reported the breastfeeding intent of African American women, Feinstein et al. (1986), Kurinij et al. (1988) and Parraga et al. (1988) reported actual infant feeding choices. However, there were wide variances in the rates. Parraga et al. (1988) had a sample of 116 African American mothers who were asked to complete a dietary history form at well-child visits and complete a face-to-face questionnaire administered by trained interviewers. The researchers found that at 3 weeks postpartum,

20% of the participants who had initiated exclusive breastfeeding had continued and 22% were breastfeeding and using formula. In stark contrast, using a larger sample ($n = 668$) of African American women who comprised of 57% within a total sample of 1,179, who completed surveys, Kurinji et al. (1988) discovered that of the African American women who originally were breastfeeding in the hospital ($n = 324$) or 74% had continued at 1 month postpartum. Feinstein et al. (1986) also reported high breastfeeding continuation rates at 1 month postpartum (83%) based on monthly phone follow-ups were they answered structured questions related to their current feeding method. Seventy-eight percent of the sample were African American mothers.

One reason for the variance in results may be the definitions of breastfeeding used by the researchers. Breastfeeding was defined by Feinstein et al. (1986) into two categories: total (no more than one formula supplement per day and partial (greater than one formula supplement per day). Parraga et al. (1988) used three categories to define breast and formula feeding: solely breastfed (breast only), partially breastfed (breastfed with formula supplementation), and formula fed. Kuriniji et al. (1988) used four classifications: exclusively breastfed (breast only), breast- and formula fed, formula feeding with intention to breastfeed, and formula feeding without intent to breastfeed. As mentioned in Chapter One, the inconsistencies in definitions of breastfeeding terms created difficulties in comparing results.

In addition, survey research in the latter part of the decade was inclusive or at times solely focused on African American women; it had similar flaws noted during the earlier years. For instance, all surveys used closed-ended questions (Marinez & Nalezienski, 1981; Martinez et al., 1981; Rassin et al., 1984; Feinstein et al., 1986;

Kurinji et al., 1988; Parraga et al., 1988). Participants were simply asked their demographic information (e.g., age, educational level, and income.) and which feeding method they had chosen; if they were breastfeeding, they were asked about breastfeeding duration (Marinez & Nalezienski, 1981; Martinez et al., 1981; Rassin et al., 1984; Kurinji et al., 1988). These approaches lacked depth because they did not allow for an explanation of the decision-making of the participants.

Retrospective review of records. Collecting and analyzing infant feeding data from medical records was the other trend noted in the late 1980s. These studies sought to characterize women who breastfed (Grossman, Larsen-Alexander, Fitzsimmons, & Cordero, 1989) as noted in Table 2. Grossman et al. (1989) argued that the results of mail and phone survey may have misrepresented women of lower economic backgrounds because this population was more likely not to return mail surveys or difficult to be reached by phone or mail. Therefore, in their study, Grossman et al. (1989) reviewed pre- and post-natal records of 2,124 (66% African American) women who had delivered between the periods of 1976-1985 and found that only 15% of the African American women in the sample initiated breastfeeding. This study was limited by the fact the sample population was considered high-risk, meaning they had some medical (e.g., pregnancy induced hypertension, diabetes) and/or social (e.g., substance abuse, unwanted pregnancy) issue or condition.

Similar results were noted in a study conducted by Biegelson et al. (1986). They conducted two retrospective reviews (in 1979 and 1982) using records from child health clinics yielding 1,391 records in 1979 and 1,410 in 1982. In the 1979 review, 7% of the women who brought their newborns in for their well-child visits reported exclusive or

combination (breast and formula) feeding. Three years later, the rates were not much better (9%). As with some of the earlier studies, race/ethnicity was not specified, so no conclusions could be inferred related to infant feeding choice based on race. Furthermore, the process of reviewing medical records posed limitations to the data collected. In fact, Biegelson et al. (1986) described the variation in recordkeeping between the six Child Health Station sites limited their data collection. This dissimilarity in recordkeeping among the various clinics could lend itself to inaccurate data being used to conduct research, yielding erroneous findings.

In addition, Sullivan and Jones (1986) conducted a secondary analysis from a previous study funded by the Nestle Coordination Center for Nutrition. In their study, Sullivan and Jones examined breastfeeding adoption among 181 low-income African American women. They found that the majority of the women (64%) made the decision not to breastfeed. The women had made their infant feeding choice early (not specified) in their pregnancies. Several limitations with using data from a previous study were noted by the authors. For example, data collected in the original study was done by various interviewers which may have lead to differences in the participants' responses (Sullivan & Jones, 1986). Furthermore, the authors noted bias toward breastfeeding in the original study's questions which may have an effect on the participants' responses. It is important to note that the Nestle Company, a manufacturer of infant formula, was the funding source for this study. This may have had an impact on the researchers' perspective.

Moreover, throughout the 1980s, regardless of data collection method, nurse researchers were not well represented in the area of breastfeeding research, with the exception of Sullivan and Jones (1986). The majority of the studies were conducted by

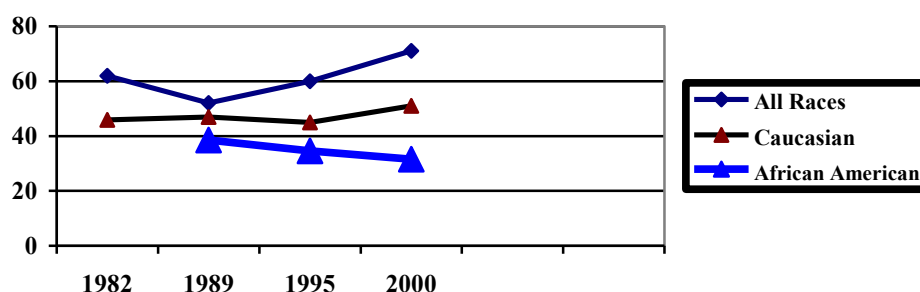
physicians, pediatricians in particular, and nutritionists. These studies reported low breastfeeding rates for African American women; yet, failed to explore reasons, outside of demographics, for these low statistics. It is important to note that the socioeconomic state of African American women during this time period was generally more disadvantaged than their Caucasian counterparts (Kurini et al., 1988). Thus, the common characteristics of African American women participants in studies related to infant feeding decisions were low-income, recipients of some type of federal supplementation (e.g., WIC and/or other assistance), unmarried, and had low educational levels (Rassin et al., 1984; Biegelson et al., 1986; Parraga et al., 1988; Kuriniji et al., 1988; Grossman et al., 1989). Therefore, demographics (e.g., age, ethnicity, educational level, and socioeconomic status) were thought to be key attributes associated with whether or not African American women breastfed. This assumption may be due to the fact that the researchers focused mainly on low-income African American women. African American women with higher educational levels were more apt to breastfeed than those women with a lower educational background (Rassin et al., 1984; Kurini et al., 1988; Parraga et al., 1988; Grossman et al., 1989). Research during this time was more descriptive as opposed to exploratory or experimental. Additionally, qualitative methodologies (e.g., ethnography or narratives) were not employed.

Breastfeeding Research: 1990s

During 1990, the U.S. Public Health Services established *Healthy People 2000* with objectives for breastfeeding aimed at a 75% initiation rate and a 50 % continuation at 6 months (USDHHS, 1990). Unfortunately, as the new decade approached, overall U.S. breastfeeding rates had dropped; furthermore, the already bleak figures for African

American women remained on a continuous downward trend (Ryan, Rush, Krieger, & Lewandowski, 1991). Overall breastfeeding initiation rates had declined from 61.9% in 1982 to 52.2% in 1989 (Ryan et al., 1991). In particular, there was a 10% drop in breastfeeding rates among young, low-income African American women (Ryan et al., 1991). Figure 2 is an illustration of breastfeeding initiation rates by race/ ethnicity during the 1990s when data by race became more available.

Figure 2
Breastfeeding Initiation Rates by Race/Ethnicity: 1980s-2000s



Note. Adapted from “Recent declines in breast-feeding in the United States, 1984 through 1989,” by Ryan, A. S., Rush, D., Krieger, F. W., & Lewandowski, G. E., 1991, *Pediatrics*, 88(4), 719-727 & from “Years 1991-1998: Breastfeeding Trends Through 1998. Mother's Survey. Years 1999-2001: Unpublished data,” by Ross Products Division. Abbott Laboratories, 1999.

The research conducted during the 1990s was categorized by research design methods: quantitative, qualitative, and mixed-method as illustrated in Table 3. The studies in Table 3 appear chronologically according to the type of research design. In the text, this portion of the body of research has been critically analyzed.

Quantitative design. Research in the 1990s continued to focus mainly on low-income African American women using predominately quantitative methods. Similar to studies conducted in the 1980s regarding this population and breastfeeding, research during this decade continued to concentrate on the demographic details associated with feeding decisions. Ryan et al. (1991) compared 1984 and 1989 breastfeeding rates, using

large samples from national survey data. Several other researchers (Jacobson, Jacobson, & Frye, 1991; Timbo, Altekuse, Headrick, & Klontz, 1996; Wiemann et al., 1998) all reported breastfeeding rates for African American women at 25% or lower. However, Humphreys et al. (1998) found a rate of 50% and also explored familial and social support as major factors influencing infant feeding decisions. They found that if women received positive information regarding breastfeeding (e.g., benefits) from family members including the father of the baby, these women were more likely to plan to breastfeed than those who received no family input (Humphreys et al., 1998). It is important to note that the researchers used a six-page quantitative questionnaire with a large sample ($n = 1001$) to examine the effect of social support, demographics, and previous breastfeeding experiences on breastfeeding *intent*, not actual behavior. This is of significance because intent may not correlate with actual performance.

Similar to the previous decade; the African American women studied who had lower educational and economic levels were also more likely to choose formula over breast milk. Unfortunately, these studies did not serve to explain the reasons for these findings, including how African American women made their infant feeding choices which might explain the different rates. The majority of the research on African American women and infant feeding during this time continued to be predominately quantitative as shown in Table 3.

There were inconsistencies in the findings associated with infant feeding preferences and healthcare provider and support group encouragement. Healthcare providers and systems were defined as CNMs, physicians, WIC counselors/ nutritionists,

Table 3

Summary of Research Related to African American Women and Infant Feeding Choices: 1990s

1st Author & Year	Discipline of 1st Author	Purpose of the Study	Total <i>n</i>	% of AAW^a in Sample	Method of Data Collection
Quantitative Design					
Kistin (1990)	Medicine	Examine whether health care providers' prenatal education of low-income black women related to increased breastfeeding rates	159	100	2 structured interviews: prenatal & within 4 days post partum
Jacobson (1991)	Psychology	Examine cognitive & personality correlates of breastfeeding in 2 independent samples	187	73	PPVT-R ^c , BD ^d , PC ^e , Beck Depression Inventory, SCT ^f , HOME ^g
Ryan (1991)	Anthropology	Report updates in breastfeeding trends in infant feeding patterns in the U.S. (1984-1989) & compare rates in 1989 with those in 1984	30,855	RND ^b	Mail-surveys (1984 & 1989) by Ross Laboratories
O'Campo (1992)	Epidemiology	Examined psychosocial, demographic, & medical factors identified prenatally that may be associated with longer breastfeeding duration & may serve as suitable areas for prenatal breastfeeding promotion interventions	198	44	BSES ^h
Timbo (1996)	Epidemiology	Identify factors that might be targeted for intervention to increase breastfeeding among AAW	5,142	100	Secondary analysis of the 1988 NMIHS ⁱ
Gross (1998)	Nutrition	Evaluate the effectiveness of motivational videotapes &/or peer counseling on breastfeeding duration among AAW receiving WIC ^k	115	100	Interviews @ 7-10 days postpartum to determine breastfeeding initiation, 24hr recall & infant-feeding checklist @ 7-10 days postpartum to determine feeding method, telephone interviews @ 8 & 16 weeks to determine feeding method & work status
Humphreys (1998)	Nutrition	Describe relationship between breastfeeding intent among socioeconomically disadvantaged pregnant women &	1001	79	Questionnaires

1st Author & Year	Discipline of 1st Author	Purpose of the Study	Total <i>n</i>	% of AAW^a in Sample	Method of Data Collection
		maternal demographics, prior experience, & social support			
Arlotti (1998)	Nursing	Determine the relationship between peer counselor support group and breastfeeding exclusivity and duration among low-income women enrolled in WIC	36	47	Interviews using an interval contact questionnaire
Wiemann (1998)	Medicine	Identify racial/ ethnic differences in prevalence & factors that influence breastfeeding decisions among adolescent mothers	696	30	Face-to-face closed-ended interviews with questions developed by researcher
Qualitative Design					
Locklin (1993)	Nursing	Examine breastfeeding experiences of a group of educated, low-income, minority women	10	80	Face-to-face interviews with researcher developed questions
Underwood (1997)	Nursing	Gather information to describe common infant feeding practice of low-income AAW, determine the influence of cultural & economic variables on infant feeding decisions by AAW	35	100	Focus groups (4) with questions & probes developed by the principal investigator & team of nurse clinicians
Aikin (1999)	Nursing	Explore factors that influence infant feeding choice among AAW who receive care from a WIC clinic	DNS ^j	100	Focus groups (5) with questions developed by researcher
Mixed Method Design					
Dix (1991)	Nursing	Examine the factors affecting women's infant-feeding method & breastfeeding attitudes	81	71	Semi-structured with open-ended questions developed by author
Bentley (1999)	Nutrition	Examine the determinants of maternal breastfeeding intention among inner-city AAW who received WIC	441	100	Structured & unstructured interviews: using an ethnographic guide

^aAfrican American Women (AAW). ^bRace Not Differentiated (RND). ^cPeabody Picture Vocabulary Test-Revised (PPVT-R). ^dBlock Design (BD). ^ePicture Completion (PC). ^fSentence Completion Test (SCT). ^gHome Observation for Measurement of the Environment (HOME). ^hBreastfeeding Self-Efficacy Scale (BSES). ⁱNational Maternal and Infant Health Survey (NMIHS). ^jData Not Stated (DNS). ^kWomen, Infant, and Children (WIC)

and lactation consultants. If support groups were used, they were generally conducted by trained peer counselors. Humphreys et al. (1998) found that healthcare providers' support had little influence on infant feeding choice compared to familial support. Similarly, Gross et al. (1998) reported no change in breastfeeding initiation and continuation among African American women ($n = 35$) who received counseling and motivational videotapes on breastfeeding from an area WIC clinic, in comparison to the control group ($n = 15$).

Alternatively, Arlotti, Cottrell, Lee, and Curtin (1998) conducted a quasi-experimental study examining the effect of breastfeeding peer group support on continuation and exclusivity. They found that women (47% African American) who intended to breastfeed and had received support from trained peer counselors had longer breastfeeding duration and exclusivity than those in the control group (Arlotti et al., 1998). However, peer counseling had no effect on breastfeeding initiation because all the women (control & experimental group) breastfed with the exception of one participant. Kistin, Benton, Rao, and Sullivan (1990) studied the effects of prenatal classes on breastfeeding rates among African American women. African American women who received prenatal breastfeeding education (in a group or individualized setting) were more likely to breastfeed as they had intended in comparison to those with no prenatal breastfeeding education (group 86%, individual, 62%, & control 50%) (Kistin, 1990). In both the latter studies, support and education had positive effects on breastfeeding rates.

Wiemann et al. (1998) found that 1 in 4 African American adolescents chose to bottle feed because of the advice received from their healthcare providers. The researchers conducted in-hospital surveys using trained researchers asked the respondents ($n = 696$; 212 of which were African American) questions related to infant feeding

choice. In addition, Timbo et al. (1996) reported related findings from a secondary analysis using a large dataset. They found that African American women in their sample ($n = 5,142$) who breastfed recalled receiving breastfeeding advice from WIC counselors prior to delivery (Timbo et al., 1996). Even though the main purposes of these three studies were to gain insight into factors that influenced infant feeding choices among African American women, there were major differences in the samples and methods which affected outcomes. For instance, Wiemann et al. (1998) focused solely on adolescents, who may be a uniquely vulnerable group, but not readily comparable to adult women.

Qualitative design. Despite the continued concentration on demographic influences, an emergence of more in-depth inquiries were conducted about African American women's infant feeding choices. Maternal attitudes, confidence levels, and familial opinions of feeding preferences were identified as possible factors in determining infant feeding decisions (Dix, 1991; Locklin & Naber, 1993; Underwood et al., 1997; Aiken, 1999; Bentley et al., 1999).

For example, in a qualitative study by Aikin (1999), counselors led five focus groups of breastfeeding mothers, with 2-9 women in each group in an effort to gain data regarding influential factors that guided infant feeding decisions. Aiken (1999) found support to be a major theme; African American women who breastfed reported doing so when they were supported by their personal environments (family and friends) and healthcare providers (identified as nurses and midwives). This study was limited in that the researchers failed to report the total sample size. It can be assumed that the sample was small because there were anywhere from 2-9 participants in each focus group. Also,

it is impossible to draw conclusions from the demographics of the sample such as income or education because only race was reported.

Locklin and Naber (1993) with a sample of 10 educated, low-income, minority women (8 of who were African American) used a grounded theory approach to investigate women's breastfeeding experiences. By direct observation, face-to-face interviews, and constant comparative analysis, the researchers derived five themes related to breastfeeding experienced by these women: *Against All Odds*, *Personal Motivation*, *Support*, *Attachment*, and *Telling the World*. Their research was innovative in that it focused predominately on African American breastfeeding mothers. African American women in this study made the choice to breastfeed despite perceived obstacles (theme, *Against All Odds*) and late or lack of familial support (theme, *Support*). Women also reported that their determination and persistence in seeking postpartum help when breastfeeding problems arose (e.g., engorgement from the theme, *Personal Motivation*) and the maternal bond they gained through breastfeeding (theme, *Attachment*) helped in their continued successes with breastfeeding. Locklin and Naber (1993) were also pioneers in explaining the concept of breastfeeding empowerment in this group of low-income women, a group marginalized by society through race and economics. They concluded that comments from others that enhanced breastfeeding illustrated that subsequent success can have an effect on the recognition of one's strength among this population (Locklin & Naber, 1993). The concept of realization of one's power found in this study is in concordance with the Black Feminist perspective. Women described how they felt good about themselves and how they wanted to share their successes with others (theme, *Telling the World*). Through their research, Locklin and Naber (1993) further

illustrated how African American women, who have been reported as less likely to breastfeed in previous studies, were able to persevere and breastfeed despite societal and personal obstacles.

Underwood et al. (1997) continued the trend to employ qualitative research to study breastfeeding in African American women. They conducted four focus groups to gather information on infant feeding traditions among 35 low-income African American women. To identify common themes, members of the research team (the primary researcher and nursing center clinicians from the community) held numerous discussions to compare analyses of the transcripts. As a result, six themes were reported: *infant feeding practices of low-income African American women, preferred method of infant feeding, preparation of commercially prepared formula, introduction of cereal(s) and solid foods, introduction of water, and influence of culture and economics on the decisions made by low-income African American women regarding infant feeding.* Because of their relevance to better understanding African American women's infant feeding decisions, two of the themes will be discussed in depth.

In the theme, *preferred method of infant feeding*, Underwood et al. (1997) found that participants preferred bottle feeding despite knowing that breastfeeding was the favored method among healthcare providers and the American Academy of Pediatrics. This insight challenged claims of earlier research that lack of breastfeeding knowledge had a negative correlation with breastfeeding (Parraga et al., 1988). In the focus groups, Underwood et al. (1997) found that African American women's attitudes and values related to infant feeding practices were guided by teachings of their cultural group and economic pressures (theme, *influence of culture & economics on the decisions made by*

low-income African American women regarding infant feeding). The women disclosed that their infant feeding “practices were ‘learned’ from family members and others within their community and ‘shared’ with other new mothers within the community as well” (Underwood et al., 1997, p. 200). This was one of the first mentions of culture and economic demands relative to infant feeding decisions noted in the literature.

Mixed-method design. Other researchers utilized mixed-method inquiry, the use of quantitative and qualitative approaches, to study the issue of low breastfeeding rates among African American women (Dix, 1990; Bentley, Caulfield, Gross, Bronner, Jensen, Kessler, et al., 1999). With a sample of 81 African American women, Dix (1991) conducted semi-structured interviews where women were given the opportunity to explain the basis of their infant feeding choice. She noted that 55% of the women had negative attitudes concerning breastfeeding such as feelings of awkwardness (Dix, 1991). Conversely, if a mother had a positive view of breastfeeding, she was more likely to chose the infant feeding method and initiate it. Dix also noted that only 16% of her sample viewed family as having the biggest impact on their infant feeding choices. The women in this study placed themselves (77%) as the most influential person in their infant feeding decision. Dix interviewed women using some open-ended questions to allow women to express their own statements when explaining their feeding choices; however, the majority of her data were collected through multiple choice questions she had developed. Although this questionnaire had an interrater reliability ranging from 0.81-1.0, she did not specify the number of open-ended questions she used or how these questions were integrated with multiple choice ones.

Bentley et al. (1999) also used a mixed-method design to look at how African

American women's lives influenced their infant feeding intentions. They reported breastfeeding rates of 43% among African American women. In addition to using a structured questionnaire, Bentley et al. (1999) used an ethnographic guide for unstructured interviews to examine various factors potentially influencing infant feeding among this population. From their initial sample ($n = 441$), 80 women were required for the qualitative interview portion of the study. Findings were similar to that of prior quantitative (Timbo et al., 1996; Humphreys et al., 1998; Wiemann et al., 1998) and qualitative (Locklin & Naber, 1993; Underwood et al., 1997; Aiken, 1999) studies in which the opinions and support of family and healthcare providers played major roles in breastfeeding intent.

In conclusion, research during the 1990s concerned with infant feeding decisions among African American women shed new light on factors that influenced breastfeeding among this population. Although sample sizes in qualitative studies were fairly small, they provided greater depth of insights, resulting in the recognition that there was more to breastfeeding disparities between African American women and those of other races than simply demographic differences. Also, more nurses appeared as first authors in breastfeeding research.

Breastfeeding Research: 2000s

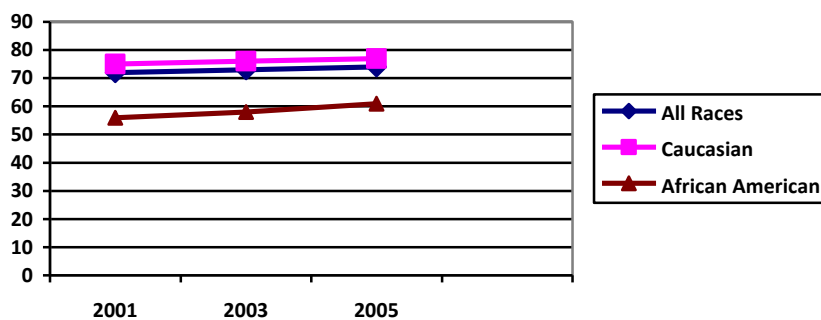
A surge of research related to African American women and infant feeding choices occurred during the early part of 2000 to the present. Despite this outpouring of research, the predominant method of research design remained quantitative. Research during this era was categorized by research design: quantitative, qualitative, and mixed-method styles as illustrated in Table 4. Also presented is an analysis of the studies

according to these broad categories.

According to the U.S. National Immunization Survey (2006), the percent of children breastfed at birth shows minimal increases in the available time frame from 2001-2005 (see Figure 3). Yet, consistent with previous reports, breastfeeding rates for African American women remained lower than other races and the goals of *Healthy People 2000* and *2010*.

Quantitative designs. Several researchers (Ertem, Votto, & Leventhal, 2001; Fooladi, 2001; Forste et al., 2001; Li & Grummer-Strawn, 2002; Sharps, El-Mohandes, El-Khorazaty, Kiely, & Walker, 2003; Bonuck, Trombley, Freeman, & McKee, 2005; Wagner et al., 2006; Mickens, Modeste, Montgomery, & Taylor, 2009; Tender et al., 2009) used quantitative approaches to report breastfeeding rates of about 30% for African American women in their studies.

Figure 3
U.S. Breastfeeding Initiation Rates 2001-2005



Noted. Adapted from “Breastfeeding among U.S. Children Born 1999–2005, CDC National Immunization Survey,” by Centers for Disease Control and Prevention, 2008.

Table 4

Summary of Research Related to African American Women and Infant Feeding Choices: 2000s

1st Author & Year	Discipline of 1st Author	Purpose of the Study	Total <i>n</i>	% of AAW^a in Sample	Method of Data Collection
Quantitative Design					
Ertem (2001)	Medicine	Determine prevalence & correlates of early breastfeeding discontinuation by mothers eligible for WIC ^p	64	56	Semi-structured interviews with closed-ended questions developed by researcher; chart reviews
Fooladi (2001)	Nursing	Determine differences in perspectives on breastfeeding among 2 generations of Black women with and without access to governmental assistance	87	100	23-item questionnaire developed by researcher
Forste (2001)	Sociology	Estimate the effects of maternal & birth characteristics on decision to breastfeed & relate breastfeeding practices to racial differences in infant mortality	1088	30	Secondary analysis of the 1995 NSFG ^b
Li (2002)	Epidemiology	Examine racial & ethnic disparities in breastfeeding rates among U.S. infants using national representative data	DNA ^c	DNA ^c	Secondary analysis of the NHANES III ^d
Meyerink (2002)	Nutrition	Gain perspective on breastfeeding initiation & duration among poor women	150	93	Face-to-face surveys developed by researcher
Wells (2002)	Psychology	Examine the feasibility of using cognitive evaluation theory to examine pregnant women's intention to breastfeed	228	92	16-item survey to measure motivation developed by researcher
Li (2003)	Epidemiology	Examine the current prevalence of breastfeeding in the U.S. using national data	1436	RND ^c	2001 NIS ^f
Beal (2003)	Medicine	Determine rates of breastfeeding advice given to AAW & Caucasian women by HCPs & WIC nutrition counselors & determine whether racial differences in advice add to racial differences in breastfeeding rates	8,757	55	Secondary analysis of the 1988 NMIHS ^g

1st Author & Year	Discipline of 1st Author	Purpose of the Study	Total <i>n</i>	% of AAW^a in Sample	Method of Data Collection
Park (2003)	Nutrition	Evaluate the breastfeeding initiation rates for teenage mothers enrolled in WIC, also identify the predictors of their breastfeeding initiation.	3,534	RND ^c	Secondary analysis of the 1995 Pregnancy Nutrition Surveillance System
Sharps (2003)	Nursing	Describe breastfeeding initiation among urban AAW with inadequate prenatal care	210	100	Interviews, MHBQ ^h , AAPI ⁱ , CPSS ^j , PDH ^k
Meier (2004)	Nursing	Evaluate the effectiveness of an evidence-based breastfeeding program for mothers & their very-low-birth-weight infants	207	45	Retrospective analysis of hospital records
Mitra (2004)	Epidemiology	Determine factors that predict breastfeeding initiation among low-income pregnant women	687	54	Closed-ended questionnaire developed by researchers
Saunders-Goldson (2004)	Nursing	Assess AAW's intent to breastfeed during their prenatal care; describe the relationship between knowledge, age, education, parity, & selected factors of the theory of planned behavior; determine which factor(s) best predicted AAW's breastfeeding intent.	95	100	Modified version of the Minnesota Infant Feeding Questionnaire
Bonuck (2005)	Epidemiology	Determine if an individualized, pre- & postnatal, lactation consultant intervention results in increased cumulative intensity of breastfeeding up to 52 weeks postpartum	304	36	Structured interviews
Lee (2005)	Epidemiology	Examine relationship between socio-demographic factors, maternal characteristics, & intention to breastfeed among low-income, inner-city pregnant women	2,690	60	Researcher developed surveys
Li (2005)	Epidemiology	Estimate breastfeeding rates in the US by characteristics of the child, mother, or family using data from a national survey	3,444	15	2002 NIS ^f
Stolzer (2006)	Psychology	Determine whether low-income women were receiving breastfeeding advice from the physicians	104	6	EBS ^k

1st Author & Year	Discipline of 1st Author	Purpose of the Study	Total <i>n</i>	% of AAW^a in Sample	Method of Data Collection
Wagner (2006)	Medicine	Measure the impact of personality & other factors on the decision to initiate breastfeeding	87	44	Semi-structured interviews developed by researchers, NEO-PI-R ^m
Wells (2006)	Psychology	Develop & evaluate the psychometric properties of a scale measuring prenatal breastfeeding self-efficacy	279	74	Prenatal Breast-feeding Self-Efficacy Scale
Persad (2008)	Medicine	Provide a descriptive analysis of the sociodemographic characteristics, breastfeeding intent, & breastfeeding attitudes of primiparas seeking care at an inner-city clinic; determine if breastfeeding attitudes are associated with breastfeeding intent & socio-demographic variables.	100	86	IIFAS ⁿ
McCarter-Spaulding (2009)	Nursing	Determine whether breastfeeding self-efficacy predicts the duration & pattern of breastfeeding in postpartum black women	125	100	BSES-SF ^o
Mickens (2009)	Public Health	Identify what factors impact low-income mother's infant feeding decisions	109	100	45-item questionnaire developed by researcher
Tender (2009)	Medicine	Identify reasons why low-income mothers start formula supplementation prior to hospital discharge & risk factors for in-hospital supplementation	150	91	Face-to-face orally administered surveys
Qualitative Design					
Corbett (2000)	Nursing	Explore infant feeding styles of low-income AAW	10	100	Unstructured interviews using guiding questions developed by the researcher
Hannon (2000)	Medicine	Explore minority adolescent's perceptions of breastfeeding & the influences on infant feeding choices	35	60	Ethnographic interviews: an ethnographic checklist developed by the researcher & focus groups (2) using researcher-developed semi-structured guidelines
Raisler (2000)	Nursing	Describe breastfeeding experiences of low-income women	42	52	Focus groups (7), questions were semi-structured developed by researcher

1st Author & Year	Discipline of 1st Author	Purpose of the Study	Total <i>n</i>	% of AAW^a in Sample	Method of Data Collection
Cricco-Lizza (2004)	Nursing	Explore infant-feeding beliefs & experiences of AAW enrolled in WIC	319	100	Observation, interviews with questions developed by researcher
Cricco-Lizza (2005)	Nursing	Explore influence of WIC on infant-feeding decisions of inner-city AAW enrollees	319	100	Observation, interviews with questions developed by researcher
Cricco-Lizza (2006)	Nursing	Describe reports of low-income AAW regarding infant-feeding education & support from HCPs during pregnancy, childbirth, & recovery	130	100	Observation, interviews developed by researcher
Nelson (2006)	Nursing	Synthesize 15 qualitative breastfeeding studies	15 studies	0	15 qualitative studies
Meier (2007)	Nutrition	Identify the strengths, operation procedures, areas of improvement of a breastfeeding peer counselor program from the perspectives of the participants & counselors	42	38	Focus groups (6), discussion guides developed by researchers
McCarter-Spaulding (2007)	Nursing	Learn about the experience of breastfeeding from AAW who have breastfed	8	100	Focus group (1), questions developed by researcher
Avery (2009)	Epidemiology	Identify the process contributing to breastfeeding decisions among Caucasian and AAW	152	51	Grounded theory; secondary analysis of 24 focus groups
Racine (2009)	Dietician	Explore incentives and disincentives to breastfeeding within 6 months post-delivery	41	96	In depth face to face interviews; semi-structured questions developed by researchers
Mixed Method Design					
Brownell (2002)	Medicine	Define barriers to breastfeeding in the inner-city African American adolescent mother	25	100	Survey, open-ended interviews both developed by the researchers

^aAfrican American Women (AAW). ^bNational Survey of Family Growth (NSFG). ^cData Not Available (DNA). ^dThird National Health and Nutrition Examination Survey (NHANES III). ^eRace Not Differentiated (RND). ^fNational Immunization Survey (NIS). ^gNational Maternal and Infant Health Survey (NMIHS). ^hMaternal Health Belief Questionnaire (MHBQ). ⁱAdult-Adolescent Parenting Inventory (AAPI). ^jCarolina Parent Support Scale (CPSS). ^kParenting Daily Hassles (PDH). ^lEcology of Breastfeeding Survey (EBS). ^mNEO Personality Inventory Revised (NEO-PI-R). ⁿIowa Infant Feeding Attitude Scale (IIFAS). ^oBreastfeeding Self-efficacy Scale-Short Form (BSES-SF). ^pWomen, Infant, & Children (WIC)

During this decade, numerous researchers (Forste et al., 2001; Li & Grummer-Strawn, 2002; Li, Zhao, Mokdad, Baker, & Grummer-Strawn, 2003; Beal et al., 2003; Park, Meier, & Song, 2003; Li, Darling, Maurice, Barker, & Grummer-Strawn, 2005) reported statistics from studies using large sample sizes (ranging from 1,088 to over 5,000 participants) gathered from data collected from national surveys (e.g., Third National Health and Nutrition Examination Survey: 1988-1994; the National Survey of Family Growth, Cycle V, 1995; and the 1988 National Maternal and Infant Health Survey). Forste et al. (2001) reported that their findings were limited based on the “structure of the survey response options” (p. 295), meaning that their use of a secondary analysis of national survey limited their understanding of potential psychological and/or social rationales behind the participants responses. In addition, Li and Grummer-Strawn (2002), provided data that breastfeeding disparities existed, yet in-depth reasons for these inequalities were not addressed. Furthermore, the use of large datasets lacked depth by not collecting data concerning women’s unique experiences. Because these participants were asked to recall infant feeding practices for over one year (e.g., 17 months), the potential for accuracy was decreased. Moreover, the characteristics of African American women studied were similar to those identified in the 1980s, they were primarily women of low socioeconomic background, receiving some type of federal assistance, unmarried, and with limited education.

Other study subject populations were comprised of relatively smaller convenience samples gathered from local urban-based hospitals and clinics (Ertem et al., 2001; Fooladi, 2001; Meyerink & Marquis, 2002; Wells, Thompson, & Kloeblen-Tarver, 2002; Sharps et al., 2003; Saunders-Goldson & Edwards, 2004; Mitra, Khoury, Hinton, &

Carothers, 2004; Lee, Rubio, Elo, McCollum, Chung, & Culhane, 2005; Stolzer & Zeece, 2006; Mickens et al., 2009; Tender et al., 2009). Despite being quantitative in design, these researchers examined the influence of maternal characteristics, such as attitudes, toward infant feeding choices. Using structured questionnaires, Mickens et al. (2009) looked at maternal attitudes and beliefs related to breastfeeding intent among pregnant low-income African American women ($n = 109$). The participants who received breastfeeding encouragement from peer support counselors were twice as likely to plan to breastfeed compared to those receiving no support. Women answered structured questions developed by the researcher. There was no opportunity for the women to speak freely regarding infant feeding due to the closed-ended nature of the questions.

A few studies were conducted with the purpose of examining maternal confidence or motivation (Ertem et al., 2001; Wells et al., 2002; Mitra et al., 2004). For example, Ertem et al. (2001) collected baseline data on various maternal characteristics (e.g., attitudes and beliefs) regarding breastfeeding from their sample of 64 women (56% of whom were African American) who intended to breastfeed. Using semi-structured interviews at specified time periods (48 hours, 1 week, & 2 weeks postpartum) and chart reviews at 2 and 4 months postpartum, Ertem et al. (2001) found that when the women were asked how confident they were that they would maintain breastfeeding until 2 months, less than half of the mothers (45%) were confident that they would continue. In fact, at 2 months, 77% of the breastfeeding mothers had discontinued any type of breastfeeding. The report did not differentiate the percentage of mothers in each racial category who discontinued breastfeeding. Thus, rates cannot be inferred based on race. Similarly, Mitra et al. (2004) collected data, using a 2-page closed-ended questionnaire,

from 687 pregnant women who received prenatal care at 18 local health departments in Mississippi and completed the instrument. Surveying a total of 228 pregnant women (92% were African American), Wells et al. (2002) used a 16-item questionnaire to measure breastfeeding motivation. They found that women who had the intent to breastfeed had higher motivation than those who planned to use formula. Based on either three or four true/false questions, Mitra et al. (2004) used logistical regression to determine the association between self-efficacy and breastfeeding intention. They reported that higher self-efficacy resulted in a woman more likely reporting intention to breastfeed. Once again, it was not reported how many of the intended breast-feeders ($n = 328$) were African American. Furthermore, the use of dichotomous questions lacked the depth of inquiry needed when examining a concept as multifaceted as self-efficacy.

Several researchers (Sharps et al., 2003; Wagner et al., 2006; Wells et al., 2006; Persad & Mensinger, 2008; McCarter-Spaulding & Gore, 2009) used psychological tests and other scales to examine maternal attitudes, characteristics, and their effects on infant feeding decisions. Sharps et al. (2003) examined the parenting attitudes and health beliefs of 210 low-income women (over 98% of whom were African American) who received little to no prenatal care. They collected postpartum data while the women were in the hospital regarding health beliefs, parenting knowledge, and social support using the following tools: Maternal Health Belief Questionnaire, the Adult-Adolescent Parenting Inventory, and the Carolina Parent Support Scale. In addition, at one month postpartum the women were contacted via phone or in-person to assess the frequency and intensity of daily stressors the mother had experienced (Sharps et al., 2003). What the researchers concluded was that maternal self-motivation in this group was more influential on infant

feeding choice than social support. The other factors such as daily stressors or parenting knowledge were not significant in this population. These findings are not generalizable to all African American women because the researchers looked at women who received little to no prenatal care and this is not representative of the majority of pregnant African American women. Furthermore, the fact that these mothers received inadequate care may also contribute to the results of the study a concern which was not addressed by the authors.

Moreover, Wagner et al. (2006) conducted a quantitative study using semi-structured interviews and a 240-item personality test (NEO-Personality Inventory Revised) to measure the impact of personality on breastfeeding initiation among 87 mothers (36 or 44% were African American) who delivered at a local university hospital. Fifty of these mothers had initiated breastfeeding in the hospital (14 were African American). Wagner et al.'s (2006) results from the personality test demonstrated that mothers who breastfed ($n = 50$) had the following traits: extraverted (e.g., prefer the company of others, high energy, affectionate, etc.) and open (e.g., seeks out new things) more so than those who formula-fed. Again, how mothers scored is not noted based on race. It is difficult to believe that because only 14 of the 50 mothers who initiated breastfeeding were African American, the remaining African American women were introverted and not open to change. The use of a personality test, not specific to breastfeeding may not be appropriate because other personal factors (e.g., childhood history or education) may influence in how one scores on these tests.

Two of the previously noted studies (Wells et al., 2006; McCarter-Spaulding & Gore, 2009) did examine maternal intrapersonal traits, such as self-efficacy, specific to

breastfeeding. Wells et al. (2006) developed a tool to measure breastfeeding self-efficacy during the prenatal period. Using a sample of 279 low-income pregnant women (74% of whom were African American), Wells et al. (2006) administered a 20-item 5-point Likert scale tool to examine if self-efficacy had an effect on breastfeeding intent with this population. Sixty percent of the women reported they intended to breastfeed. The authors reported that women who intended to breastfeed had a significantly higher ($p < 0.001$) mean score on the scale than those who did not. To date, no other studies have utilized this instrument. Although the researchers developed a tool specific to mothers who are making infant feeding decisions, the authors did not follow through to determine if intent had an impact on actual infant feeding behavior. This was not adequate because the intent a person has is not always carried through in one's behavior.

Furthermore, McCarter-Spaulding and Gore (2009) used a relatively older scale, the breastfeeding self-efficacy scale short-form (BSES-SF) developed by Dennis and Faux (1999). This scale measured breastfeeding self-efficacy during the postpartum period and was only intended to determine the effect on breastfeeding duration. McCarter-Spaulding and Gore (2009) is the only study to date to examine the predictability of breastfeeding self-efficacy on duration and breastfeeding pattern in a sample ($n = 125$) of women of African descent. They found that increased breastfeeding self-efficacy scores predicted extended breastfeeding duration and more exclusive breastfeeding patterns. However, McCarter-Spaulding and Gore only considered the relationship between breastfeeding self-efficacy and duration; initiation was not addressed.

In addition to using large national datasets, surveys or questionnaires, small

samples from hospital or clinic settings, and personality scales, two other groups of researchers (Meier, Engstrom, Mingolelli, Miracle, & Kiesling, 2004; Bonuck et al., 2005) used a randomized control trial or examined established interventions during this era. For example, Meier et al. (2004) conducted a retrospective study of 207 infants in the neonatal intensive care unit (NICU) of a university hospital. They examined the effectiveness of an evidence-based breastfeeding program for very low-birth weight infants admitted to the NICU. They conducted chart reviews of the infants, of whom 45% of the mothers were African American, for the rates of breastfeeding initiation and continuation (to 15, 30, and 60 days post delivery). Of the African American participants, 63% initiated breastfeeding as compared to 78% of Caucasian participants (Meier et al., 2004). In addition, at 60 days post birth, 56% of the all of the breastfeeding mothers continued to do so. The authors reported that this study was the “first to demonstrate excellent lactation outcomes for African American women, the majority who were low-income” (Meier et al., 2004, p. 170). Despite the fact that duration rates were high for African American women, they were still the lowest among all races/ ethnicities studied (Caucasian and Latina). Although this study showed the success of an evidence-based program for a vulnerable population (low-income women and their very low birth weight infants), it is exclusive to a particular hospital with an extensive and established program that may not be generalizable to other facilities with limited resources. Furthermore, the study would have had more impact if the mothers had been asked to share their thoughts and feelings about their experiences.

In a randomized controlled trial, Bonuck et al. (2005) evaluated the effect of pre- and postnatal lactation consultants on breastfeeding duration of 304 women (intervention:

$n = 145$; control: $n = 159$). The women were recruited from local health centers that served predominately African American women and Latinas. Women in the intervention group received visits from a lactation consultant 2 times prenatally, once in the hospital, and then either home visits or phone calls post-discharge (although the frequency of contact in each group was not clearly stated). Bonuck et al. (2005) reported that at 2 weeks postpartum, approximately 90% of the intervention group was breastfeeding compared to 60% of the control group. These figures began to become similar as time passed and there were no significant differences between groups after 20 weeks. The researchers noted some limitations to their study. First, the use of lactation consultants who were not employees of the health clinics posed a potential problem because they were not housed at the clinics; it made scheduling follow-up appointments difficult (Bonuck et al., 2005). Furthermore they were not able to establish trust with the participants and may have been viewed as outsiders because the lactation consultants were part of the research team and not from the participants' communities. In addition, Bonuck et al. (2005) noted low rates of in-hospital contact between participants and lactation consultants. Only a few women (25%) had face-to-face contact with the lactation consultant in the hospital; 49% had contact with consultant during a home visit (Bonuck et al., 2005). The researchers attributed this low rate to the fact that most women wanted to initiate breastfeeding in private. A follow-up unstructured interview would have given the women an opportunity to explain why they refused lactation help in the hospital. The study missed a chance to probe deeper into the reasons why the participants did not want contact with consultants. This randomized controlled trial lacked attention to cultural competency in the research.

Using an approach found in the earlier literature reported, Tender et al. (2009) used a survey to examine the reasons why breastfed infants are supplemented with formula in the hospital. These authors reported that early formula supplementation had a negative impact on breastfeeding duration. Their sample was predominately African American (137 women of 158). Sixty-eight percent of the women had initiated breastfeeding; however, of those initiating, 78% reported their infants received formula in the hospital. At least 20% reported they were uninformed as to why their infant was supplemented. Subsequently the researchers reviewed medical records and only 13% (9/69) had medical indications for supplementation (e.g. hypoglycemic or congenital malformation). The survey questions were read to the participants and they gave verbal responses. How the data were recorded was not clearly stated. The authors cited their data collection methods as possible limitations to the study. For example, women might have been more inclined to respond with socially acceptable responses directly to interviewers. Participant recall was another drawback to the study.

Qualitative design. After a few qualitative studies of African American women in the 1990s, more appeared after 2000. Nurse scholars, in particular, have more readily adopted qualitative research in the area of infant feeding among African American women (Corbett, 2000; Raisler, 2000; Cricco-Lizza, 2004, 2005, & 2006) than researchers in other disciplines such as medicine or nutrition (Avery, Zimmermann, Underwood, & Magnus, 2009; Racine, Frick, Strobino, Carpenter, Milligan, & Pugh, 2009).

Qualitative methods currently used in the literature increasingly seek new information from the participants through listening to how everyday experiences affect

their infant feeding choices. Crizzo-Lizzo (2004) explains how qualitative methodology offers an alternative to quantitative research:

“Most studies use survey methods to explain infant-feeding decisions. [Qualitative research] provides a contextually detailed description of infant feeding in Black women....This broader context should generate new insights about the resources and constraints that influence infant-feeding decisions” (p. 1198).

The focus of research during the 2000s may be classified into two categories: research aimed at exploring experiences (qualitative) and research targeting identifying influential factors (both qualitative and quantitative). Researchers who have used various forms of qualitative methodologies cited numerous reasons for choosing such approaches. Corbett (2000) claimed that ethnography was the most suitable method for studying African American women’s infant feeding choices, a phenomenon with a dearth of information. Corbett (2000) conducted unstructured interviews with 10 low-income African American women to gather information about their infant feeding styles. The women participated in a total of 8 interviews each, over the course of their newborn’s first year. The first interview was at 2 weeks postpartum and these continued monthly up to 6 months, with the last 2 at 9 and 12 months respectively. Instead of asking “why” questions, Corbett asked them to “tell” her about how they fed their infants. This gave the women the chance take the lead in explaining their experiences. Furthermore, “why” questions may put individuals on the defense. Through the use of coding and categorizing like themes found in the transcripts, Corbett noted similarities in feeding styles among the 10 participants. For instance, it was a common belief in this group that infants were to be given water whether they were breastfed or not. Also, 70% of the infants received infant cereal prior to 3 months. The women believed that milk alone was not sufficient. They

reported that these beliefs were passed down from their mothers and other family members. These findings are similar to those found in a previous study by Underwood et al. (1997) who noted similar feeding patterns among African American women in their focus groups. Despite, the small sample size, Corbett (2000) was able to identify feeding patterns of African American women and, more importantly, the women were able to share the reasoning behind their infant feeding choices.

Furthermore, Cricco-Lizza (2004, 2005, 2006) used an ethnographic method because it allowed for a “wide-angle lens to observe a large number of BWEW [Black women enrolled in WIC]... and narrow-angle lens to follow key informants prospectively throughout pregnancy and the first year postpartum” (p. 1198). In three different publications from one study, Cricco-Lizza (2004, 2005, 2006) reported using an ethnographic qualitative design to explore infant feeding experiences of, decisions by, and influences on 130 African American women enrolled in WIC in the New York metropolitan area. Through the use of observation, Cricco-Lizza (2004, 2005, 2006) was able to view and interact with the WIC clinic environment and the people who were there. She noted that the women received prenatal information, including infant feeding options. She observed the culturally appropriate breastfeeding posters on the walls of the clinic, women mainly bottle-feeding their infants in the waiting area, and women sharing feeding experiences with each other as they waited (Cricco-Lizza, 2004, 2005). She also observed another 189 people in the WIC environment including 116 children, as well as grandmothers, fathers, other relatives, and friends. In addition, Cricco-Lizza (2004, 2005, 2006) selected 11 key informants to participate in a more in-depth follow-up from among the 130 women who had been observed. These women were purposively selected to be

followed from pregnancy through the postpartum periods (Cricco-Lizza, 2004, 2005, 2006). Through formal and informal interviews with her 11 key informants, Cricco-Lizza (2004, 2005, & 2006) identified factors that influenced the women's infant feeding choices, gathered information on attitudes and beliefs regarding breastfeeding, and gained insight into the perceptions these women had concerning their HCPs and the information received from them. The information obtained from the 11 key informants allowed them to discuss their beliefs about infant feeding. However, the findings were limited to this one WIC clinic and focused on low-income women. Therefore the results are not generalizable to all African American women.

Aside from ethnography, researchers who used focus groups did so because of the assumption that groups formed with others of similar backgrounds helped to engage the participants to be more open in sharing their experiences and opinions than if they were interviewed individually (Raisler, 2000; McCarter-Spaulding, 2007). Furthermore, Raisler (2000) reported using focus groups to listen to women who were breastfeeding, in communities where this was uncommon, to gain insight from them about more effective means of providing education and support. She reported a limitation with the use of focus groups. For example, during the group discussion, some women could be caught up in the 'group effect' and fail to fully express their opinions. Furthermore, the groups only focused on breastfeeding mothers and the opinions of bottle-feeding women were excluded. It is important to understand why some African American women prefer formula over breast milk.

McCarter-Spaulding (2007) noted that a phenomenological approach was appropriate because it allowed this normally marginalized group to be heard. In her

study, she focused on exploring the experience of breastfeeding from African American women's points of view. She conducted a focus group ($n = 8$) to gather data. Using structured questions that she developed, she asked about decision making, as well as breastfeeding challenges, difficulties, supports, and benefits. The themes derived from the transcripts were based on the above mentioned topics. The researchers who used focus groups made an assumption; they believed that women were more willing to share in groups than during individual interviews. However, the amount of sharing also depends on the facilitator of the focus group. For example, if the researcher is an outsider to the community and or not of the same racial/ethnic background, then the participants may be hesitant to speak openly on the topic.

To examine the motives, incentives, and disincentives for breastfeeding, Racine et al (2009) conducted in-depth interviews with 44 breastfeeding women (96% African American). Semi-structured interviews asking women why they chose breast over bottle were conducted at 3 months postpartum if the participant had discontinued breastfeeding, and at 6 months if still breastfeeding. The researchers categorized the women into three groups: *intrinsically motivated*, *extrinsically motivated*, and *successfully experienced with both intrinsic and extrinsic motivation*. Intrinsically motivated mothers relied on internal factors as incentives to initiate and continue to breastfeed. Even though this group valued the positives (incentives) related to breastfeeding, they tended to need more guidance from others to reach their breastfeeding goal. On the other hand, extrinsically motivated women depended more on external factors for motivation. This group appeared to be affected more by disincentives (e.g., pain with feeding) and therefore was least likely to continue with breastfeeding. The third group had previous breastfeeding experience and

was more likely to continue to breastfeed at 6 months. This group seemed to cope better with both incentives and disincentives related to breastfeeding. Although in-depth interviews was the method for data collection and the sample was large for a qualitative study, the researcher still used semi-structured questions; therefore, limiting the women's freedom to speak candidly regarding perceived incentives and disincentives and their affects on breastfeeding continuation.

Grounded theory was used most recently by Avery et al (2009) in a secondary analysis of larger qualitative study conducted by the U.S. Department of Health and Human Services. Avery et al (2009) used a modified grounded theory method to analyze transcriptions from 24 focus groups to determine schema contributing to breastfeeding decisions among Caucasian and African American women. Their findings yielded the *process of confident commitment*. Successful breastfeeding is a two-fold process: establishing confidence in ones' ability to breastfeed and maintaining the commitment to making it work. The researchers suggested that confidence is beneficial but inadequate to guarantee breastfeeding sustainability. The researchers did not explore this process with breastfeeding intent and initiation where confidence, has been shown to be effective (Wells et al., 2006; McCarter-Spaulding & Gore, 2009). Another weakness of the Avery et al's (2009) study was that it is a secondary analysis. The participants could not be re-contacted for follow-up and the validity of the transcripts could not be assumed, but not confirmed.

Beyond the critiques of the methods used in the breastfeeding literature on African American women, other aspects of the studies that provided additional perspectives on this body of work published over three decades were identified. Certain

emphases in the researchers' purposes also appeared repeatedly. The purposes in relation to the major methodological approaches, quantitative and qualitative were analyzed, but were further characterized by subsets of purposes within each. It was decided that it was important to go beyond listing the purposes to identify commonalties among them, which is reported in the following section. Similarly, a variety of factors that were identified as influences on African American women's infant feeding choices across the studies were subsequently explained.

Characterization of the Study Purposes in Three Decades of Breastfeeding Research

The characterization of the purposes of the quantitative studies fell into two general subsets. First there were many studies that dealt with statistical trends and patterns in breastfeeding, including population demographics and various measures such as maternal personality, social support, and culture (Beigelson, et al., 1986; Ryan et al., 1991; Humphreys et al., 1998; Wells, 2002; Ertem et al., 2001; Beal et al., 2003; Sharps et al., 2003; Li et al., 2005; Mickens et al., 2009) along with a couple that reported on psychometrics of instruments (Wells, 2006; McCarter-Spaulding, 2009). The second main subset was comprised of several studies that reported on specific interventions. The interventional studies included outcomes of using motivational videotapes and peer counseling (Gross, 1988), cognitive evaluation theory (Wells, 2002), and lactation consultants (Bonuck, 2005).

As qualitative research on breastfeeding occurred, the general intent of the method was to be descriptive. There were two subsets identified within the stated purposes of the qualitative studies. The most prominent subset included the studies that

described women's breastfeeding experiences, practices, and/or perceptions (Locklin & Naber, 1993; Raisler, 2000; Avery et al., 2009; Racine et al., 2009). The smaller of the two subsets dealt more with structural or external factors, such as effects of HCPs, WIC, culture, economics, and barriers that women reported as influences on infant feeding (Cricco-Lizza, 2004, 2005, 2006).

By characterizing the purposes of the studies that were done, areas that have been better addressed than others within the breastfeeding literature on African American women are demonstrated. This contributed to the study by highlighting where some answers have been provided and areas that still need to be explored.

Factors Influencing African American Women's Infant Feeding Decisions: Over 30 Years of Research

In addition to the identification of the researchers' use of various methodological approaches and the characterization of their stated purposes, eight themes were identified across the research conducted in the last three decades as key organizing concepts for the influences on infant feeding choices among African American women. They are: *sample traits; maternal breastfeeding knowledge; maternal attitudes and beliefs; maternal breastfeeding experience; breastfeeding self-efficacy; messages from family and friends; messages from HCPs; and messages from WIC*. This thematic categorization of which of the 58 reviewed studies reported identifying particular influential factors or combination of factors, is presented by decade in Table 6. The major influences are described in the following sections, with examples from particular studies previously reviewed.

Sample Traits

Many (34 of the 58 studies, 59%) of the researchers reviewed who reported demographics (Rassin et al., 1984; Grossman et al., 1989; Dix, 1991; Timbo, et al., 1996; Aikin, 1999; Corbett, 2000; Forste, 2001; Beal et al., 2003; Stolzer et al., 2006) also identified sample traits related to breastfeeding (see Table 5). The tendency has been to focus predominantly on African American women with lower educational and economic levels. However, this is a limited perspective on African American women and further contributes to their marginalization.

A different form of examining the impact of sample traits was used less frequently. For example, in one quantitative study, using the NEO Personality Inventory Revised questionnaire, Wagner et al. (2006) found that the 50 mothers (n=87) who were open to new ideas and possessed outgoing personalities were more likely to breastfeed. However, the idea that women choosing to bottle feed lacked these desirable personality traits is based on faulty assumptions. The use of general personality tests to make conclusions about women of any race in relation to infant feeding choices is not justified.

In conclusion, sample traits alone provided limited information about African American women's infant feeding choices. Simply identifying sample traits was more predominant in the literature during the 1980s and 1990s. As researchers gradually used a wider variety of methods and identified additional factors influencing infant feeding choices, they contributed more to the knowledge of the phenomenon. Across the decades, sample traits became increasingly only one aspect of several that were considered as possible influences on newborn feeding decisions. This is readily seen in Table 5, in broad categories were designated that influenced factors identified in each study by placing the letter 'X' in the appropriate cells.

Table 5

Factors Influencing African American Women's Infant Feeding Decisions Identified in Research Chronologically Over 30 Years

1 st Author & Year	Sample Traits	Maternal BF Knowledge	Maternal Attitudes & Beliefs (+) & (-)	Maternal BF Experience	BF Self-Efficacy	Messages from Family & Friends	Messages from HCPs	Messages from WIC
1980s								
Martinez (1981)	X							
Martinez et al. (1981)	X							
Rassin (1984)	X	X						
Beigelson (1986)	X							
Fienstein (1986)	X						X	
Sullivan (1986)	X			X				
Kurinij (1988)	X							
Parraga (1988)	X							
Grossman (1989)	X							
1990s								
Kistin (1990)			X			X	X	
Dix (1991)	X	X	X					
Jacobson (1991)	X		X					
Ryan (1991)	X							
O'Campo (1992)					X			
Locklin (1993)	X					X	X	X
Timbo (1996)	X							X
Underwood (1997)	X	X				X		
Arlotli (1998)								
Gross (1998)	X							X
Humphreys (1998)	X			X		X		
Wiemann (1998)				X		X	X	
Aikin (1999)	X	X	X			X	X	X
Bentley (1999)	X					X	X	X
2000s								
Corbett (2000)		X	X	X		X	X	
Hannon (2000)				X		X	X	
Raisler (2000)		X	X			X	X	X
Ertem (2001)		X	X					
Fooladi (2001)			X			X	X	X
Forste (2001)	X		X					
Brownell (2002)		X	X			X		
Li (2002)	X							
Meyerink (2002)	X			X				
Wells (2002)				X				
Beal (2003)	X					X	X	X
Li (2003)	X							
Park (2003)	X							
Sharps (2003)	X		X					
Cricco-Lizza (2004)	X	X				X		X
Saunders-Goldson (2004)	X		X			X		

1 st Author & Year	Sample Traits	Maternal BF Knowledge	Maternal Attitudes & Beliefs (+) & (-)	Maternal BF Experience	BF Self-Efficacy	Messages from Family & Friends	Messages from HCPs	Messages from WIC
Meier (2004)						X	X	
Mitra (2004)	X				X			
Bonuck (2005)	X						X	
Cricco-Lizza (2005)		X				X		X
Lee (2005)	X							
Li (2005)	X							
Cricco-Lizza (2006)			X			X		X
Stolzer (2006)	X		X				X	
Wagner (2006)	X		X			X		
Wells (2006)					X			
Meier (2007)						X	X	
McCarter-Spaulding (2007)		X	X	X		X	X	
Persad (2008)		X	X			X		
Avery (2009)					X			
McCarter-Spaulding (2009)		X	X		X			
Mickens (2009)		X	X			X		X
Nelson (2006)			X	X		X	X	
Racine (2009)			X	X		X	X	
Tender (2009)			X				X	

Maternal Breastfeeding Knowledge

A review of one-fourth (14 = 24%) of the 58 studies done over the past three decades identified that knowledge about breastfeeding (e.g., its benefits and/or how to breastfeed) had an impact on women's infant feeding choices. However, many of these study findings also revealed areas in which knowledge was missing. For example, based on the findings from using semi-structured interviews and open-ended questions with 58 African American women, Dix (1991) found that only 33% of the women in her sample were aware of maternal benefits from breastfeeding. Using unstructured interviews that Corbett (2000) conducted, participants were found to have a knowledge deficit regarding benefits of breastfeeding. Similar to Dix (1991), none of the 10 mothers in her study

could identify any maternal benefits of breastfeeding (Corbett, 2000). In discussions with 7 focus groups (n=42), 8 African American mothers reported that there was an assumption made by their HCPs that women were well-informed about breastfeeding (Raisler, 2000). If the HCPs did not mention breastfeeding, neither did the women. For instance, one participant noted that even when she had questions regarding breastfeeding she failed to ask her physician because she assumed he was not interested (Raisler, 2000).

In the 14 studies in which researchers examined maternal knowledge, they often reported women did know the health benefits of breastfeeding for babies. Although Dix (1991) found that 84% of her 81 participants bottle-fed (71% of whom were African American), more than half of them (70%) knew the health benefits of breastfeeding for the baby. Aikin (1999) also found that women were knowledgeable about the infant benefits. In the five focus groups used, the women, who were all African American, talked about the nutritional benefits of breastfeeding babies (Aikin, 1999). Raisler (2000) also had positive findings in her seven focus groups regarding the majority of her population, which was African American women, and their knowledge of various benefits for infants from breastfeeding. McCarter-Spaulding (2007), also used a focus group ($n = 8$) of exclusively African American women and found that they were aware of the infant benefits of breastfeeding. Ninety percent of the 64 women in the Ertem et al. (2001) study were educated about the benefits of breastfeeding; however, they were not as familiar with the pediatric recommendations about breastfeeding duration. The sample included a majority of African American women. Merely 30% of the women were aware of the American Academy of Pediatrics' (AAP) recommendations for the length of exclusive breastfeeding (Ertem, 2001). This was the only study that looked for a

correlation between maternal knowledge and breastfeeding initiation and continuation rates; they found none.

Other researchers reported findings in which knowledge of the AAP recommendations did not appear to influence women's newborn feeding choices (Rassin et al., 1984; Underwood et al., 1997). Rassin et al. (1984) noted that 61.5% of the women in their study (n=358, consisting of 37% African American women) knew what the AAP recommended for newborn feeding. However, 64% of the total stated they did not believe breastfeeding was the most suitable choice for them. Underwood et al. (1997) also reported various instances in which African American women in their four focus groups reported going against APA recommendations regarding infant feeding. For instance, participants in this study reported introducing their infants to cereal and other solids earlier than 4-6 month of age (Underwood et al., 1997).

In conclusion, knowledge about breastfeeding has been shown to be inadequate in a few of the related studies. However, in others, even when infant benefits are relatively well known, African American women have made their own choices, independent of the knowledge available to them.

Maternal Attitudes and Beliefs

Of the 58 studies reviewed, more than one-third (21 or 36%) considered both positive and negative maternal attitudes and beliefs related to breastfeeding as shown in Table 5. Mothers were more likely to bottle feed if they had negative attitudes towards breastfeeding (Dix, 1991; Corbett, 2000; Hannon et al., 2000; Brownell et al., 2002; Cricco-Lizza, 2004; Persad & Mensinger, 2008; Racine, 2009). For example, eleven women in Corbett's (2000) study revealed, through unstructured interviews, their feelings

of disgust with the action of breastfeeding. Similarly, Cricco-Lizza (2004) conducted formal interviews with 11 African American mothers and found that some of them described breastfeeding as “nasty” (p. 1202). Raisler (2000) and Cricco-Lizza (2004) both found that African American women believed breastfeeding to be cumbersome. The same two studies described women’s feelings of modesty about breastfeeding in front of family members and in public. Believing that breastfeeding would somehow “spoil” the baby was another belief these women reported (Corbett, 2000; Cricco-Lizza, 2004). In contrast, Raisler (2000) used focus groups and found that 13 African American women who did breastfeed appreciated the bond they established with their babies.

Sharps et al. (2003) used a variety of instruments with 210 African American women and found that maternal confidence and the belief that breastfeeding had health benefits were greater factors in positively influencing breastfeeding than familial support. Their results are similar to research findings in the 1990s previously described (Locklin & Naber, 1993; Timbo et al., 1996; Underwood et al., 1997; Gross et al., 1998; Humphreys et al., 1998; Wiemann et al., 1998; Aikin, 1999; Bentley et al., 1999). Sharps et al. (2003) also noted that the women in their study had little to no prenatal care and support from other sources may have been limited, which may have had an effect. Intention to breastfeed was increased if the mother believed breastfeeding is what “good” mothers do (Wells et al., 2002; Saunders-Goldson & Edwards, 2004). The authors do not define “good” mothers, thus, leaving this interpretation open to the reader.

Alternatively, having a preference for bottle feeding was another attitude that was found among the low-income African American women studied. Forste (2001) reported that 83% of the African American mothers who chose to bottle feed did so simply

because they preferred formula over breast. Cricco-Lizza (2004) addressed this issue of preference. Interviews conducted using open-ended questions revealed beliefs that influenced their decisions to bottle feed. Many women chose bottle feeding out of convenience and because it was what was familiar to them (Cricco-Lizza, 2004). Furthermore, Ertem et al. (2001) reported mothers believed that their infants enjoyed formula feeding over breastfeeding.

In conclusion, maternal attitudes and beliefs about breast or bottle feeding are influential. In the literature, women frequently appeared to choose the infant feeding methods they preferred for personally determined reasons. For example, positive maternal attitudes to one method and/or negative considerations toward the other resulted in women choosing whichever method they preferred.

Maternal Breastfeeding Experience

As early as the 1980s, researchers found that women who had previously experienced breastfeeding (either directly as infants or they had breastfed their other children) were more likely to breastfeed their own subsequent children. Only 16% of the studies reviewed (9 out of 58) reported the effect of maternal breastfeeding experience on infant feeding choices among African American women. Sullivan and Jones (1986) conducted a secondary analysis of 181 low-income African American women and found that the trend to breastfeed was common among women who had prior breastfeeding experience. They stated that 62% of the women who had decided to breastfeed were breastfed themselves. Similarly, Meyerink & Marquis (2002) conducted face-to-face surveys with 150 women, of whom 93% African American women. They suggested that women's previous familial exposures (e.g., being previously breastfed as an infant) to

breastfeeding were a major effect on intention, initiation and continuation rates. They found that mothers who previously breastfed were more than 10 times likely to initiate breastfeeding than those who had no previous breastfeeding experience (Meyerink & Marquis, 2002). Using a 70-item self-report questionnaire, Humphreys et al. (1998) found that 51% of all the participants intended to breastfeed and the intention was greater (77%) among those with breastfeeding experience. Although the majority (80%) of the total sample ($n = 1001$) was African American, the researchers failed to differentiate how many of them were influenced by previous breastfeeding experience.

In conclusion, indications in the literature that prior direct exposure to the act of breastfeeding increased the likelihood women would choose to breastfeed were found. However, the number of studies examining this effect was relatively small, only 8 out of 58(14%). Furthermore, breastfeeding experience has been poorly defined by failing to differentiate between participants who were themselves breastfed as infants and those who chose to breastfed their other children. Further clarification and additional study of these influencing factors are indicated.

Breastfeeding Self-Efficacy

Although maternal attitudes towards breastfeeding have been studied among African American women, research related to intrapersonal traits such as self-efficacy and its impact on breastfeeding has not been considered much in this population group. There is considerable evidence that there is an association between self-efficacy and breastfeeding although only 5 of the 58 studies (9%) examined it. O'Campo and colleagues (O'Campo, Faden, Gielen, & Wang, 1992) found that maternal self-efficacy was one major attribute that had an impact on breastfeeding duration. In their sample of

198 breastfeeding women (44% African American), those who had less self-efficacy were three times as likely ($RR=3.06$, CI 95%) to discontinue breastfeeding than women with higher self-efficacy (O'Campo et al., 1992).

To measure the concept of self-efficacy in breastfeeding, Dennis and Faux (1999) were the first to develop a reliable and valid instrument, the Breastfeeding Self-Efficacy Scale (BSES), which found positive correlations between breastfeeding duration and self-efficacy. Internal consistency for the BSES was reported $\alpha = .96$, (Dennis & Faux, 1999). Validity of the scale was reported as construct validity calculated by factor analysis, comparison of differing groups, and correlations with measures of theoretically related constructs (Dennis & Faux, 1999). For example, three factors emerged as a result of factor analyses: maternal skills and acknowledgment of breastfeeding skills needed for success; maternal attitudes regarding breastfeeding; and, maternal behavior to help with breastfeeding. However, the majority of their sample ($n = 130$) were Caucasian (92.5%); thus, generalizability across racial groups could not be established. Furthermore, the test was not designed to predict breastfeeding initiation, only duration.

Since Dennis and Faux's (1999) development of the BSES and later the BSES-Short Form (Dennis, 2003), several researchers have used their tool to examine breastfeeding self-efficacy and duration. Blyth and colleagues (Blyth, Creedy, Dennis, Moyle, Pratt, & De Vries, 2002) used the BSES developed by Dennis and Faux (1999) and conducted a prospective study ($n = 300$) of Australian women looking at breastfeeding self efficacy and duration at 1-week and 4-months postpartum. Their findings supported those of Dennis and Faux (1999) in that self-efficacy and breastfeeding are strongly related. This study, like previous studies, is limited in the fact

that 86% of the sample was Caucasian and that breastfeeding duration, not initiation, was studied.

In a randomized control trial, researchers (Noel-Weiss, Rupp, Cragg, Bassett, & Woodend, 2006) tested the effects of a prenatal breastfeeding workshop on self-efficacy and breastfeeding duration in a large tertiary hospital in Canada. Women who were randomized to the breastfeeding workshop reported higher breastfeeding self-efficacy scores and exclusively breastfed more often than the control group. However, duration times did not significantly differ between the groups. This study was limited by a small sample size ($n=110$). Furthermore, many of the sample participants were college graduates and had household incomes of greater than \$70,000. Even more importantly, the authors do not report the racial/ ethnic background of the participants; thus, the percentage of African American women in the study cannot be determined. Therefore, generalizability of this intervention cannot be assumed.

Intention to breastfeed and self-efficacy has also been studied. Mitra et al. (2004) and Wilhelm, Rodehorst, Stephans, Hertzog, and Berens (2008) studied breastfeeding intention and self-efficacy. Intenders reported increased levels of breastfeeding self-efficacy (Mitra et al., 2004) and the combination of high breastfeeding intention and self-efficacy was associated with increased likelihood to breastfeed (Wilhelm et al., 2008). Although Mitra et al. (2004) used a large sample ($n = 456$) which included a majority of African American women (82%); the questionnaire developed by the investigators had no reported reliability. The study by Wilhelm et al. (2008) used the BSES (Dennis and Faux, 1999) with known reliability and validity as stated above. Unfortunately, their sample was homogeneous consisting of mainly Caucasian women (89%); in fact, there were no

African American women reported in the study.

Not until recently have researchers examined the effects of breastfeeding self-efficacy on duration among diverse populations. For example, one group of researchers (Gregory, Penrose, Morrison, Dennis, & MacArthur, 2008) tested the psychometric properties of the BSES-SF using an ethnically diverse population. They concluded that the BSES-SF was a reliable tool ($\alpha = .90$) that could be used among diverse populations (Gregory et al., 2008). However, the diverse population used in their study was predominantly Southeast Asian women (36%), so the information is not generalizable to the current study. McCarter-Spaulding and Gore (2009) is the only study to date to examine the predictability of breastfeeding self-efficacy on duration and breastfeeding pattern in a sample ($n = 125$) of women from African descent. Consistent with studies that examined these variables with predominantly Caucasian samples; increased breastfeeding self-efficacy scores predicted extended breastfeeding duration and more exclusive breastfeeding patterns (McCarter-Spaulding & Gore, 2009). Similar to previous studies, McCarter-Spaulding and Gore only considered the relationship between breastfeeding self-efficacy and duration; self-efficacy and breastfeeding initiation has not been studied.

Using a qualitative approach (grounded theory), Avery et al (2009) found that a *process of confident commitment* leads to successful breastfeeding. They defined this concept as women not only having confidence in the practice of breastfeeding and their ability to do so, but also having the commitment to making breastfeeding successful (Avery, 2009). In this secondary analysis, the researchers analyzed transcripts from focus groups (51% of sample consisted of African American women) and developed a process

which promoted sustained breastfeeding. Part of the process was having confidence in one's ability to carry out breastfeeding. Their use of the term confidence is parallel to the concept of breastfeeding self-efficacy previously analyzed. However, Avery et al.'s study also did not consider the decision making process for initiation.

Wells et al. (2006) aimed to address the issue of breastfeeding self-efficacy predicting initiation by developing and psychometrically testing the Prenatal Breastfeeding Self-efficacy Scale. They determined that the tool was a reliable and valid tool to measure self-efficacy in the prenatal period. Internal consistency was reported, using $\alpha = .89$ (Wells et al., 2006). Validity of the instrument was reported including content validity index of .90. Also, construct validity was calculated by a factor analysis resulting in 4 themes which included the ability to: manage breastfeeding skills and demands, gather information regarding breastfeeding, handle breastfeeding in public, and deal with social pressures of breastfeeding (Wells et al., 2006). They concluded that further research is warranted to establish if their scale is predictive of actual breastfeeding behavior (Wells et al., 2006).

In conclusion, tools to measure breastfeeding self-efficacy have been developed and tested. They are reported to have reliability, validity, and predictive value. However, the use of these tools by researchers has been limited to predominantly Caucasian women samples. Self-efficacy may be an important factor in women's intention and follow-through with breastfeeding, but the concept needs to be studied more among African American women.

Messages from Family and Friends

Influences from family and friends were reported in 24 (41%) of the 58 studies reviewed. Reports have shown that familial influence appears to have an impact on infant feeding decisions for African American women (Underwood et al., 1997; Aikin, 1999; Corbett, 2000; Hannon et al., 2000; Ertem et al., 2001; Meyerink & Marquis, 2002; Cricco-Lizza, 2004; McCarter-Spaulding, 2007; Mickens et al., 2009; Racine et al., 2009). Several reported familial support as significant, as previously described. For example, women in the focus group conducted by Underwood et al. (1997) reported that they learned their infant feeding habits from family members or others in the community. Furthermore, it was apparent to Aikin (1999) that female influences (participants' mothers, sisters, and girlfriends) impacted women's infant feeding choices.

Lack of role models is a negative factor contributing to decreased implementation of breastfeeding among African American women (Wiemann et al., 1998; Corbett, 2000; Ertem et al., 2001; Meyerink & Marquis, 2002; Cricco-Lizza, 2004). Thirty-seven of the African American adolescents ($n = 212$ African American) reported having no breastfeeding role models (Wiemann et al., 1998). Many of the women who chose to bottle feed had never seen anyone breastfeed or had limited exposure through the media (Cricco-Lizza, 2004). In another study, 31% of the 64 participants had never seen anyone breastfeed (Ertem et al., 2001).

Lack of support and rejection from family members also influenced infant feeding decisions. Corbett (2004) noted that an informant reported being told to go into the bathroom to breastfeed by her mother. Others were encouraged to switch to bottle feeding when problems with breastfeeding occurred (Cricco-Lizza, 2004). Family members' and friends' negative breastfeeding experiences had an effect on infant feeding decisions.

Stories of nipple pain and difficulty weaning (Cricco-Lizza, 2004) have been shown to negatively influence breastfeeding initiation.

In conclusion, family support or active discouragement of a woman's infant feeding choice can be powerful. It makes intuitive sense that those in the immediate environment could exert influence by encouraging and supporting one feeding method over another. This category of familial influences reinforces the need for continued qualitative studies in which African American women's experiences can be told in their own words, since the variations range from subtle to broad and are sometimes stated in ways that are uniquely forceful and/or descriptive.

Messages from Healthcare Providers

Primary HCPs (CNMs, physicians, and nurses) have influenced infant feeding choices among African American women as reported in 18 (31%) of the 58 studies. For example, in a mixed-method study, Bentley et al. (1999) reported that 42% of the women they surveyed intended to breastfeed, based on the information and encouragement they received from their HCPs. Comparable findings were noted in Raisler's (2000) study in which she reported that women in her focus groups stated that they felt positively about breastfeeding based on the personal contacts they received on several occasions during visits with their midwives, doctors, or nurses. Furthermore, of the six breastfeeding mothers who participated in unstructured interviews (n = 10), Corbett (2000) reported that they all opted to breastfeed based on the advice and support they received from their HCPs during routine prenatal care.

However, in a large survey study (n = 8,757), Beal et al. (2003) provided the results of a bivariate chi-square that demonstrated that African American women (n =

4,791) reported not receiving breastfeeding advice from their HCPs more often than Caucasian women (n = 3,966). Less than half (48%) of the African American women in the study reported receiving advice versus 53% of Caucasian women ($p < 0.001$). Being African American was self-reported to be associated with a lower likelihood of receiving breastfeeding advice and a greater chance of receiving bottle feeding encouragement. Beal et al. (2003) acknowledged recall bias as a limitation of their study. For example, participants at the time of the interview had already made their infant feeding choices and may have not have recalled being advised to feed their infants using methods opposite of what they had chosen. The average time lapse between delivery and the interview was 17 months (Beal et al.).

Other studies that targeted African American women's perceptions of HCPs' influences on their infant feeding choices reported that women expressed feelings of distrust and anxiety when dealing with their providers (Cricco-Lizza, 2004, 2006). During their pregnancies, women reported limited breastfeeding support or education from their doctors or nurses (Bentley et al., 1999; Corbett, 2000; Cricco-Lizza, 2006; Stolzer & Zeece, 2006). For example, Bentley et al. (1999) reported that 74% of the 441 African American women they studied who intended to bottle-feed reported they had no idea of their HCPs' thoughts on breastfeeding or stated that their providers did not care which method they chose. Similarly, Bonuck et al. (2005) reported that only 43% of the 304 women in their sample reported receiving breastfeeding advice from their HCPs.

In qualitative studies, utilizing in-depth interviews, unstructured interviews, and focus groups respectively, Locklin and Naber (1993), Corbett (2000), and Raisler (2000) found that women in their studies reported that hospital staff people seemed to have

negative impacts on their infant feeding decisions. For instance, one breastfeeding woman in Locklin and Naber's (1993) study reported that her nurse offered to give her baby a bottle in the nursery to allow the participant time to rest after receiving a blood transfusion for postpartum complications. Another example of a negative situation reported by African American women who had chosen to breastfeed in two studies (Corbett, 2000; Raisler, 2000) was that their infants received formula even when they instructed the nurses not to bottle feed their infants. In the same studies, others reported if they did receive help while in-patient, it was often rushed and rude. About half of the 11 participants who were interviewed reported that they were encouraged to bottle feed immediately after delivery (Cricco-Lizza, 2006). The overall hospital environment was characterized as not conducive to breastfeeding in Corbett (2000), who reported women were separated from their infants and given hospital packs containing formula upon discharge even if they were breastfeeding. In fact, Tender et al (2009) reported that in majority (91%) sample of breastfeeding African American women, 20% of them had no idea why their infants received formula in the immediate postpartum period in the hospital. However, an exception for hospital staff members was noted for in-house lactation consultants, whom women reported had positive impacts on their breastfeeding choices (Bonuck et al., 2005).

In conclusion, several studies have noted that the advice HCPs offered has impacted African American women's infant feeding choices. HCPs and institutions are influential, but not always in positive ways. Although in-house lactation consultants were viewed positively, much of the other data are confusing. This could be due to different providers and agencies that came into contact with the women in the various studies

reviewed. While women noted several positive influences, providers have also been influential when they failed to offer advice were discouraging of breastfeeding, or promoted bottle-feeding in a variety of ways. More research is needed on the impacts of specific HCPs and institutions.

Messages from WIC

In addition to HCPs' influences on women, 12 (21%) of the 58 studies reviewed have specifically examined the impacts of WIC, the maternal-child supplemental feeding program that has low-income eligibility requirements for receiving services. WIC's influence on women's infant feeding decisions was addressed in several reports (Timbo et al., 1996; Meier et al., 2007; Gross et al., 1998; Corbett, 2000; Raisler, 2000; Fooladi, 2001; Beal et al., 2003; Cricco-Lizza, 2004, 2005, 2006) with contrasting results according to the women participants. For example, through the use of focus groups ($n = 42$), Raisler (2000) found that only seven mothers stated that WIC promoted breastfeeding more than formula, five had the opposite opinion, and another four women thought both methods were equally encouraged. Another group of researchers (Meier et al., 2007) also found that women had mixed feelings about WIC.

On the side of supporting breastfeeding, some mothers reported that they felt WIC endorsed breastfeeding more than bottle, and that WIC breastfeeding peer counselors and nutritionists were more helpful compared to the physicians and nurses the women had seen prenatally (Meier et al., 2007). In addition, in an experimental study conducted by Gross et al. (1998), 70% of the group of African American women who received peer counseling and a motivational video supplied by WIC were breastfeeding at 8 weeks postpartum, compared to 20% of the women in the control group who received neither (p

< .05). Cricco-Lizza (2004, 2005, 2006) studied one particular WIC site and reported her findings in three publications from the data she had gathered, which was primarily observational for most of the sample (n = 130) but included interviews with 11 women. All of the women whom Cricco-Lizza (2004) interviewed stated they were exposed to breastfeeding endorsements at the WIC clinic. Reporting on her observations, Cricco-Lizza (2005) also noted that the WIC clinic she surveyed had culturally appropriate breastfeeding materials (e.g., posters and brochures) available throughout the clinic.

Other studies reported very different experiences with WIC. For example, Raisler (2000) reported that 64% of her respondents described minimal breastfeeding advice from WIC counselors. Corbett (2000) identified that women reported that were assigned WIC counselors upon discharge, but they never received home visits. Despite the fact that they may have received breastfeeding information at the WIC clinics, some women reported little to no influence on their infant feeding decision (Cricco-Lizza, 2004). In another publication from the data she had gathered at one particular WIC site, Cricco-Lizza (2005) also reported that some women came there expressly with the expectation of receiving free formula. Several informants also reported that because of WIC, it was much easier for people to obtain formula because it was free (Raisler, 2000; Fooladi, 2001; Cricco-Lizza, 2005).

In a secondary analysis of a large national survey conducted in 1988, Timbo et al. (1996) found that breastfeeding was reported more often by African American women who recalled receiving some type of breastfeeding advice through their WIC program. However, using the same large national data set, Beal et al. (2003) stated that 65% of the African American women in this study reported getting advice from their WIC counselor

to bottle-feed compared to only 55.4% of Caucasian women ($p < 0.001$), which is a statistically significant difference. It is likely that WIC is an influential factor according to the various studies noted, but also possible that the staff may have differentially approached women according to race overtime.

In conclusion, more research on the impact of WIC is needed, particularly to explore current information being conveyed. The impact of WIC appeared to be inconsistent across the studies reviewed. While WIC appears to have the potential to positively and negatively affect breastfeeding as a choice, its influence cannot be determined at this time.

Categories of Structural Conceptualizations Reported in the Literature

In reviewing the literature, several authors reported the major conceptual structures within which they framed their studies; this occurred in only 12 of the 58 (21%) studies reviewed. These structural conceptualizations were further categorized into two groups by looking for broad similarities across the 12 studies in which they were noted. The two major conceptual categories derived are named: (a) cultural/multi-factorial and (b) cognitive-behavioral/individualistic. Each broad category is described with examples below.

The cultural/multi-factorial category was defined as including those studies which recognized the importance of multiple external influences on the research and the participants, such as cultural practices and social systems. Underwood et al. (1997) and Corbett (2000) used frameworks that centered on culture and its effects on behavior. For example, Underwood (1997) used the PEN-3 model developed by Airhihenbuwa (1990-1991) as a basis for gaining awareness of health behaviors of people from African

countries. He asserted that health behaviors of persons from African countries tended to have a cultural influence (Airhihenbuwa, 1990-1991). Therefore those utilizing the PEN-3 model will integrate the goal of health education, educational analysis for health behavior, and cultural aptness of the health actions (Underwood et al., 1997). Thus, Underwood et al. (1997) used this conceptual model to look at cultural influences on African American women. Using the PEN-3 model, the researchers were able to determine that cultural influences had effects on the infant feeding practices in this sample of four focus groups consisting of a total of 35 African American women.

Corbett (2000) used a cultural-ecological structure to conceptualize and explain infant feeding methods of African American women. This framework looks at how the entire ecosystem impacts an individual. Focusing on the interrelationship between the mother and her infant feeding decision, Corbett used this conceptual model to examine the impacts of culture on infant feeding decision-making. Corbett was able to support her claim that for African American women in the study, culture had an impact on infant feeding decisions because maternal opinions and beliefs related to information that had been passed down from generations (Corbett, 2000). Furthermore, that unevenness in breastfeeding information received from HCPs also had impacts on the infant feeding preferences of the women.

Another conceptual structure categorized as cultural/multi-factorial was the innovation decision-making framework which looks at how information (e.g., about breastfeeding) is channeled through various social systems and affects women's decision-making processes (Rogers, 1983). There are 5 stages identified in this decision-making process: *knowledge* (the awareness that breastfeeding is an alternative to formula);

persuasion (attitudes of the social systems that either help or inhibit breastfeeding acceptance); *decision* (either rejecting or adopting breastfeeding as the infant feeding choice); *implementation* (initiating breastfeeding), and *confirmation* (continuing or discontinuing breastfeeding after a period of time). Sullivan and Jones (1986) used Rogers' (1983) concepts to examine breastfeeding adoption among African American mothers as an example of innovation decision-making. The researchers used this theory to explain the reason some women were early adopters of breastfeeding while others were early rejecters.

The second major category derived was the cognitive-behavioral/individualistic structural conceptualization which suggested that behaviors (e.g., infant feeding choices) are strongly influenced by the women's individual thoughts. Several researchers used Ajzen and Fishbein's Theory of Planned Behavior (Ertem et al., 2004; Saunders-Goldson & Edwards, 2004; Lee et al., 2005; Persad & Mensinger, 2008) as the structural foundation for their studies in their efforts to determine factors influencing infant feeding choices made by African American women. For example, Ertem et al. (2004) found that women, who initially were breastfeeding and expressed doubt that they would continue breastfeeding up to 2 months, did discontinue early. In contrast, researchers in the other studies using the structural concept of planned behavior (Saunders-Goldson & Edwards, 2004; Lee et al., 2005; Persad & Mensinger, 2008) focused on breastfeeding intent among their samples, not actual behaviors. They found that maternal thoughts about breastfeeding did affect their intentions to initiate breastfeeding or not, but the researchers did not study what behaviors actually occurred after the women delivered.

Another structural conceptualization categorized as cognitive-

behavioral/individualistic was found in the reports of those researchers who used the theory of self-efficacy (Bandura, 1986). Self-efficacy is an individualistic concept that does not focus generally on maternal attitudes but more on a person's self-perceived competence and confidence in carrying out an act. As mentioned earlier, a few studies (O'Campo et al., 1992; Mitra et al., 2004; Wells et al., 2006; McCarter-Spaulding & Gore, 2009) have examined self-efficacy and breastfeeding among African American women. Mitra et al. (2004) and Wells et al. (2006) demonstrated that breastfeeding self-efficacy had an effect on breastfeeding intentions. O'Campo et al. (1992) and McCarter-Spaulding and Gore (2009) found that breastfeeding self-efficacy had an effect on how long one breastfed. In all cases, the more efficacious a woman was in her individual ability to breastfeed, the more likely she was to plan to breastfeed and the more likely to continue if she had already started.

In addition, Racine et al. (2009) developed the concept of Individual Net Benefit Maximization (INBM) from an economic theory. In the INBM model, Racine claimed that breastfeeding women will act in ways that maximized their efficacy. Sources of motivation and investment vary over time. When the negatives begin to outweigh the motives, breastfeeding will cease in an effort to achieve or maintain maximum happiness.

While these two broadly categorized structural conceptualizations may have been helpful in examining aspects of women's infant feeding decisions, they were rarely found in the literature. It is possible that other structural concepts still need to be identified and that they may have more explanatory power in future work. Also, combining the two broad categories to allow integrated examination of cognitive-behavioral/individualistic concepts and those that are cultural/multi-factorial may be of greater utility when

studying the complexity of the phenomenon of African American women's infant feeding choices.

Gaps in the Literature

Thirty years of research on African American women and their infant feeding choices has been analyzed. Despite the decades of research, eight common gaps in the literature have been identified. First, for the majority of the studies that differentiated race/ethnicity demographically, the participants were single, low-income, African American women with minimal levels of education. This limited view of African American women overlooked other subgroups. African American women with higher educational and socioeconomic statuses may shed new light on how these women in these groups also made their decisions on infant feeding choices.

Secondly, in several studies the researchers (Martinez & Nalezienski, 1981; Martinez et al., 1981; Sullivan & Jones, 1986; Grossman et al., 1989; Timbo et al., 1996; Forste et al., 2001; Li & Grummer-Strawn, 2002; Beal et al., 2002; Park et al., 2003; Li et al., 2005) used samples from large national datasets and collected data through surveys, questionnaires, and closed-ended questions. These methods of data collection yielded objective data, e.g., demographics and responses to predetermined questions only. While this approach produced valuable data, the women's chance to be heard was omitted. Marginalized persons, such as African American women, are at risk for exploitation through the use of questionnaires or structured interviews because they are not encouraged to express their own thoughts and views (Holloway & Freshwater, 2007a). However, their responses were somewhat limited by the questioning technique.

Thirdly, only 25% of the studies reviewed were qualitative in nature. The majority of the qualitative studies used ethnography or grounded theory methods; none analyzed narratives. Data collection in the qualitative studies occurred predominately by semi-structured interviews, focus groups, and/or observations of WIC agency characteristics. Through the use of these qualitative methods, researchers were able to more closely identify what some African American women experienced when making their infant feeding choices, compared to quantitative data sources.

Fourth, although mixed-method designs were used in three studies (Dix, 1991; Bentley et al., 1999; Brownell et al., 2002), the researchers did not include enough depth from the subjective data. The mixed-method studies used closed-ended questions or surveys to elicit quantitative data and then qualitative measures such as open-ended questions and ethnographic interviews only to gain further insight into their quantitative findings. The mixed-method studies were imbalanced in their use of the methods (quantitative predominated over qualitative). For example, Dix (1991) reported that the majority of her questions were closed-ended multiple choice. This restricted the depth of the information gathered. The ethnographic study (Bentley et al., 1999) used a structured questionnaire with an interview guide that was considered unstructured, however, no qualitative themes were identified. Instead, the authors stated, “Data were analyzed by searching through codes to identify narrative data relevant to the quantitative findings” (p. 28). In the third mixed-method study (Brownell et al., 2002), there is no description of the tool used other than that the total 19-items included both multiple choice and open-ended questions. These three mixed-method studies added some richness to the data but lacked the information obtained by using one-to-one narrative interviews.

A fifth gap is the inconsistencies in the findings reported in the literature. Some researchers reported familial influences as the major factor affecting African American women's infant feeding choices; others report that families were not influential. The same discrepancies are noted for the influence HCPs have on African American women's infant feeding choices. Approaching this issue from a mixed-method perspective helped clarify these discrepancies and variations in individual women's decision-making.

Because the purposes of the research which were heavily represented by statistical trend reporting and descriptive studies among the varied subsets were able to readily characterize, a sixth gap was identified: there are still uncertainties and unexplored areas remaining in regard to African American women and infant feeding decisions. For example, there were only five studies (Kistin et al., 1990; Gross et al., 1998; Meier et al., 2004; Bonuck et al., 2005; Meier et al., 2007) that focused on the effectiveness of interventions and increasing breastfeeding rates. Therefore, there is a need for more intervention studies specific to African American women and infant feeding. There is also a need to examine how factors identified as influential in research can then be used to promote healthy decision-making among African American women who are formulating their infant feeding choices.

A seventh gap in the literature is the lack of attention paid to the economic aspects that affect infant-feeding choices. Some of the studies (Cricco-Lizza, 2004, 2005, & 2006; Fooladi, 2001) examined women who received federal assistance (e.g., WIC), yet failed to discuss the impact that free formula may have on infant-feeding choices. Corporate marketing of formulas and giving free samples in hospitals are other mechanisms in the U.S. that promote formula feeding, however, they are rarely (Raisler,

2000; Tender et al., 2009) identified and critiqued as influential in the literature.

An eighth gap exists in regard to maternal self-efficacy. While it has been supported that maternal attitudes towards breastfeeding have a significant effect on infant feeding preferences, additional research is needed to explore the effect of self-efficacy, a confidence measure, on African American women's feeding preference. The literature from a variety of researchers (O'Campo et al., 1992; Dennis & Faux, 1999; Dennis, 2003; Blyth et al., 2002; Noel-Weiss et al., 2006; Wells et al., 2006; Avery et al., 2009; McCarter-Spaulding & Gore, 2009) has shown a clear relationship between self-efficacy and breastfeeding, yet much of the research has not been inclusive of African American women. Determining if self-efficacy (specifically during the prenatal period) has an effect on whether African American women choose to breastfeed or not is important. If so, self-efficacy may play a major role in developing interventions to increase breastfeeding rates among this population.

Most importantly, the ninth gap identified is that, to date, no research examining African American women and infant feeding preferences have used the Black Feminist perspective as a philosophical basis for research. Thus, African American women have not truly been placed at the center of the research being conducted. The voices of this population need to be, but have not been clearly heard.

Conceptual Framework for the Study

In nursing research, conceptual frameworks are used to explain the foundation for the approaches to and the analysis of the studies. Few explorations related to African American women's feeding decisions have identified conceptual frameworks as the basis of their research. However, based on the gaps identified in the literature, there is still a

need to tie the influential factors identified in previous research with the actual experiences of how African American women choose the methods by which they will feed their infants. It is important to understand at what point in the decision process external and internal factors play roles in their infant feeding preferences. Adding a narrative approach allowed women ample time to share, using their own words, the reasons they chose particular feeding methods. Narratives strengthened the study because these data were analyzed separately for themes. Narratives also enhanced the Black Feminist approach underpinning of the study to make the African American women's views and experiences central. The quantitative data in the study was considered separately using African American women's expressions about breastfeeding self-efficacy. Then, the convergence and divergence of all the results were considered in the final analysis to enhance knowledge from African American women about their infant feeding choices and the realities they encountered.

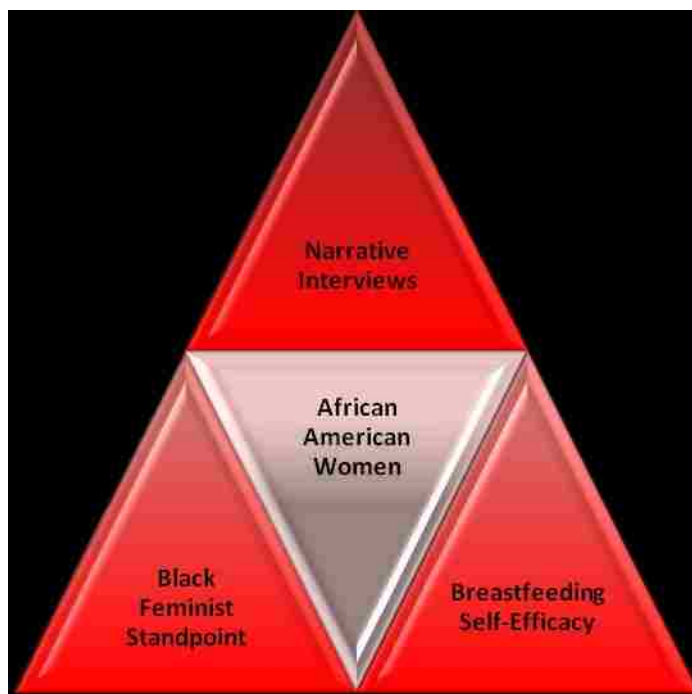
Therefore, triangulation is the approach in this study. Triangulation is a term that indicates greater accuracy can be gained about a concept by using multiple perspectives, in this case, quantitative, qualitative, and Black Feminist approaches. Thus, it enhanced the knowledge gained about the phenomenon under study, which is important when it is as complex as infant feeding choices and when it has been previously documented in the literature review to include multiple factors. Together, the three perspectives form the conceptual framework of the study, shown in Figure 4.

After conducting a thorough review of the literature, gaps have been identified in research aimed at examining infant feeding choices among African American women. The intent of this research was to add new insights to the topic by addressing the gaps in

the following ways.

Figure 4

Conceptual Framework for the Study



Dissertation Approach

A mixed method study was conducted to triangulate on the topic identify it more clearly by using multiple perspectives. The use of 1-to-1 narrative interviewing (qualitative) and individual questionnaires (quantitative) methodologies for data collection were incorporated. The combination of both approaches made the research more robust, producing results that add to the science by focusing on African American women's voices about breastfeeding. To counter the lack of African American women's views, who have for the most part been silenced in research pertaining to their decision making. Through allowing women to tell their stories, analyses of some of the stereotypes and attitudes African American women and their providers may have of each

other was performed. By asking women to, “Tell me all your thoughts, feelings, perceptions, experiences, and other influences that you recall that went into your newborn feeding choice,” it was anticipated that the processes by which African American women chose their infant feeding preferences would be uncovered.

Furthermore, integrating the Black Feminist philosophical standpoint as the basis of the study, and strengthening the approach by adding self-efficacy as the theoretical framework were unique aspects of the study. The Black Feminist perspective works toward empowering African American women and part of being empowered includes believing in one’s abilities (also considered self-efficacy). The use of these philosophical and theoretical perspectives supports the conceptual framework the exclusive emphasis on African American women’s experiences, which remains crucial in attempting to capture the uniqueness of this population.

Assumptions of the Study

For the study, the following assumptions were made:

1. African American women have rarely been asked directly or listened to closely regarding their newborn feeding choices.
2. African American women would be willing to share their stories regarding infant feeding choices.
3. African American women would be more comfortable and willing to share information with an African American female researcher particularly with a potentially sensitive topic.
4. The Black Feminist standpoint brought African American women to the center of this inquiry as an act of empowerment that counteracts marginalization.

5. Black Feminism combined with self-efficacy theory recognized and honored African American women's power as decision makers.
6. The use of a mixed-method approach would hold information, provide accuracy, and enlightenment through triangulation about African American women's infant feeding choices.

Research Questions

The research questions addressed in this mixed-method study are the following:

1. Are African American women who intend to breastfeed more confident in their ability to breastfeed than those who intend to bottle feed?
2. What factors do African American women report as influencing their infant feeding choices, including how they made their decision?

CHAPTER THREE

Research Design and Methods

In the previous chapters, the importance of breastfeeding was discussed and the fact that African American women remain the population least likely to initiate, continue, and exclusively breastfeed was reported. Furthermore, by conducting a thorough review of the literature, gaps that justify the rationale for this study including use of both quantitative and qualitative approaches have been identified. Finally, by using the Black Feminist standpoint, where African American women are at the center of research, a basis for using mixed method approaches to this study was provided.

Pilot Study

To determine the utility of a narrative methodology to learn about African American women's infant feeding choices, Robinson and VandeVusse (2009) conducted an exploratory, descriptive, qualitative pilot study. The researchers received IRB approval from Marquette University and a purposive convenience sample of African American women who were obtaining prenatal care from a private obstetrician's office in northern Illinois was recruited to participate in the study. Two weeks after delivery the primary researcher contacted, by phone, interested women who had been discharged home from the hospital with their full term (at least 37 weeks gestation) infants.

After informed consent was obtained, five individual narrative interviews were conducted at three weeks postpartum. The women were asked to give their personal account of "their thoughts, feelings, perceptions, experiences, and other influences" (Robinson & VandeVusse, 2009) that shaped their infant feeding choice. Taped recorded

narratives were transcribed with the removal of all identifiers. Each woman also completed a questionnaire that provided demographic information.

Descriptive statistics were used to represent the sample demographics. Analyzing the narratives was completed through rereading the transcripts and systematically coding the data for themes. The researchers focused their attention on the women's use of repetition and voice tone and the use of feeling words for emphasis. Themes were identified through the use of initial independent coding and analysis, mutual discussion of insights noted in data with a qualitative research expert, and subsequent reconfiguration of patterns into three major themes and sub-themes. In Table 6 is a summary of the themes and sub-themes that surfaced which are described further.

Table 6

Pilot Study Themes

1-Factors Influencing Breastfeeding (BF) a Maternal Infant Feeding Choice
<ul style="list-style-type: none"> • Maternal and newborn advantages of BF • Bonding enhanced • Previous BF experience • Exposure to BF through family • My own decision • Provider support
#2-Factors Influencing Formula as Maternal Infant Feeding Choice
<ul style="list-style-type: none"> • Unsuccessful BF attempts • Non-supportive providers • Availability of free formula • Convenience of formula • View breast as sex objects
#3-Opinions of Why Other African American Women Chose Not to BF
<ul style="list-style-type: none"> • Lack of maturity • Decreased education • Selfishness • Laziness • Ability to share feeding • Lack of awareness in the media

Note. Adapted from "Exploration of African-American Women's Infant Feeding Choices," by Robinson & VandeVusse, (2009), *Journal of National Black Nurses Association*.

Because all the women in the pilot ($n = 5$) initiated breastfeeding, they talked about factors that influenced their choice to breastfeed (Theme 1). For example, women were knowledgeable about the maternal and infant benefits of breastfeeding (sub-theme, *maternal and infant advantages of breastfeeding*) and cited this as a major reason they chose to breastfeed. Other sub-themes that emerged: *bonding enhanced* (more time with the baby), *previous breastfeeding experience*, and *exposure to breastfeeding through family* (own mothers' breastfed participants and/or their siblings).

Participants who had switched to formula feeding by the three-week interview discussed issues that influenced their rationale for the change (Theme 2). The 2 (40%) women who changed had substituted formula for breast milk for various reasons such as breastfeeding difficulties and lack of HCPs' support (Robinson & VandeVusse, 2009). The authors found many sub-themes related to the use of formula: *unsuccessful breastfeeding attempts* (either in-hospital or post discharge), *lack of support from HCPs during the postpartum period* (e.g., WIC lactation consultant not returning participant's phone calls), and *the availability and convenience of formula* (e.g., participants received formula from the hospital at discharge even if they were breastfeeding, making it easier for them to prepare formula when breastfeeding problems arose) (2009).

Finally, the participants spoke about why they believed other African American women preferred not to breastfeed (Theme 3). Many of the rationales given were related to maternal characteristics (e.g., not being mature enough to breastfeed, lack of education, and being egocentric) (Robinson & VandeVusse, 2009).

In general, the women were open about what factors influenced their infant feeding choices. Robinson and VandeVusse (2009) also found that the participants spoke

openly about their preconceived notions and opinions regarding infant feeding preferences of other African American women. This pilot study provided an illustration of the validity of a narrative interview methodology when collecting information related to infant feeding choices among African American women. In addition, findings from this pilot were similar to influential factors identified in previous studies (e.g., breastfed previously, provider support, and non-supportive providers), as discussed in Chapter 2.

However, the study was not without limitations. First, the researchers recognized that the sample was “small and not representative of all African American women” (Robinson & VandeVusse, 2009). For example, many of women were college educated and were married. Secondly, collecting data solely through 1-to-1 qualitative interviews could be limited due to the need for of confirmatory information. Thus, further exploration of other concepts, such as self-efficacy, which have not been studied extensively in this population, need to be researched. In fact, only two studies to date (Wells, et al., 2006; McCarter-Spaulding & Gore, 2009) have focused on African American women when examining infant feeding preference and self-efficacy. Therefore, the findings and limitations from this preliminary study guided the research design selected for the dissertation inquiry.

Research Design

A sequential, explanatory, mixed-method approach using both quantitative and quantitative methods was utilized from a philosophic basis of Black Feminism to meet the objectives of this study and facilitate triangulation on the phenomenon. In sequential methods, one approach is used first with the participants, followed by the other (Creswell, 2007). In this study, a quantitative method was used first, followed by a qualitative

interview with a subset of the sample. The objective behind this type of design was for the qualitative portion of the study to offer more detailed information about and enhance interpretation of the findings from the quantitative results (Pope & Mays, 2006; Creswell, 2007). This approach was chosen because the complexity of studying the phenomenon of infant feeding choices among African American women required a more multifaceted design to capture the data. Sandelowski (2000) studied this approach of using more comprehensive research designs to study complex topics. By using both quantitative and qualitative methods, the desire was to gain a more comprehensive understanding of the process of infant feeding choice among African American women. Mixed-method styles of thinking purposely included various ways of knowing (Greene, 2007). The mixed-method style lent itself to the Black Feminist viewpoint because it helped get to deeper knowledge and gave voice to a vulnerable population whose perspectives have been omitted in previous studies (Hesse-Biber & Leavy, 2006; Holloway & Freshwater, 2007b). By placing women at the center of the research, African American women in this study had an opportunity to describe, in their words, what factors influenced their infant feeding choice.

These two methods were used in a sequential explanatory manner with a quantitative to a qualitative design. This design was chosen because the purposes of the study were to:

1. Compare prenatal self-efficacy scores (quantitatively) of mothers who intended to breastfeed with those who intended to bottle feed.
2. Listen (qualitatively) to African American women share their rationale for choosing their infant feeding method.

The concept of self-efficacy has been explored and shown to have an effect on infant feeding choice (O'Campo et al., 1992; Dennis & Faux, 1999; Blyth et al., 2002; Noel-Weiss et al., 2006; Wells et al., 2006; McCarter-Spaulding & Gore, 2009). Valid and reliable tools such as the Breastfeeding Self-Efficacy Scale-Short Form (BSES-SF) (Dennis, 2003) and the Prenatal Breast-feeding Self-efficacy Scale (Wells et al., 2006) have been used to determine the effect of breastfeeding self-efficacy on infant feeding choice. The more efficacious a woman is about breastfeeding, the more likely she is to initiate breastfeeding; yet, the findings of these studies have been limited to mainly Caucasian women. To date, there was only one study that has exclusively focused on women of African descent (not exclusively African American women) and the concept of breastfeeding self-efficacy (McCarter-Spaulding & Gore, 2009). As a result, there was no certainty of the effect of breastfeeding self-efficacy on African American women. Thus, the current study explored this concept specific to African American women.

African American women may perceive themselves as having the potential to be successful with breastfeeding but still opt to bottle-feed or change from breast to bottle after a few weeks postpartum. It was imperative to hear women's stories of what they encountered. Therefore, the qualitative portion of the research study helped provide a bridge from what was found from the quantitative analysis to the actual experiences of the participants. Qualitative methods enhanced quantitative findings by focusing on the significance behind the numbers (Few, Stephens, & Rouse-Arnett, 2003). Furthermore, the qualitative research allowed for exploration of participants' subjective views of their day-to-day experiences (Pope & Mays, 2006).

More specifically, narrative interviews compared to other qualitative designs,

provided a more holistic means to understanding life experiences (Hesse-Biber & Leavy, 2006). Furthermore, through narrative inquiry, participants had the opportunity to define their realities and not have them shaped by the researcher (Holloway & Freshwater, 2007a). Through narrative interviews, African American women in this study had an opportunity to share their personal stories regarding infant feeding choices and their subsequent postpartum experiences that may have further shaped their decisions.

Furthermore, storytelling is an instinctive part of the human experience (Hesse-Biber & Leavy, 2006; Holloway & Freshwater, 2007). African Americans, in particular, have a long history of storytelling (Banks-Wallace, 2002). In addition, Gates (1989) noted that using narratives to answer epistemological and ontological inquiries from an African American point of view has been vital in the role of the survival of this vulnerable group.

Sample Participants and Setting

When utilizing a sequential, explanatory, mixed-method design, the same participants are recruited for quantitative and qualitative data collections (Creswell, 2007). The target population for this study was pregnant African American women in their third trimester of pregnancy (28 weeks gestation or greater). The convenience sample was recruited from a private obstetrician/gynecologists' office in northeastern IL and a midwifery practice located in a large teaching hospital in Southeastern WI. These two sites were chosen because of their significant African American populations ranging from 50-85%. Because of the socioeconomic, educational, and marital diversity in the African American women at the two sites it was anticipated that there would be generalizability of the quantitative findings. Letters of support from the obstetrician/gynecologists' office and the nurse-midwifery group practice, giving consent to recruit and conduct narrative

interviews on site, were obtained and submitted to Marquette University's IRB for approval prior to the start of the study.

Women were asked to participate if each met the following criteria: literate in English, at least 18 years of age, carrying a singleton pregnancy, and healthy with no prenatal complications (e.g., gestational diabetes or preterm labor). Women who were younger than 18 years of age, pregnant with multiples (twins, triplets, etc.), and at risk for delivering prematurely (prior to 37 weeks) were excluded, due to the assumption that these confounding variables may have influenced self-efficacy perception and postpartum realities encountered. All women identified by the personnel at the practice offices (e.g., CNMs, physicians, and medical assistants) as eligible were recruited to participate. In an effort to achieve 80% power and 5% error variance in determining the effect of breastfeeding self-efficacy on breastfeeding intention, a minimum sample size of 52 participants was determined by *G*Power* 3.0 version (Faul, Erdfelder, Lang, & Buchner, 2007). An additional 26 participants could have been recruited based on the fact that the dropout rates among this population is high (approximated to be 50%), which brought the total maximum sample size that could have been recruited to 78. From this sample, women were purposefully reconnected to participate in face-to-face narrative interviewing 3-4 weeks postpartum. Thirty women (15 of whom intended to breastfeed and 15 of whom intended to bottle-feed) were contacted in an attempt to obtain a minimum of 20 women to be interviewed. A total of 30 were recruited due to the fact that recent life changes (i.e., giving birth and adding a new baby to the family) may have limited the number of women who were interested and able to follow through with their interviews. Therefore, a 50% rate of non-completed interviews was also estimated.

Sample characteristics are described in detail in Chapter Five.

Data Collection

There were three paper and pencil instruments used in the study for data collection. Two were used at the prenatal contact; the third was completed at the 3-4week follow-up visit.

Demographic Questionnaire and Contact Form

Demographic data was collected using the Demographic Questionnaire (DQ) developed by the primary investigator (Appendix A). The DQ measured maternal age, educational level, marital status, socioeconomic level, number of living children, gestational age, provider, and intended infant feeding method. On the Contact Form (Appendix B), which was attached to an informational brochure regarding the study, the participants were also asked to list two contact numbers at which the researcher could potentially contact them to schedule a follow-up interview 3-4 weeks after giving birth. In addition, this form gave permission from the participant to allow her HCPs' office staff to inform the researcher of her delivery.

Prenatal Breastfeeding Self-Efficacy Scale

The Prenatal Breast-feeding Self-Efficacy Scale (Wells et al., 2006) (Appendix C) was used. This scale measured breastfeeding self-efficacy during pregnancy. Bandura's (1986) definition of self-efficacy was used to create the scale; specifically, the scale assessed the mother's perceived ability to carry out behaviors needed to initiate breastfeeding (Wells et al., 2006). It is a 20-item, self-report survey on a 5-point Likert rating scale from 1, "not at all sure" to 5, "completely sure." The questionnaire was

administered to consented participants in their 3rd trimester of pregnancy. Total possible score on the scale ranged from 20-100. Internal consistency was reported, with reliability $\alpha = .89$ (Wells et al., 2006). Validity of the instrument was reported: content validity index of .90; construct validity calculated by factor analysis resulting in 4 themes (Wells et al., 2006). The four themes within the women's perceived abilities were identified by factor analysis as follows:

- manage breastfeeding skills and demands (e.g., the ability to make time to breastfeed)
- gather information regarding breastfeeding (e.g., the ability to seek out information)
- handle breastfeeding in public (e.g., comfort with feeding in public), and
- deal with the social pressures of breastfeeding (e.g., the ability to breastfeed without encouragement from support persons).

Infant-Feeding Form

At the 3-4 week interview, participants were asked to complete a short infant-feeding form (Appendix D) once the interview was completed. Respondents were to indicate if they had initiated breastfeeding in the hospital (check *yes* or *no*). In addition, the women were to report if they were currently breastfeeding (*yes* or *no*). If yes, then their level of breastfeeding was obtained using the schema developed by Labbok and Krasovec (1990) regarding exclusivity or estimated formula usage.

Narrative Interviews

Individual narrative interviews were conducted face-to-face at the office practice sites. It was estimated that each interview would last approximately 30-45 minutes. Women were asked the following lead statement: “Tell me all your thoughts, feelings, perceptions, experiences, and other influences that you recall that went into your infant feeding decision.” Probing statements about the woman’s infant feeding choices were asked as needed to obtain rich data, such as “Tell me about:

- how confident you are in your infant feeding choice.”
- your family and friends’ input in your decision.”
- any advertising or news media influences.”
- what your providers shared with you about newborn feeding.”
- any effects from your labor and delivery on your feeding choice.”
- any policies related to newborn feeding at work or in public places that you may have heard when making your decision.”
- whether you changed your mind about your decision at any time and when that occurred.”
- whether your planned birth control method effected your newborn feeding decision.”

Each interview concluded with the open-ended statement to the women: “Is there anything else?”

Procedures

After approval from Marquette University’s IRB, the recruitment process began. Permission to use office space for interviewing was obtained in the two practices’ support letters, prior to the start of data collection. The the office personnel at each site were

oriented about the study and their anticipated roles, such as identifying women in their 3rd trimester, and confirming delivery dates for those women who had signed consent forms permitting this information to be shared. Data collection took place over two different time-periods: *Time 1* (3rd trimester) and *Time 2* (3-4 weeks postpartum).

Time 1

Each site was visited on average once a week by the primary investigator (PI) for recruitment. An informational brochure (Appendix B), to which the Contact Form was attached, was given to all eligible women. If interested, women consented for the quantitative portion and the possibility of being re-contacted for a narrative interview (Appendix E). Each woman who signed the consent was given a packet which included the DQ and Prenatal Breast-feeding Self-efficacy Scale. The packet was completed and returned prior to leaving the office after her prenatal visit. Completed packets were placed into one of two folders based on the participants' intended infant feeding choice (breast or bottle-feeding). Sixty-five women were approached for the quantitative portion. Recruitment continued until the minimal sample size needed for the power analysis ($n = 52$) was acquired, yielding a final sample size of 59 participants. Upon returning the completed DQ and Prenatal Breast-feeding Self-efficacy Scale to me, participants were given a \$5 Target gift card.

Thirty women were selected from the initial sample ($n = 59$) to be re-contacted for narrative interviews at 3-4 weeks postpartum. The women were re-contacted as they delivered. Following the initial contact, the office personnel were contacted weekly to find out if any of the women who signed consents had delivered. Participants ($n = 54$) had consented to allow the office staff to release information about when each one had

delivered.

Time 2

As each of the 30 participants delivered (15 of whom intended to breastfeed and 15 of whom intended to bottle-feed according to their DQ results), they were phoned no later than 2-weeks postpartum, to confirm interest and eligibility in being interviewed. If still interested in participating, a meeting date and time was scheduled to conduct the individual, face-to-face narrative interview at 3-4 weeks postpartum to discuss each woman's infant feeding choice and experience since birth. Interviews took place in private rooms at the office sites during a time that was mutually agreed upon.

During the individual, face-to-face narrative interview, the participant was asked to, "Tell me all your thoughts, feelings, perceptions, experiences, and other influences that you recall that went into your infant feeding decision." Probing statements were used as needed during the interview. Participants were encouraged to tell their stories, in their own ways, about how they arrived at their infant feeding choices. In an effort to have accurate data, all narratives were audio taped.

After the narrative interview was completed, participants were asked to complete a short infant-feeding form (Appendix D). With this tool, participants self-reported their feeding methods. If breastfeeding, they reported the level of breastfeeding using the schema developed by Labbok and Krasovec (1990). Upon completion of the narrative interview and Infant Feeding Form, participants received a \$20 gift card to Target.

Data Analysis

Quantitative data collected was analyzed using the Statistical Package for Social

Science (SPSS), 16.0 version. To provide details regarding the sample, demographic and intended feeding choice data were summarized using descriptive statistics. An independent-sample t-test was used to compare prenatal self-efficacy mean scores between women who intended to breastfeed and those intending to bottle-feed. Means of the itemized statements on the Prenatal Breast-Feeding Self-Efficacy Scale were also compared between the groups using independent t-tests. Logistical regression and odds ratio analysis was used to determine predictability of prenatal self-efficacy on breastfeeding initiation. Statistical significance was determined at $p < .05$ and odds ratios at 95% confidence interval. The quantitative data was entered into SPSS weekly as it was collected and narrative interviews were transcribed within a 2-3 week period after each interview.

Qualitative data analysis essentially began during data collection (Carpenter, 1995). During the narrative interviews, notes regarding observations of participants' nonverbal cues were taken. In addition, through active listening, notes pertaining to the use of verbal emphasis (e.g., use of voice tone) were made. After each interview, an audit trail to track the process of data analysis leading to the development of themes related to infant feeding choices in African American women was created. In an effort to recapture the complete interview, observational notes were added to the transcribed transcriptions which were audio-taped.

Next, content and thematic analysis was used to analyze the narratives (Duffy, 2007; Holloway & Freshwater, 2007a). Independent analysis for initial themes was done by rereading the transcripts and systematically coding the data for themes. Attention was given to the women's use of repetition and topics covered. Like phrases between and

within the groups were grouped. Breastfeeding and bottle-feeding women in the study had similarities and differences in factors influencing their infant feeding choice.

Because there was redundancy in labeling of groups, like groups were bracketed, further reducing the themes. Then insights noted in a portion of the data were discussed with a second coder who is an expert in narrative analysis. Finally, patterns were reconfigured into six major themes which are discussed in detail in Chapter Five.

In qualitative research, trustworthiness and authenticity are synonymous with reliability and validity used in quantitative research. In this study, trustworthiness was achieved through giving attention to the following four attributes within the data. For *credibility*, attention was given to the data collected by including observational notes made during the interview with the transcriptions the data was re-represented so that the voices of the participants were truly expressed. For *dependability*, by tape recording and transcribing all narratives verbatim, the accuracy in which data were collected was maintained. Also, further evidence of the thoroughness of the methods of data analysis and the manner in which the conclusions were drawn was achieved by re-reading and discussing analysis with a second coder. For *confirmability*, through the use of an audit trail, conclusions were drawn and the findings adhered to the aims of the study. With transferability, it was expected that the results of this study would have utility to other African American women (Lincoln & Guba, 1985; Carpenter, 1995; Holloway & Freshwater, 2007a; Drew, Hardman, & Hosp, 2008). Furthermore, authenticity was reached by appropriately presenting, through the use of selected explanatory direct quotes, the thoughts and feelings of the participants (Carpenter, 1995; Holloway & Freshwater, 2007a).

Finally, the analyses from both the quantitative and qualitative data were compared and inferences made based upon the findings. In particular, with the use of triangulation (mixed-method approach from a Black Feminist standpoint), conclusions were drawn that examined both intent (quantitative) and actual experiences (qualitative) of African American women as the central focus of the research. Triangulation enhanced the meanings derived from the data and allowed greater depth of interpretation than either method alone. The findings from this study are reported in Chapter 5.

Protection of Human Subjects

There was minimal to no risk to participants in this study. Letters of support from the obstetrician/gynecologist office in northeastern IL and the midwifery center located in a large teaching hospital in southeastern, WI, with prior IRB approval from Marquette University, and signed consents were obtained prior to initiation. The consents included permission from the participants to the office staff of their care providers to release their dates of delivery to the researcher. Furthermore, the consent gave authorization to re-contact the participant to take part in an individual narrative interview and to tape record them.

Because participating in the narrative interviews and/or completing the DQ and Prenatal Self-efficacy scale required an added commitment of time, the participants received gift card(s) as compensation. Participants were aware of their right to withdraw from the study at anytime. However, if a participant did withdraw, they were also aware that they would not receive compensation.

In an effort to maintain participant confidentiality, the two forms with identifiers, the consent forms and the contact information forms, were kept in a locked file, separate

from any other data collected, in the office of the researcher. Only the PI had access to consent forms. Furthermore, the subjects were identified by assigned code numbers (participant #1, #2, etc.) in the order in which participants completed the DQ and Prenatal Self-efficacy Scale. Thus the PI was the sole person able to make direct links to participants and the collected data. All de-identified data (field notes, transcriptions, spreadsheet of de-identified demographics, and data analysis) are stored separately in a password protected computer file. The audiotapes were transcribed and all identifiers removed from the transcriptions. In the event that any secondary analysis may be conducted, the data and findings will be kept in locked files for up to seven years after dissemination and publication of this study. After such time, all data and findings will be shredded or otherwise destroyed.

Study Limitations

While using a mixed-method design proved advantageous to study the phenomenon of infant feeding decisions among African American women, there were limits to the design. For example, this study focused specifically on pregnant and postpartum African American women; thus, the findings may not be applicable to pregnant and postpartum women of other races. Furthermore, qualitatively, a small sample size was chosen to gather in-depth information regarding infant feeding choices; thus just beginning to include African American women's voices into the study of this phenomenon. However, a broader understanding of a range of African American women's infant feeding experiences was projected than through the sole use of paper pencil tests..

Another potential limitation to this study was the issue of recall. Participants may have had memory gaps due to many life transitions occurring simultaneously in their

lives. It was expected that the relatively short time frame, in weeks, from Time 1-2, would lessen the likelihood that participants would forget how they arrived at their infant feeding choices. Additionally, participants may have shared only information they deemed as socially acceptable (Holloway & Freshwater, 2007a). However, by expressing an openness to listen to women's experiences and being from the same racial background, it was assumed that participants would freely communicate their stories with me in the role of the researcher.

Exploration of African-American Women's Infant Feeding Choices

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Published in: *Journal of the National Black Nurses Association*, 20(2), 32-37.

Abstract

It is well documented in the literature that breastfeeding is more beneficial for infants and mothers than is formula feeding. Yet, African-American women are least likely to initiate and continue breastfeeding compared to other ethnic groups. Few studies have examined African-American women's infant feeding choices from the women's perspectives. Therefore, the purpose of this exploratory study was to examine African-American women's infant feeding choices with individual narrative interviews at 3 weeks postpartum. Five African-American women participated. After coding and analyzing the narrative interviews, three major themes with sub-themes emerged that identified influencing factors on participants' choices and their opinions about other women who chose formula. The women willingly shared their rationales for their infant feeding methods. In an effort to develop and implement culturally appropriate interventions and to increase breastfeeding rates in this population, further exploration of infant feeding choices from the women's perspectives is needed.

Key Words: African-American women, breastfeeding, infant feeding

Introduction

Breast milk is supported in the literature as the ultimate source of nutrition for infants. Despite known maternal and infant benefits to breastfeeding, African American women breastfeed at a lower rate than any other ethnic group. This fact is disconcerting. African American infants could benefit the most by being breastfed; currently they have the highest rates of any group for prematurity or death before their first birthdays. Findings such as these have brought national awareness to infant health disparities that exist in this country and the advantages that breast milk could have for this population.

In the *HSS Blueprint for Action on Breastfeeding*, the U. S. Surgeon General noted the racial/ethnic breastfeeding disparities that exist, especially among African American women (U.S. Department of Health and Human Services, 2000a). He also identified the need to reach African American women by providing culturally appropriate methods to promote breastfeeding (U.S. Department of Health and Human Services, 2000a). Therefore, changing this situation requires that African American women's perspectives be included to develop and implement culturally suitable interventions to increase breastfeeding rates among African American women.

Background and Significance

Breastfeeding as an Optimal Feeding Choice

Nationally, breastfeeding has been supported as the optimal feeding method by various professional organizations, e.g., the American Academy of Pediatrics (2005), the American College of Nurse-Midwives (2004), and the American College of Obstetricians and Gynecologists (2003). Nutritional, immunological, social, psychological, and

economical advantages have been associated with breastfeeding (U. S. Breastfeeding Committee, 2002a). In the 2005 revised policy statement regarding breastfeeding, the American Academy of Pediatrics maintained that breastfeeding guarantees optimal health in addition to providing the most favorable developmental and psychosocial outcomes for infants. Unfortunately, during the 20th century, the United States became primarily a formula-feeding nation (Philipp & Jean-Marie, 2007).

Documentation of Feasibility of Breastfeeding

The benefits of breastfeeding are well documented. Therefore, when the U.S. Department of Health and Human Services (USDHH) developed *Healthy People 2010*, national breastfeeding objectives were established as follows: 75% of women will initiate breastfeeding, 50% will continue for at least six months, and 25% will continue for one year (USDHH, 2000). Provisional results from a survey conducted by the Centers for Disease Control and Prevention (CDC) in 2006 were encouraging; 74% of babies born in the U.S. were initially breastfed (CDC, 2009). Despite the national increase in breastfeeding initiation, the rates were not uniform across ethnicity/race. As shown in Table 1, African-American women have lower initiation of breastfeeding and continuation rates than do both White and Hispanic women (CDC, 2009). The statistics are disturbing because African-American women consistently experience the highest infant mortality rates and other illnesses (e.g., asthma and obesity) to their children, who, in turn, could benefit the most by being breastfed (see Table 1).

African American Women and Breastfeeding

There have been numerous studies spanning decades that focused on African-

American women and infant feeding preferences. The majority of this research consisted of quantitative studies centered on low-income women (Forste, Weiss, & Lippincott, 2001; Li & Grummer-Strawn, 2002; Mitra, Khoury, Hinton, & Carothers, 2004; Li, Darling, Maurice, Barker, & Grummer-Strawn, 2005; Persad & Mensinger, 2008; McCarter-Spaulding & Gore, 2009; Thulier & Mercer, 2009). Researchers reported that maternal demographics such as age and socio-economic and marital statuses contributed to their infant feeding choice (Forste et al., 2001; Li & Grummer-Strawn, 2002; Mitra et al., 2004; Li et al., 2005; Thulier & Mercer, 2009).

Table 1

National Breastfeeding Initiation and Continuation Rates				
	<i>Healthy People</i>	Hispanic	White Women	African-American
	2010 Goals	Women		Women
Initiation	75%	81%	77%	60%
Continuation				
(6 months)	50%	46%	45%	31%
Duration				
(1 year)	25%	24%	22%	16%

Note. Adapted from “Breastfeeding among U.S. Children Born 1999–2006, CDC National Immunization Survey,” by Centers for Disease Control and Prevention, 2009 & U.S. Department of Health and Human Services (2000). *Healthy people 2010*. Washington, DC: Author.

Maternal Characteristics and Breast Feeding

Maternal characteristics were also found to be factors that influenced infant feeding choices. Maternal beliefs, both positive and negative, and confidence have been shown to influence infant feeding preferences (Corbett, 2000; Forste et al., 2001; Mitra et al., 2004; Persad & Mensinger, 2008; McCarter-Spaulding & Gore, 2009; Thulier &

Mercer, 2009). Furthermore, mothers who lacked knowledge about the benefits of breastfeeding were more likely to use infant formula and bottle-feed their infants (Persad & Mensinger, 2008; McCarter-Spaulding & Gore, 2009).

Few studies examined infant feeding choice from the mother's perspective (Cricco-Lizza, 2004, 2005, 2006; McCarter-Spaulding, 2007). Women reported that messages from family and friends were key factors in their infant feeding choices (Corbett, 2000; Froste et al., 2001; Cricco-Lizza, 2004, 2005, 2006; McCarter-Spaulding, 2007). Health-care providers and counselors from The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) were also found to have impacts on infant feeding choices among African-American women (Cricco-Lizza, 2004, 2005, 2006).

Purpose of the Study

The purpose of this study was to examine African-American women's infant feeding choices with narrative interviews. In addition, this preliminary study aimed to demonstrate the effectiveness of narrative interviews in gathering information from African-American women regarding their infant feeding choices.

Methods

Research Design, Sample and Setting

This was an exploratory, descriptive, qualitative study. African-American women, 18 years of age or older, were the target population for this study. African-American women in their last month of pregnancy were approached about the study if they spoke and read English; had phone access and could be contacted two weeks after

delivery; delivered full-term (> 37 weeks gestation) infants who were discharged from the hospital with the mothers; and had transportation to their provider's office for the interview. Due to confounding factors that might have influenced their infant feeding choices, women who had complications (e.g., gestational diabetes, preterm labor) prenatally and/or during the intrapartum period or who were pregnant with and delivered multiples (e.g., twins or triplets) were excluded from the study. Recruiting took place at a private obstetrician/gynecologist office located in a northern Illinois suburb.

Because this was a pilot, exploratory study, a small sample of five women was planned. To achieve this, seven women who expressed initial interest in participating in the study were recruited. One of the women was not able to be contacted; another did not arrive for her scheduled interview. Therefore, five women participated in the study.

Data Collection

IRB approval was granted from the University. After informed consent was obtained, five individual narrative interviews were conducted at three weeks postpartum. Each woman was asked to disclose, in her own words, all of her thoughts, feelings, perceptions, experiences, and other influences that went into her newborn feeding choice. The interviews were tape recorded and transcribed verbatim by the lead researcher, who removed the identifiers. After the interview, each participant completed a demographic questionnaire.

Data Analysis

Demographic data was summarized using descriptive statistics. An inductive approach to data analysis was completed through re-reading the transcripts and

systematically coding the data (Orcher, 2005). The initial organization of the data occurred through labeling similar sections from the participants' transcribed narratives into various categories. During this coding process, attention was given to the women's use of repetition, voice tone, and feeling words for emphasis to develop the codes along with an array of preliminary themes. Then, review and discussion of the initial codes and themes occurred with a qualitative expert concerning commonalities and outliers, as well as how best to organize the data to convey the women's meanings. In qualitative research, "data collection and data analysis are iterative processes" (Hesse-Biber & Leavy, 2006, p.348). The themes were further refined and grouped together until major themes and sub-themes were identified (Pope, Ziebland, & Mays, 2006).

Findings

Sample

The mean age of the participants was 29.4 years of age ($SD = 3.65$). The majority of the women were married (60%) and had some college experience (80%). Median household income for this sample ranged between \$40,001-\$60,000 and one participant reported a family income of over \$80,000. Three of the women planned to return to work full-time and the other two part-time.

Themes

Three major themes emerged from the analyses. In Table 2, a summary of the major themes and sub-themes are noted. At least one example of each sub-theme is documented in the text (see Table 2).

Table 2

Thematic Categories Related to African American Women's Infant Feeding Choices

Factors Influencing		Opinions of Why Other
Breastfeeding	Formula Use	African-American Women Choose Not to Breastfeed
Maternal advantages	Failed breastfeeding attempts	Lack of maturity
Infant advantages	Non-supportive providers	Decreased education
Own individual decision	Free formula	Laziness
Bonding enhanced	Convenience of using formula	Selfishness
Previously breastfed		Lack of attention in the media
Exposure through family		Breast viewed as sex objects
Provider support		

Theme 1: Factors influencing breastfeeding as infant feeding choice. Given that there was a 100% initiation rate, all of the women talked about factors that influenced their choices to breastfeed (Theme 1). For example, women were knowledgeable about the maternal and infant benefits of breastfeeding and cited this as a major reason they chose to breastfeed. A couple of the participants spoke of the physical advantages they expected from breastfeeding: “I knew it would help my uterus shrink back and help me lose weight.” “It’s healthier for me. It’s motivating me.”

All of the women cited benefits of breastfeeding for their babies as being key to their choosing to breastfeed. They opted to breastfeed because “it [breast milk] got all the antibodies to help the baby stay well;” [breastfed infants] “are smarter, less colicky,” and [they] “don’t get sick as much.”

Each woman expressed that her infant feeding choice was an individual one that

she made herself. A couple of the women stated that their decisions to breastfeed were made early. “Pre-conceptually I had already kinda decided.” “I knew from the very beginning I would nurse her.” Others spoke of not being influenced by external factors. “Really there was no one to tell me; I made the decision on my own.” “I didn’t need the help.”

Desiring to develop a greater maternal bond with their infants was another factor that played a role in infant feeding preference for these women. Sixty percent of the women spoke about choosing to breastfeed because they wanted to “do the bonding thing” and “wanting the bonding experience.”

Having breastfed previously and/or being exposed to breastfeeding through family (e.g., their own mothers had breastfed the participants and/or their siblings) were also factors that influenced breastfeeding initiation. Breastfeeding was the initial feeding method of choice because “My mother breastfed us; so, it was always the way you do it.” “Knowing that it’s been done in the family, of course that’s what I’m gonna do, too.”

Most of the women reported positive feedback from their health-care providers. Sixty percent of the women reported having some help in the hospital from their postpartum nurses. Another participant stated, “The pediatrician we saw in the hospital said it [breastfeeding] was better for her [the baby].” However, other participants reported receiving ambivalent or negative advice from their health-care providers noting that the “doctor said either-or is fine” or the nurses “automatically assumed I was bottle-feeding.”

Theme 2: Factors Influencing formula as infant feeding choice. By the time of the three week postpartum interview, 40% ($n = 2$) of the participants had switched to formula feeding. They discussed various issues that influenced their basis for the change

(Theme 2). Failed breastfeeding attempts, mainly after discharge, were cited as the primary reason for switching to formula. The women spoke of their babies “not latching on” and the breast milk “not coming out as much.” One mother who had initiated breastfeeding and was using formula at the time of her interview, spoke of her frustration and described her transition from breast to bottle as a personal letdown.

“He would not latch on whatsoever. I didn’t have a choice but to give him a bottle. It’s frustrating when your baby is hungry and he’s not latching on and you can’t feed him. I didn’t know whether I was doing it right or what. I think that’s the problem; I didn’t have enough knowledge on how to do it and that’s why I failed.”

Some of the participants reported seeking help from various health-care providers but they were not supported. The lack of assistance began prior to leaving the hospital. “They were actually trying to offer him a bottle even though I was breastfeeding” and the lactation consultant “didn’t come.” The lack of support from health-care providers persisted after discharge. “I even tried to call them [WIC lactation counselor] for consulting because I was trying to give it [the breast] to him when we got home. I couldn’t get in touch with nobody.”

Being advised by their infants’ pediatricians was also mentioned as reason for changing to formula from breast milk. A mother whose infant was diagnosed with thrush was instructed “don’t give him no more [breast milk] because it’s [thrush] gonna keep occurring.” She was also told that “after the thrush is gone, if [she] still had milk supply then [she] could try it again because that’s why he wasn’t taking it.”

Furthermore, the two women who were using formula at the three-week follow-up spoke of the availability and convenience of having formula in their home when breastfeeding problems arose. When they experienced breastfeeding difficulties, “it was more convenient to hand [the baby] a bottle.” All the participants received formula from

their respective hospitals at discharge, despite the fact they were breastfeeding successfully when they left.

Theme 3: Opinions of why other African-American women choose not to breastfeed. Finally, all of the participants discussed their opinions about why they believed other African-American women choose not to breastfeed (Theme 3). The majority of the reasons given were related to maternal attributes (sub-themes: *lack of maturity, decreased education, laziness, and selfishness*). For instance, one mother stated, “You have to have a more mature mind [to breastfeed]. You know you can’t just pass the baby off when you want to go do something.” Another reported that her prenatal class instructor described breastfeeding mothers as “more educated.” “It’s laziness” was another attribute the women used to describe why other African-American women choose not to breastfeed. Others stated that the lack of interest in breastfeeding was selfish and noted that “back in the day, there was no formula; you just did what you had to do.”

Little media attention given to breastfeeding, especially media catering to African-American women was also cited as a possible reason the majority of African-American women choose not to breastfeed. “The awareness is definitely not on TV.”

Many of the women spoke about how some of their friends viewed breasts as sex objects, therefore, turning them off to the idea of breastfeeding. “I’ve heard one of my girlfriends say, ‘the thought of anybody sucking my breast that wasn’t a man was not appealing.’ They couldn’t differentiate sexuality with nurturing.” Another mother said that her girlfriend thought she “shouldn’t nurse because it was dirty or it was inappropriate to do or not to be done in public.”

Discussion

In this exploratory, pilot study, breastfeeding initiation rates exceeded the objective of *Health People 2010*, with all of the women choosing breastfeeding. The participants noted various factors influencing their choices to breastfeed. Furthermore, several themes in this introductory study (e.g., breastfeeding knowledge, breastfed previously, provider support, and non-supportive providers) have been identified as influential factors in previous studies about African-American women's infant feeding choices (Mitra et al., 2004; McCarter-Spaulding, 2007; Persad & Mensinger, 2008; McCarter-Spaulding & Gore, 2009).

However, the women in this study clearly mentioned that they made their infant feeding decisions on their own. This finding conflicts with previous studies (Cricco-Lizza, 2004, 2005, 2006; McCarter, 2007; Persad & Mensinger, 2008) that reported family and health-care providers as key contributors in African-American women's infant feeding choices. Earlier research has not shown a strong emphasis on breastfeeding as a woman's individual choice. Furthermore, 80% of the women ($n = 4$) reported having had some breastfeeding exposure through family and/or friends. Prior studies also reported that African-American women had few or no breastfeeding role models (Corbett, 2000; Cricco-Lizza, 2004, 2005, 2006).

Among those 2 (40%) who had discontinued breastfeeding by three weeks post partum, breastfeeding difficulties, mainly latching issues, were noted to be the major reason for the change in feeding method. Not being able to get help from their providers further complicated the situation. Having formula readily available, because it was given to the women upon hospital discharge, made the transition from breast to bottle easier.

Cricco-Lizza (2005) also noted that the availability of formula from WIC influenced bottle-feeding among her sample. The inadvertent message being sent to breastfeeding mothers, when they are provided with *just in case* free formula, is actually quite a powerful one that does not convey the likelihood of success.

There is also an economic impact related to infant feeding choice. The formula industry is a lucrative business. In fact, it is reported that annual formula sales generated in the U. S. total approximately \$3 billion (Philipp & Jean-Marie, 2007). Additionally, WIC is the biggest consumer of formula in the U. S., purchasing approximately 40% of all formula sold (Weimer, 2001). Every 10% increase in breastfeeding among women who participate in WIC would save the program \$750,000 per year in formula expenses (USBC, 2002b). These monies could be allocated for improved maternal nutrition for breastfeeding mothers.

Overall, the women spoke without restraint concerning what factors played a part in their infant feeding decisions. They were also candid about their biases and opinions regarding infant feeding preferences; thus, this study demonstrated that a narrative interview methodology was useful in gathering information regarding infant feeding choices directly from African-American women.

Limitations

Although this was a qualitative, exploratory, pilot study, the sample nonetheless was small and was not representative of all African-American women. For example, 4 (80%) of the women had some college education, and 3 (60%) were married. This is high compared to national statistics that show only 40% of women in the sample's age group (25-29) have ever been married (U.S. Census Bureau, 2005b). Similarly, the median

income of African-American households nationally was \$30,000 in 2004, which is lower than what was reported in this study (U.S. Census Bureau, 2005a). Additionally, the process of data collection was exclusively through one-time 1:1 qualitative interviews, which could be limited by a lack of confirmatory information.

Practice Implications

The literature indicates that all health-care providers, particularly those who provide care to women and infants, such as maternity nurses, certified nurse-midwives, and pediatric caregivers, are in ideal situations to provide women with infant feeding options in order for them to make informed choices. Open dialogues between clients and providers, addressing the pros and cons of breastfeeding, are needed. Providers must be active on hospital committees to discuss the issue of the potential negative impact that formula distribution has on breastfeeding mothers.

In addition, providers need to encourage more hospitals to follow the Baby Friendly Hospital Initiatives (BFHI) sponsored by the World Health Organization and the United Nations Children's Fund. This program recognizes hospitals that assist mothers to successfully initiate and continue to breastfeed (BFHI, 2009). Philipp et al. (2001) reported an increase in breastfeeding initiation rates among African-American women (from 34 % to 74 %) in its inaugural year of implementing the BFHI at Boston Medical Center.

Furthermore, health-care providers need to be aware of their impacts on feeding choices among this population. The results of this study and others have demonstrated both the positive and negative effects that providers can have on women's infant feeding

preferences.

Research Implications

As we approach 2010, it is clear that the U. S. will fall short of its *Healthy People 2010* breastfeeding objectives, particularly for African-American women. Despite the known advantages of breastfeeding, African-American women continue to opt for bottle-feeding more than any other ethnic group. Thus, further exploration of infant feeding choices among African-American women is needed.

Through the use of quantitative methods, a variety of authors have identified many influential factors in the literature regarding African-American women when choosing their infant feeding methods (Corbett, 2000; Forste et al., 2001; Mitra et al., 2004; Persad & Mensinger, 2008; McCarter-Spaulding & Gore, 2009; Thulier & Mercer, 2009). However, there are conflicting findings among these factors. Thus, more research is needed, both qualitative and quantitative, that seeks additional themes expressed by African-American women regarding their infant feeding decisions to gain fuller understanding. In an effort to develop and implement culturally appropriate interventions to increase breastfeeding rates among this population, further exploration of African-American women's infant feeding choices, directly from the women's perspectives, is needed. Until then, it will be difficult to move forward and close the breastfeeding gap that exists between African-American women and women of other races.

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**African American Women's Infant Feeding Choices:
Prenatal Breastfeeding Self-Efficacy and Narratives from a Black Feminist
Perspective**

Abstract

The purpose of this mixed-method study was to examine infant feeding decisions among African American women, including prenatal breastfeeding self-efficacy. Black Feminist philosophy was used to place women's experiences at the center of the research. Fifty-nine African American women completed a Prenatal Breastfeeding Self-Efficacy Scale to determine differences between intended breast-feeders and intended bottle-feeders. Narrative interviews ($n = 17$) were conducted to analyze postpartum accounts of actual infant feeding methods. Participants with breastfeeding intentions ($M = 82.59$, $SD = 12.53$) scored significantly higher on the scale than those planning to bottle-feed ($M = 70$, $SD = 15.45$), $p = .001$ (two-tailed). Four themes from the narratives were similar to categories related to self-efficacy: *performance accomplishments*, *vicarious experiences*, *verbal persuasions*, and *physiological reactions*. Two additional themes (*social embarrassment* and *feelings of regret*) were also identified. Many of the women who were breastfeeding at 3-4 weeks postpartum ($n = 7$) used < 1 bottle of formula a day. The prenatal period is an opportune time for providers to screen for breastfeeding self-efficacy. Providers need to continue dialogues regarding infant feeding choices throughout each woman's pregnancy. Bottle-feeding women in this study reported that despite the fact that they were committed to using formula, there were still opportunities prenatally during which they could have been influenced to breastfeed.

Keywords: African American women, self-efficacy, infant feeding, breastfeeding

Since 1955 when national surveys representative of the U. S. population were initiated (Coates & Riordan, 2005), breastfeeding rates have fluctuated throughout history hitting a record low of 20% in 1970 (Feinstein, Berkelhamer, Gruszka, Wong, & Carey, 1986). The rates have been rising since then in the U. S., ranging from 68% in 1999 to 74% in 2006, the most recent data (CDC, 2009). Even though these numbers are encouraging, disparities still exist among races/ethnicities. In particular, African American women have consistently maintained the lowest breastfeeding rates of any race. According to provisional reports from the 2006 National Immunization Survey (CDC, 2009), only 60% of African American women are initiating breastfeeding, which is notably below the national average of 74%. Duration rates among this population drop even lower during the first year life with 29% of African American women breastfeeding at 6 months and 13% at 12 months (CDC, 2009).

These statistics are disturbing because African American infant mortality rates are double that of the national rates (CDC, 2008) and breastfeeding has been shown to reduce mortality rates among even high risk infants (Smith, Durkin, Hinton, Bellinger, & Kuhn, 2003). Breast milk has other dietary, cost-effective, sociological, and psychological benefits that are advantageous for vulnerable populations such as African Americans. Yet, the population who could gain the most from breast milk breastfeeds the least.

There are numerous reports in the literature of various factors related to African American women's infant feeding preferences. In studies that included at least 30% African Americans, the findings were conflicting. For example, Dix (1991) and Corbett (2000) found that knowledge deficit related to breastfeeding benefits contributed to choosing formula over breast milk. Others noted that African American women were

indeed aware of the various benefits of breastfeeding, yet chose not to breastfeed (Raisler, 2000; McCarter-Spaulding, 2007). As a result, research is needed that seeks to clarify inconsistencies.

Reports have also shown that either support or lack of encouragement related to infant feeding choices from family members and health care providers are powerful influences on African American women's decision-making (Hannon et al., 2000; Cricco-Lizza, 2004, 2006; McCarter-Spaulding, 2007; Meier, 2007). Yet in a small narrative interview based study, all five of the African American women who participated maintained that their choices to initiate breastfeeding were their decisions alone (Robinson & VandeVusse, 2009).

Therefore, this study provided a way in which African American women directly communicated their rationales for their infant feeding preferences, including factors influencing their choices. Placing African American women at the center of research related to their infant feeding practices may offer clarity to previous contradictions noted in the literature related to this population and infant feeding.

Philosophical and Theoretical Concepts

Black Feminism

This study is unique in examining African American women and their infant feeding choices from a Black Feminist standpoint. The Black Feminist view takes general feminist principles that work toward establishing equality for women and specifically applies them to the lives of African American women (Barbee, 1994; Taylor, 1998). Viewpoints from the Black Feminist philosophy were used to listen to individual African

American women and learn from each one about how she chose her infant feeding method. This approach made each woman central to her own narrative and honored her unique insights avoiding the assumption that quantitative averages alone can elucidate African American women's decision making related to the phenomenon of interest.

Self-Efficacy

Self-perception of one's competence has great influence on preference for and diligence in certain behaviors. The concept of self-efficacy, developed from Bandura's (1977) social cognitive theory, claimed that individuals gauged their ability to perform a particular action based on previous experiences, support from external sources, role models, and their personal physiological reactions (Bandura, 1997).

The theory of self-efficacy has been investigated in research centered on breastfeeding. The assumption is that the more confident a woman is about breastfeeding, the more likely she is to initiate and continue. Self-efficacy has been shown to have an effect on infant feeding choice, although most of these studies were conducted with Caucasian women (O'Campo, Faden, Gielen, & Wang, 1992; Dennis & Faux, 1999; Blyth, Creedy, Dennis, Moyle, Pratt, & De Vries, 2002; Noel-Weiss, Cragg, Bassett, & Woodend, 2006; Wells, Thompson, & Kloeblen-Tarver, 2006; McCarter-Spaulding & Gore, 2009). Instruments such as the Breastfeeding Self-Efficacy Scale-Short Form (BSES-SF) (Dennis, 2003) and the Prenatal Breast-feeding Self-Efficacy Scale (Wells et al., 2006) have been used to determine the effect of maternal breastfeeding confidence on infant feeding choice. Two noteworthy studies have examined the concept with predominantly African American women samples (Wells et al., 2006; McCarter-Spaulding & Gore, 2009). Wells et al. (2006) studied breastfeeding self-efficacy during

the prenatal period in a sample with a majority (74%) of African Americans. McCarter-Spaulding and Gore (2009) examined self-efficacy in breastfeeding women exclusively of African descent, including 32% African Americans.

The unique philosophic standpoint of Black Feminism, along with the limited exploration of African American women's infant feeding decisions found in the literature, formed the rationale for this study. The purposes of this study were two-fold: (a) compare differences in prenatal breastfeeding self-efficacy between African American women who intend to breastfeed and those intending to bottle-feed, and (b) analyze postpartum narratives in which individual women discussed their actual infant feeding choices.

Methods

Study Design

A sequential mixed-method approach was employed to meet the purposes of this study. Because the phenomenon of infant feeding preference among African American women is multifaceted, a design that took this complexity into account was chosen. In choosing this mixed method, the assumption was made that qualitative data would offer more depth of insight about the complexities in women's infant feeding method choices and enhance the interpretation of the quantitative findings.

Participants were recruited from two sites: a private obstetrician's office and a midwifery center in the Midwest. These were chosen because of the high numbers (50-90%) of African American women seeking care at the sites. The primary researcher visited each site at least once a week for recruitment. The health care staff (certified nurse

midwives, physicians, and medical assistants) informed the researcher of women who were eligible based on the following inclusion criterion: in their 3rd trimester of pregnancy, carrying a singleton pregnancy, 18 years of age or older, and had no diagnosed prenatal complications that labeled their pregnancy as high-risk (e.g., preterm labor, gestational diabetes or pre-eclampsia). While waiting for their prenatal visit, eligible women were given an informational brochure describing the study. Data collection occurred over two time periods: *Time 1* (3rd trimester) and *Time 2* (3-4 weeks post delivery). The Institutional Review Board at Marquette University granted approval for the study with support letters received from both practice sites.

Time 1. Women who consented to participate were asked to complete a demographic questionnaire. The questionnaire was developed to gather demographic data related to marital status, educational level, maternal age, household income, number of living children, provider, gestational age, and intended infant feeding preference (breast or bottle).

In addition to demographics, the participants completed the Prenatal Breast-Feeding Self-Efficacy Scale (Wells, et al., 2006). This 20-item, self-report tool measured breastfeeding self-efficacy during the prenatal period. More specifically, it assessed the mother's awareness of her ability to initiate breastfeeding. The Prenatal Breast-Feeding Self-Efficacy Scale is rated on a 5-point Likert scale with 1 = "not at all sure" and 5 = "completely sure." Total self-efficacy scores could range from 20-100. The scale has been reported as reliable and valid with a Cronbach's $\alpha = .89$ and a content validity of .90 (Wells, et al., 2006). The participants received a \$5 gift card after the two surveys were returned.

Time 2. Up to 30 women were to be re-contacted two weeks after delivery with the intent to have equal numbers of breast and bottle-feeders (10 each) interviewed. A 50% attrition rate was estimated due to challenges associated with early parenting and postpartum recovery; the goal was to have a total of 20 interviewees. Participants were asked to meet for individual narrative interviews to discuss the infant feeding method each had chosen. Selection was based on the chronological order of the women's estimated dates of delivery. Face-to-face narrative interviews were conducted by the first author in a private room at the practice site. All narratives were audio-taped. Each participant was asked to describe how she decided on the particular infant feeding method chosen. Since this was a narrative interview, structured questions were not used. Instead, the opening statement, "Tell me all your thoughts, feelings, perceptions, experiences, and other influences that you recall that went into your infant feeding decision" was stated to initiate dialogue. Prompts, encouraging women to talk about familial and HCP input on their decision and any indecisiveness regarding choice, were used when necessary to elicit further disclosure. The participants were given a final opportunity to add any other remarks regarding their choice as the interview concluded.

After the narrative interview, each participant completed a brief Infant Feeding Form. The form collected information on actual feeding method initiated in-hospital and current method at 3-4 weeks postpartum. If a woman was breastfeeding at the time of the interview, she was asked to describe her level of breastfeeding using Lobbok and Krasovec's (1990) breastfeeding definitions that differentiate exclusivity from varying estimates of partial breastfeeding. For example, exclusivity was defined as using no other liquids or solids and partial breastfeeding included the addition of formula (Lobbok &

Krasovec, 1990). Participants were compensated with a \$20 gift card after completing the interview and Infant Feeding Form.

Data Analysis

Quantitative data were analyzed using the Statistical Package for Social Science, 16.0 version. Demographic data, including infant feeding intent, were summarized using descriptive statistics. To compare mean scores from the Prenatal Breastfeeding Self-Efficacy Scale between women who had intended to breastfeed and those intending to bottle-feed, an independent-sample *t*-test was used. An independent-sample *t*-test was also utilized to determine mean differences of the itemized statements of the self-efficacy scale between the two groups. To determine the predictability of prenatal breastfeeding self-efficacy on intended infant feeding choice, logistical regression and odds ratio analysis was used. Statistical significance was determined at $p < .05$ with a 95% Confidence Interval (CI).

Narrative interviews were transcribed and analyzed by the primary investigator. To ensure accuracy, the transcriptions were compared against the audio-taped interviews. Analysis began during data collection (Carpenter, 1995). Throughout the interview, observational notes were made logging use of verbal inference and nonverbal cues made by the participants (Pope & Mays, 2006). Notes were added to the transcriptions to describe expressions and body language displayed by participants. Giving attention to repetition as well as outliers, the transcripts were systematically coded for women's statements related to infant feeding choice. After reading and re-reading the transcriptions, common and unique phrases were identified (Duffy, 2007). To avoid redundancy in reporting the findings, like ideas were categorized. During the process of

analysis, similarities between participants' narratives and Bandura's sources of self-efficacy were noted and were used as categories to the extent that they fit the data. After further discussion, major themes were developed from the categories to best represent the data.

Finally, the results from the quantitative and qualitative data were examined for patterns of convergence and discrepancy. This form of triangulation sought a more comprehensive assessment of the findings (Mays & Pope, 2006). Conclusions were drawn from infant feeding intent and actual practices of the women in the study.

Results

Demographics

Sixty-four women were approached to participate in the study. Fifty-nine completed the demographic questionnaire and the Prenatal Breastfeeding Self-Efficacy Scale (92% recruitment rate). Four declined and two withdrew from the study prior to completing the questionnaires. In Table 1, a summary of the participants' socio-demographics is provided. The mean age for the sample was 25 years (SD = 5.08). Average gestational age for the participants was 33.14 weeks (SD = 3.70). Most of the participants were multiparous with 75% ($n = 44$) of the sample having at least one other child at home. The majority of the women reported they intended to breastfeed. Regardless of their intended infant feeding preference, the majority of the women were single and had incomes less than \$20,000 as shown in Table 1.

Prenatal Breastfeeding Self-Efficacy

Overall, there was a significant difference in the prenatal breastfeeding self-efficacy scores for mothers intending to breastfeed ($M = 82.59$, $SD = 12.53$) and mothers with intentions to bottle-feed ($M = 70$, $SD = 15.45$), $p = .001$ (two-tailed). The size of the variances in the mean scores (mean difference = 12.51, 95% CI: 5.21 to 19.81) was large (Cohen's $d = .896$). In particular, there were significant differences between groups on 45% (9 out of 20) of the items on the Prenatal Breastfeeding Self-Efficacy Scale. Items from the breastfeeding self-efficacy scale for which there were significant mean differences are shown in Table 2. Participants who planned to breastfeed perceived themselves to be efficacious in their ability to seek breastfeeding information, manage breastfeeding obligations, and feed in the presence of others compared to participants aiming to bottle-feed.

Table 1

Demographics of African American Study Participants ($n = 59$)

	<i>n (%)</i>
Educational Level	
Some High School	13 (22)
High School Diploma	16 (27)
GED	5 (9)
Some College	15 (25)
College Diploma	8 (14)
Graduate School or Higher	2 (3)
Household Income	
Under \$20,000	41 (71)
\$20,001-\$40,000	8 (14)
\$40,001-\$60,000	5 (9)
\$60,001-\$80,000	2 (3)
\$80,001 and above	2 (3)
Provider	
Certified Nurse-Midwife	35 (49)
Obstetrician	14 (24)
More than one Provider	10 (17)
Infant Feeding Choice	
Breast (any)	34 (58)
Bottle	25 (42)

A logistical regression was performed to measure the effect of age, marital status, educational level, household income, and prenatal breastfeeding self-efficacy on women's intended feeding method. The model with all predictors was statistically significant, $\chi^2(5, N = 58) = 14.879, p = .011$, demonstrating that model was able to discern between participants who reported intention to breastfeed and those intending to bottle-feed. On a whole, the model explained between 22.6% (Cox and Snell R square) and 30.4% (Nagelkerke R squared) of variance in infant feeding intention. As shown in Table 3, prenatal self-efficacy scores were the only significant predictor of women intending to breastfeed. The higher a woman's prenatal self-efficacy score, the more likely she was to report an intention to breastfeed (OR = .93; 95% CI: .88 to .98).

Table 2

Mean Prenatal Breastfeeding Self-Efficacy Scores in a Sample of African American Women ($n = 59$)

I can...	Feeding ^a Choice	M	SD	Sig. (2-tailed)	95% CI	
					Lower	Upper
find information I need about breastfeeding problems	Breast	4.00	1.04	.01	.23	1.69
	Bottle	3.04	1.56			
find out what I need to know about breastfeeding	Breast	4.32	.68	.05	.01	1.20
	Bottle	3.72	1.35			
make time to breastfeed when I feel busy	Breast	4.09	.97	.01	.33	1.69
	Bottle	3.08	1.47			
breastfeed when I am tired	Breast	4.18	1.06	*	.65	2.10
	Bottle	2.80	1.56			
breastfeed when I am upset	Breast	4.15	1.11	*	.60	2.09
	Bottle	2.80	1.58			
use a breast pump	Breast	4.29	.97	.01	.21	1.58
	Bottle	3.40	1.58			
breastfeed even if it causes discomfort	Breast	3.76	1.28	*	.49	1.92
	Bottle	2.56	1.45			
breastfeed in the presence of family or friends	Breast	4.38	.95	.02	.15	1.49
	Bottle	3.56	1.45			
breastfeed for one year	Breast	3.42	1.39	.04	.02	1.55
	Bottle	2.64	1.50			

Note. ^aIntended Feeding Choice. * p value < .0001

Narrative Interviews

Attempts were made to re-connect with up to 30 participants after birth to participate in individual narratives to discuss their infant feeding choices. The goal was to interview 10 intended breast-feeders and 10 intended bottle-feeders and allow for attrition. A total of 17 women were interviewed about their infant feeding decisions by the first author (11 who had intended to breastfeed and 6 who had planned to bottle-feed), yielding an 85% sample from the target of 20.

Table 3

Predictors of Infant Feeding Intentions among African American Women ($n = 59$)

Variable	<i>B</i>	S.E.	Wald	df	<i>p</i>	OR	95% CI
Marital Status	1.99	1.41	2.00	1	.157	7.324	[.464, 115.63]
Education	.403	.718	.316	1	.574	1.50	[.366, 6.11]
Income	-1.13	.623	3.29	1	.070	.323	[.095, 1.10]
Age	.075	.072	1.09	1	.297	1.078	[.936, 1.242]
Self-efficacy	-.073	.026	7.724	1	.005	.930	[.883, .979]

Among the 17 women interviewed, there was a significant difference in mean prenatal breastfeeding self-efficacy scores between mothers with breastfeeding intentions ($M = 79.55$, $SD = 16.07$) and those intending to bottle-feed ($M = 69.17$, $SD = 14.55$) $p = .21$ (two-tailed); 95% CI: -6.47 to 27.23. Of the 11 women interviewed who had intended to breastfeed, eight (73%) initiated breastfeeding in the hospital and three chose to bottle-feed. All six of the women interviewed who planned to initiate bottle-feeding did so. Intended and actual infant feeding methods are summarized in Table 4.

Breastfeeding rates had dropped by the 3-4 week postpartum interviews. Using Labbok and Krosovec's (1990) schema of breastfeeding levels, participants who had continued to breastfeed were advised to self-report their degree of breastfeeding (Table 5). Most (5 =72%) of the breastfeeding mothers reported using < 1 bottle of formula per day.

Table 4

Postpartum Infant Feeding Methods among African American Women Interviewed ($n = 17$)

Feeding Method	Breastfeeding n (%)	Bottle-Feeding n (%)
Intended prenatally	11 (65)	6 (35)
Initiation self-reported	8 (47)	9 (53)
Duration at 3-4 week postpartum interview	7 (41)	10 (59)

When recounting how they arrived at their infant feeding choices and recalling factors that influenced their options, the women, despite their actual feeding method, generally shared common themes. Four of the themes related to women's rationales for choosing their individual infant feeding methods were consistent with Bandura's (1997) four sources of self-efficacy: *performance accomplishments*, *vicarious experiences*, *verbal persuasions*, and *physiological reactions*. In addition, two more distinct themes, *social embarrassment* and *feelings of regret* were identified. Embarrassment was expressed when women were discussing breastfeeding and bottle-feeding, while regrets were only reported among those choosing to bottle-feed.

Performance accomplishments. According to Bandura (1997), individuals who successfully master a skill are more apt to perform that behavior again. Women who were

breastfeeding at the time of the interview reported they did so because of previous positive experiences with breastfeeding. “I know I can do it, I breastfed all three [of her other children].” “It was something that I was going to do whenever I had another baby because it’s what I did with my other two.” The breastfeeding participants felt compelled, not in a negative manner, to breastfeed the current child because of prior breastfeeding experiences. When speaking of her second child, one mother stated, “I feel like I didn’t have a choice.”

Table 5

Level of Breastfeeding at 3-4 wk postpartum among African American Women Interviewed ($n = 7$)

Level	<i>n</i> (%)
Exclusive (no other liquids or solids)	2 (29)
Less than 1 bottle of formula/day	3 (43)
Minimum 1 full bottle of formula/day	1 (14)
Minimum ½ the feedings are formula	1 (14)

Mothers who opted to bottle-feed cited unsuccessful attempts with breastfeeding their other children as reasons not to try again. “My first pregnancy I tried the breastfeeding and it hurt and he bit me; so, that’s how I came to bottle-feeding.” “That first experience I don’t know if I was doing it right; he wasn’t latching on. I don’t want to go through that again. I’d rather for him just to take the bottle.” One mother whose baby weighed 4 pounds at birth recalled briefly contemplating breastfeeding but elected not to because “all the flashbacks [of previous negative breastfeeding experiences] started coming back.” Also the lack of experience was a deterrent to initiate breastfeeding for one mother: “It’s [being a parent] my first experience, my only experience. I’m basically feeling my way through this.”

Vicarious experiences. In addition to having breastfeeding experience, women who were currently breastfeeding had role models to whom they sought guidance and saw as examples of what to do. One woman stated, there are “a lot of women in my family and they’re all big on breastfeeding.” She recalled, “Watching her cousin breastfeed and being able to ask questions.” Having witnessed others, especially individuals who share similar characteristics, successfully perform a certain task, affects one’s own self-efficacy (Bandura, 1997). The participants cited having “mothers, sisters, cousins, and friends” who all breastfed. Another proclaimed, “We have a saying in our family: the breast kind is the best kind!”

Lack of or negative role models were a major barrier for bottle-feeding mothers. Some of the bottle-feeding participants reported not seeing anyone who looked like them breastfeed. “I haven’t seen any Black women do it. I see White women do it. They do it all the time. I mean I can go to a restaurant and a White woman is sitting there with the baby on the [breast].” Even on TV, bottle-feeders noted seeing “more White women doing it.” Another commented that if she “saw Black women doing it; maybe I would have tried it.” These mothers also had friends who bottle-fed encouraged them to “do the bottle; [because] it would be easier.”

Verbal persuasions. Receiving verbal support from others, especially those seen as reputable, may influence one’s perceived self-efficacy (Bandura, 1986). All women spoke of receiving encouragement to breastfeed from outside sources. However, how the women accepted the support varied by feeding method. Having “everybody cool with it,” made the choice to breastfeed easier for some of the women. Women who were breastfeeding spoke of how family members “were so proud of [them]” and how “that

made [them] feel even better.” They spoke of being prompted to breastfeed because breast milk “is always a good thing for babies.” One woman noted that her husband had six sisters who breastfed; so, her mother-in-law “saw the impact it had” and encouraged her to do the same.

Healthcare providers (HCPs) spoke to the fact that the “baby is healthier when breastfed.” HCPs informed the women of both physical and psychological benefits of breastfeeding. Both breast and bottle-feeders described instances where their provider (including WIC personnel) offered infant feeding recommendations. HCPs talked about the potential to bond because “when you got the baby to the breast you feel more connected.” When telling the nurses of her choice to breastfeed the nurse replied, “Good mom. Good decision.” The participant recognized this positive reinforcement as “a little push/ boost” to her confidence.

Despite reporting positive conversations regarding infant feeding and being informed that breast milk is superior, mothers who chose bottle over breast maintained the discussions with HCPs or family members had little to no effect on them. They acknowledged, “She [CNM] tried to get me to breastfeed; but, I still chose bottle.” HCPs were reported saying, “Think it over; you should try it; it’s better for the baby; you’ll have smarter kids.” One participant stated she was given “basic information about breastfeeding; but bottle-feeding sounded easier.” Another chose to bottle-feed even though her “mother thought I should breastfeed because she breastfeed us.”

Others recalled receiving no advice from HCPs. One mother admitted that she did not have a “conversation [about infant feeding] because I had already kind of had my mind made up that I was going to bottle-feed.” The lack of conversation about infant

feeding weighed heavily on one mother's decision:

If I would have been persuaded; like if my doctors or the hospital would have said this is why you should breastfeed, I probably would have taken a chance and did it. But no one said this is how you do it. No one gave me any advice. [The nurses] just jammed a bottle in her mouth. They didn't say do you want to try to breastfeed her.

Both breast and bottle-feeding women said their infant feeding decisions were ultimately their own regardless of receiving verbal encouragement or not. "It's basically my choice. I don't have anybody's opinion but my own." Others explained, "It really wasn't a lot of people influencing me" and they were "going to breastfeed anyway" and could not see anything "getting in the way" of their decision. One woman concluded, "Couldn't nobody persuade me to breastfeed."

Physiological reactions. According to Bandura (1997), people may determine their ability to carry out a specific behavior based on somatic cues expressed through physiological conditions. In this study, groups called to mind how physiological demands of breastfeeding affected their decision. Breastfeeding mothers commented on the fact that breastfeeding is "not the best feeling; it's uncomfortable, especially when the milk comes in." They also described breastfeeding as a "struggle at times" with concerns of "not producing enough milk." Despite the pain and sometimes difficulty with breastfeeding, the women spoke of having to "tough it out" because of their desire to "do what was right" for the baby. One mother in particular described being pleasantly surprised that she began "liking it too." The fact that their infants were "benefitting from it [breast milk]," permitted these women to "do what [they] had to do."

For women who chose to bottle-feed, this theme seem to be a principal factor that deterred them from breastfeeding. There was an inability to get past the physical demands

of breastfeeding. “It’s too much you have to do to breastfeed. You got to watch your food; can’t drink [alcohol] or smoke.” Understanding that breastfeeding is best, one participant claimed that “the bottle is a lot easier because with breastfeeding you have to deal with buying a certain kind of bra and other stuff.” Perceived or actual pain was another physical issue the bottle-feeding mothers did not want to endure. “I didn’t breastfeed because it hurt and I just can’t do that.”

Social embarrassment. Embarrassment about breastfeeding in public was a common psychological issue that was unequivocally expressed among both breast and bottle-feeders. In an effort to avoid “people getting the wrong impression of me” some breastfeeding women reported resorting to going “to the car or to the bathroom into a stall” to feed their baby if necessary. A breastfeeding woman spoke about not wanting “to expose myself” and not “wanting anybody looking at me.” This was especially true in regards to males, whether they were family members or not. Another mother talked about her first experience breastfeeding in public,

The first time I was a little shy about where I would do it; but that just made it more stressful for me. Now I’m like whatever, baby’s got to eat. Some people would go into a bathroom; but, I’m like it’s funky in there. I don’t want to be in there. So I pretty much do it anywhere as long as I have a blanket.

Bottle-feeding mothers unanimously reported they “didn’t want to pull [their] breast out in public.” They felt that “you are not supposed to [breast] feed in public.” They, like the breastfeeding women, were reluctant to breastfeed in front of family members. One mother recalled attempting to breastfeed in front of the father of the baby and thought, “wait, he’s not supposed to see me do this.”

Feelings of regrets. Three of the 10 mothers who were bottle-feeding at the time of their interviews spoke of feelings of regret for not breastfeeding. One mother tearfully

explained, “I should have did it and found time to just do it. I’ll probably be thinking that way for the rest of my life: should of, could of, would of.” As another participant reflected on her decision, she stated, “Now that I think about it, I wish I would have breastfed.” One woman spoke of feeling left out and judged by others who have breastfed. “Everyone I talked to said they breastfed and I felt left out. I didn’t feel judged before [in the hospital]; but, now I do.”

These women attempted to breastfeed once they got home, but were met with what they perceived as resistance from their infant. “When I got home I tried to breastfeed. I tried it for that week and then I just gave up. He’d do it [latch to the breast] for little bit and then he’d turn his head like he didn’t want it.” She recalled being impatient with the baby not latching on instantly. Retrospectively, one woman agreed that it was important in the future to “give breastfeeding a fair chance before switching.”

Regardless of their infant feeding preference, women in this study reported similar factors that had an impact on their choice to breast or bottle-feed. The manner in which each source affected infant feeding selection varied between groups (Table 6).

Table 6
Relationship between Themes and Women’s Reports about Their Actual Infant Feeding Choices ($n = 17$)

Theme	Breastfeeding* ($n = 7$)	Bottle-Feeding* ($n = 10$)
Performance Accomplishments	Positive	Negative
Vicarious Experiences	Positive	Negative
Verbal Persuasions	Positive	Positive
Physiological Reactions	Negative	Negative
Social Embarrassment	Negative	Negative
Feelings of Regret	N/A ^a	Negative

Note. *Feeding Method at 3-4 weeks postpartum. ^aNot Applicable.

Prenatal Breastfeeding Self-Efficacy on Infant Feeding Initiation

Of the women who were interviewed ($n = 17$), 82% (8 out of 11 breast- and 6 out of 6 bottle-feeders) actually initiated the feeding method they said they would. A logistical regression to assess the effect prenatal breastfeeding self-efficacy had on infant feeding initiation was performed. In this study, prenatal self-efficacy was not a predictor of actual infant breastfeeding initiation ($p = .08$). Furthermore, there was a disconnect with two of the women in that they had high prenatal self-efficacy scores, yet were embarrassed to breastfeed or reported it unappealing in the narrative interview.

Discussion

The findings from this study suggest that breastfeeding self-efficacy has an impact on infant feeding intentions for African American women. Over half of the participants had intentions to breastfeed and the sample's average prenatal self-efficacy raw score was on the higher end of the scale (total possible 20-100). These findings are similar to results found by Wells et al. (2006) in which participants who had intentions to breastfeed had higher prenatal self-efficacy scores than those planning to bottle-feed. Other researchers (O'Campo et al., 1992; Dennis & Faux, 1999; Blyth et al., 2002; Noel-Weiss et al., 2006) who measured the concept of self-efficacy in breastfeeding women found that participants with high self-efficacy scores breastfed for longer periods of time compared to women with lower scores. However, the samples in these studies were comprised of predominantly Caucasian women. McCarter & Gore (2009) examined postpartum self-efficacy among breastfeeding women of African descent. The researchers found that women of African descent who had high self-efficacy scores breastfed for

similar durations when compared to Caucasian women. Therefore, in regard to breastfeeding, the more self-efficacious a woman is, the more likely she is to intend, initiate, and continue to breastfeed.

As the women talked openly about all their thoughts, feelings, and influences that went into their infant feeding choices, factors reported in prior research surfaced. For example, past breastfeeding experiences prompted mothers to initiate breastfeeding with their current infants (Humphreys, Thompson, & Miner, 1998; Meyerink & Marquis, 2002; McCarter-Spaulling, 2007).

Having no breastfeeding role models was found to be a disincentive for women in this sample who chose to bottle-feed. This finding is supported in other studies (Corbett, 2000; Meyerink & Marquis, 2002; Cricco-Lizza, 2004). For example, Cricco-Lizza (2004) reported that bottle-feeding women in her sample had no exposure to women who have ever breastfed.

Health care providers' and familial support and encouragement did not have consistent impacts in this population. Some women embraced suggestions from family members and providers; while others reported it had no influence on their infant feeding decision. This variation in the findings is found elsewhere in the literature. Racine et al. (2009) also reported differences in breastfeeding initiation and duration in their population related to the effects of external influences. Women who discontinued breastfeeding by month three tended to require more encouragement from HCPs and family members to continue. Alternatively, women who had continued breastfeeding relied on internal motivations (i.e., positive bonding, infant health) to persist with breastfeeding.

Embarrassment over feeding in public or in front of family continued to be an obstacle for African American women and their disinclination to choose breastfeeding over bottle-feeding. Even mothers who were breastfeeding commented on not wanting to expose themselves in public. This self-consciousness also was found to weigh heavily on infant feeding practices for African American women in other studies (Cricco-Lizza, 2006).

Grounding this study in Black Feminist philosophy was done purposefully to provide an opportunity for African American women to disclose how their own realities affected their infant feeding choices and systematically analyze their responses. In this study, the women's collective narratives provided a bridge between prenatal self-efficacy, infant feeding intentions, and actual feeding behaviors. The narratives enhanced and provided clarification for some of the statistical findings by giving a voice to the numbers. There was an association between prenatal self-efficacy scores and the individual post partum narratives. Many women who intended to breastfeed and had high self-efficacy scores disclosed why they felt able to initiate and continue to breastfeed. The same was not true for women who bottle-fed. More narrative work is needed in the future to promote listening to African Americans and learning directly from them about how their health decisions are made.

Although narrative interviews were added depth to this study, the small postpartum sample size likely contributed to the inability to demonstrate predictability of prenatal self-efficacy on actual maternal infant feeding choices. Much more research that allows African American perspectives to be voiced is needed, including those with larger sample sizes. Also, because there is no critical value (specified cut-off point that

differentiates between high and low scores) for prenatal self-efficacy, it is not possible to determine at what point women will actually initiate breastfeeding successfully.

Determining this critical value could help to improve the usefulness of this tool.

Implications

When the Healthy People 2020 objectives are released, increasing breastfeeding rates will continue to be a priority. Even more importantly will be the objective to increase rates among vulnerable populations where breastfeeding disparities exist. This study is unique in that it explored self-efficacy, a modifiable maternal characteristic, in an exclusively African American women sample.

Providers need to continue dialogues regarding infant feeding choices throughout each woman's pregnancy. The women in this study explained that although they thought they were committed to their infant feeding choices to bottle-feed prenatally, they reported there were still opportunities for them to be influenced to breastfeed and three strongly emphasized regrets that they had not initiated breastfeeding.

There is still policy work to be done in order to change laws and public opinion about breastfeeding in public and work. None of the women reported having policies or provisions in place at work to accommodate breastfeeding. Several reported returning to work as reasons they chose not to breastfeed. Many of the breastfeeding mothers were still apprehensive about feeding in public and only willing to do so if absolutely necessary. Women, providers, and policy makers need to demand that feeding or pumping in public restrooms is not acceptable and that work accommodations are essential in promoting breastfeeding.

Understanding why vulnerable populations make healthcare choices that do not seem to be most beneficial for them is important when trying to close health disparities gaps. More research from a Black Feminist perspective is needed to listen to marginalized persons describe how their life experiences affect their choices. Their perspectives will inform providers and foster cultural awareness. Mixed method research may provide guides for developing culturally appropriate interventions on health care issues that affect vulnerable populations.

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APPENDIX A

Demographic Questionnaire

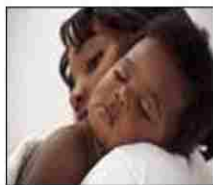
Thank you, for participating in this study. Please take a few moments to complete this questionnaire. Upon completion of this questionnaire and the Prenatal Breastfeeding Self-Efficacy Scale (a confidence measuring tool), you will receive a **\$5 Target gift card**.

Please mark the appropriate box, with an “X” that correctly identifies you.

1. Marital status:
 - Single
 - Married
 - Separated
 - Divorced
 - Widowed
2. Number of living children to whom you have given birth to:
 - 0
 - 1
 - 2
 - 3
 - 4
 - 5
 - Other (please write in) _____
3. Highest education level completed
 - Some high school
 - High school diploma
 - GED
 - Some college
 - College diploma
 - Graduate school or higher
4. Household income:
 - Under \$20,000
 - \$20,001-\$40,000
 - \$40,001-\$60,000
 - \$60,001-\$80,000
 - \$80,001 and above
5. How many weeks pregnant are you?

<input type="checkbox"/> 28	<input type="checkbox"/> 35
<input type="checkbox"/> 29	<input type="checkbox"/> 36
<input type="checkbox"/> 30	<input type="checkbox"/> 37
<input type="checkbox"/> 31	<input type="checkbox"/> 38
<input type="checkbox"/> 32	<input type="checkbox"/> 39
<input type="checkbox"/> 33	<input type="checkbox"/> 40
<input type="checkbox"/> 34	<input type="checkbox"/> 41
6. Who do you see for your prenatal visits? (Select all that apply.)
 - Certified Nurse Midwife
 - Doctor
 - Nurse Practitioner
 - Physician Assistant
7. How do you plan to feed your baby?
 - Breastfeeding
 - Bottle-feeding
8. **Please write in your age at your last birthday.** _____

About the Researcher



Karen (Goodwin) Robinson, PhD (c), RN, CNM, is a certified nurse midwife & doctoral student at Marquette University, Milwaukee, WI.



African American Women & Infant Feeding Choices



QUESTIONS



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A Research Study

African American Women & Infant Feeding Choices

Research Focus

I want to learn more about how we, as African American women, choose how we feed our babies & how confident we are. Also, women's stories are often not listened to in detail, especially when told by African American women. Through completing the forms & telling your own story, including your:

- thoughts
- feelings
- perceptions, and
- influences

health care providers, like me, may gain a better understanding of our choices.



I invite you to participate in this study if you:

1. Are age 18 or older
2. Speak & read English
3. Have a way to be contacted by phone about 2 weeks after delivery
4. Expect your baby will be ready for discharge from the hospital with you
5. Have transportation to your health-care provider's office for an interview

Interested:

Please complete the attached interest form at the right & return it to me. Your health-care provider will inform me when you have delivered & I may contact you about 2 weeks after delivery.

Participants who complete the Contact Form & the Prenatal Self-Efficacy Scale, will receive a \$5 Target gift card!

Participants selected for the interview the interview will receive a \$20 Target gift card after the interview is completed!

Contact Form

Yes, I am interested in participating in this study on African American women & their confidence regarding their infant feeding choices. I give my healthcare provider permission to inform Karen Robinson when I deliver my baby.

I would like to be contacted to tell my story about my newborn feeding choice.

Signature: _____

Printed Name: _____

Due Date: _____

Phone number (s) where you can usually be reached: _____

Thank You

APPENDIX C

Self-Efficacy of Breastfeeding

For each of the following items, tell me how sure you are that you could do each of the things described:

	Not at all Sure	Slightly Sure	Fairly Sure	Very Sure	Completely Sure
1. I can find the information I need about problems I have breastfeeding my baby.	NS	SS	FS	VS	CS
2. I can find out what I need to know about breastfeeding my baby.	NS	SS	FS	VS	CS
3. I know who to ask if I have any questions about breastfeeding my baby.	NS	SS	FS	VS	CS
4. I can talk to my partner about the importance of breastfeeding my baby.	NS	SS	FS	VS	CS
5. I can talk to my health care provider about breastfeeding my baby.	NS	SS	FS	VS	CS
6. I can schedule my day around the breastfeeding of my baby.	NS	SS	FS	VS	CS
7. I can make the time to breastfeed my baby even when I feel busy.	NS	SS	FS	VS	CS
8. I can breastfeed my baby even when I am tired.	NS	SS	FS	VS	CS
9. I can breastfeed my baby when I am upset.	NS	SS	FS	VS	CS
10. I can use a breast pump to obtain milk.	NS	SS	FS	VS	CS

Note. Adapted from “Development and Psychometric Testing of the Prenatal Breastfeeding Self-Efficacy Scale,” by Wells, KJ, Thompson, NJ, Kloeblen-Tarver (2006). *American Journal of Health Behavior*, 30 (2):177-187.

Self-Efficacy of Breastfeeding (Continued)

For each of the following items, tell me how sure you are that you could do each of the things described:

	Not at all Sure	Slightly Sure	Fairly Sure	Very Sure	Completely Sure
11. I can prepare breast milk so others can breastfeed my baby.	NS	SS	FS	VS	CS
12. I can breastfeed my baby even if it causes mild discomfort.	NS	SS	FS	VS	CS
13. I can breastfeed my baby without feeling embarrassed.	NS	SS	FS	VS	CS
14. I can breastfeed my baby when my partner is with me.	NS	SS	FS	VS	CS
15. I can breastfeed my baby when my family or friends are with me.	NS	SS	FS	VS	CS
16. I can breastfeed my baby around people I do not know.	NS	SS	FS	VS	CS
17. I can call a lactation counselor if I have problems breastfeeding.	NS	SS	FS	VS	CS
18. I can choose to breastfeed my baby even if my partner does not want me to.	NS	SS	FS	VS	CS
19. I can choose to breastfeed my baby even if my family does not want me to.	NS	SS	FS	VS	CS
20. I can breastfeed my baby for one year.	NS	SS	FS	VS	CS

Note. Adapted from “Development and Psychometric Testing of the Prenatal Breastfeeding Self-Efficacy Scale,” by Wells, KJ, Thompson, NJ, Kloeblen-Tarver (2006). *American Journal of Health Behavior*, 30 (2):177-187.

APPENDIX D

Infant-Feeding Form

1. Did you breastfeed in the hospital?
 - Yes
 - No

2. Are you currently breastfeeding?
 - Yes (If 'yes', please answer question 3.)
 - No (If 'no', skip question 3.)

3. If 'yes' to question 2, please check the level of breastfeeding:
 - Only breast milk**, no other liquids (water, juice) or solids (cereal)
 - Mostly breast milk**, along with water or vitamins given infrequently, but no formula
 - Less than one bottle of formula/day**
 - At least one full bottle of formula/day**
 - At least half of the feedings are formula**

APPENDIX E

MARQUETTE UNIVERSITY

AGREEMENT OF CONSENT FOR RESEARCH PARTICIPANTS

African American Women's Infant Feeding Choices: Triangulating Breastfeeding Self-Efficacy,
Narrative Interviews from a Black Feminist Perspective
Principal Investigator: Karen (Goodwin) Robinson, PhD(c), RN, CNM
Marquette University College of Nursing

You have been invited to participate in this research study. Before you agree to participate, it is important that you read and understand the following information. Participation is completely voluntary. Please ask questions about anything you do not understand before deciding whether or not to participate.

PURPOSE: The purpose of this research study is to gain insight into African American women's newborn feeding choices through the use of questionnaires and interviews. The goal is to examine whether African American women's confidence (self-efficacy) in their ability to feed their newborn has an effect on their feeding choice. Also, I want to listen to the many thoughts, perceptions, feelings, and influences that African American women express about deciding their infant feeding method. Points of view may have been influenced by family, friends, healthcare providers, nutritionists, the media, and your own experiences. You will be one of approximately 52 total participants in this research study.

PROCEDURES: Information regarding your infant feeding choice will be gathered by using a confidence measuring questionnaire. While you wait for your prenatal appointment, you will be asked to complete the confidence questionnaire, complete another brief questionnaire which will include, but is not limited to, questions asking your age and education level, and the contact slip attached to the brochure. You may also be contacted 2 weeks after you deliver to participate in an interview that will take place 3-4 weeks after delivery. A total of up to 30 women will be contacted to participate in an individual interview. During the interview, you, the participant, will tell me, the researcher, your story. You will also be asked to complete a short form detailing your current feeding method. If you are asked to participate in the interview, your story will be audio taped the entire time to ensure that I hear you completely and accurately. The tapes will be transcribed by me and I will remove all identifying information.

DURATION: Your participation will consist of completing the questionnaire on confidence and the other brief questionnaire while you wait for your prenatal appointment. This should take about 15 minutes. If contacted 2 weeks after delivery, you will be asked to participate in a onetime interview conducted about 3-4 weeks after your delivery. The interview should be no longer than 1 hour.

RISKS: The risks associated with participation in this study are minimal. The risks are no more than one would encounter in everyday life by simply completing a questionnaire and talking to someone.

BENEFITS: The benefits associated with participation in this study may include providing you the opportunity to be listened to closely as you share all your thoughts, feelings, perceptions, and influences that pertain to your choice of a infant feeding method. Your participation may help provide a better understanding of African American women choices about newborn feeding.

CONFIDENTIALITY: All information gathered in this study will be kept confidential. All your data will be assigned a participant number (for example, Participant # 1) rather than using your name or other information that could identify you as an individual. When the results of the study are published, you will not be identified by name. Identifiable data (the contact slip, consent forms, and audio tapes) will be locked in a file cabinet, separate from all other locked data, in my office. Only the contact slip will be taken from the locked cabinet to the office of your healthcare provider to inquire from the office staff if you have delivered. There will be no connection to your data. Only I as the researcher will be able to make the connection between you and your collected data. Identifiable and unidentifiable data will be kept for up to seven years as this study is the start of my research on African American women's newborn feeding decisions. Your research records may be inspected by the Marquette University Institutional Review Board or its designees and (as allowable by law) state and federal agencies.

COMPENSATION: Upon completion of the confidence and demographic questionnaires, I will compensate you for your time and information with a \$5 gift card from Target. If contacted for an interview, I will compensate you, upon completion of the interview, for your time and information with a \$20 gift card from Target.

EXTRA COSTS TO PARTICIPATE: The only foreseen cost to you to participate is the cost of transportation (such as gas or the use of public transportation) to your healthcare provider's office where the interview will take place a few weeks after you deliver.

VOLUNTARY NATURE OF PARTICIPATION: Participating in this study is completely voluntary and you may withdraw from the study and stop participating at any time without penalty. If you choose to withdraw from this study, simply notify me of your decision to remove yourself and I will shred and erase your information and not use it in the study. If you decide not to complete the study, you will forfeit the Target gift card.

CONTACT INFORMATION: If you have any questions about this research project, you can contact Karen (Goodwin) Robinson, PhD(c), RN, CNM, 414-288-4535, email: karen.goodwin@mu.edu or Leona VandeVusse, PhD, RN, CNM, FACNM, 414-288-3844, email: leona.vandevusse@marquette.edu. If you have question or concerns about your rights as a research participant, you can contact Marquette University's Office of Research Compliance at (414) 288-7570.

I know that I need to sign and initial the consent, and that I will receive a copy of the signed consent.

I HAVE HAD THE OPPORTUNITY TO READ THIS CONSENT FORM, ASK QUESTIONS ABOUT THE RESEARCH PROJECT AND AM PREPARED TO PARTICIPATE IN THIS PROJECT INCLUDING GIVING MY CONSENT TO BE RE-CONTACTED AFTER DELIVERY AND TO BE TAPE RECORDED.

Participant's Signature

Date

Participant's Printed Name

Researcher's Signature

Date