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Spheres of Influence: Understanding African American Males' Perceptions and Attitudes toward Infant Feeding Practices

Makeva M. Rhoden
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Walden University

College of Health Sciences

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Makeva Rhoden

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Walden University

2015

Abstract

Spheres of Influence: Understanding African American Males' Perceptions and Attitudes

toward Infant Feeding Practices

by

Makeva M. Rhoden

MPH, George Washington University, 2004

BS, Syracuse University, 2000

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Public Health

Walden University

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Abstract

Although U.S. breastfeeding rates have steadily increased since 2000, there continues to be a disparity in breastfeeding rates for African American (AA) women compared to their non-Hispanic White counterparts. A male partner's perception, specifically his positive attitude toward breastfeeding, may influence breastfeeding initiation and duration rates. This study was an exploration of AA male perceptions and attitudes toward breastfeeding and what effect masculinity ideology (gender norms) has on such attitudes. The socio-ecological model (SEM) was used as the theoretical framework to examine the various environmental levels that intersect with one another to influence these attitudes. A mixed methods study design, using (a) an online survey combining the Iowa Infant Feeding Attitudes Scale (IIFAS) and the Male Role Norms Scales (MRNS) ($N = 206$) and (b) 3 focus group sessions ($N = 17$), was used to collect data. African American men ages 18 and older were eligible to participate in the study. Results of the regression analysis showed a negative correlation between positive breastfeeding attitudes and traditional masculinity ideology. Nvivo analysis of focus group transcripts revealed themes of gender norms, knowledge of breastfeeding, and public opinions. The themes from the focus groups were categorized using the 4 levels of the SEM: Individual, Relationships, Community, and Societal; themes corresponded with Levels 1 (Individual) and 4 (Societal) of the SEM. These results indicate that a gender-transformative approach may be used to strengthen breastfeeding-promotion interventions targeting AA males. The positive social change implications of this research include a paradigm shift in views on gender norms and increased engagement of men in decisions that affect infant and child health and development.

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Dedication

Breastfeeding is enhanced and the nursing couple sustained by the loving support, help and companionship of the baby's father. A father's unique relationship with his baby is an important element in the child's development from early infancy.

La Leche League

This dissertation is dedicated to my friends and colleagues who aspire to have an impact on society and move the needle in maternal and child health by strengthening policies that affect the well-being of the families we serve. It is also dedicated to those who find value in the inclusion of men and fathers in every aspect of their child's life—from conception and beyond. Most importantly, this dissertation is dedicated to my loving family, especially Steve (my husband), Simone (my daughter) and Steven (my son) who have supported me throughout this journey. I know the road has been long and rough at times, but we can finally say that the end is in sight. Thanks for believing in me and helping me reach the finish line of this marathon!

A special thanks to my Lord and Savior Jesus Christ for whom all things are possible.

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Chapter 1: Introduction to Study

Currently African American (AA) women have the lowest rates of breastfeeding initiation and duration at 6 and 12 months (54.4%, 26.6%, and 11.7% respectively) of any racial/ethnic group (Centers for Disease Control and Prevention [CDC], 2010). The low breastfeeding rates experienced by AA women are a major public health problem. A partner's support and engagement in breastfeeding can positively impact these rates. In particular, a father's positive attitude and approval of breastfeeding can determine whether a woman will engage in or continue breastfeeding (Okon, 2004). These perceptions are influenced by knowledge of benefits (Shaker, Scott, & Reid, 2003), understanding of gender roles (Okon, 2004), and awareness of the media (Henderson, McMillan, Green, & Renfrew, 2011). In this study I examined the perceptions of AA males on breastfeeding and whether factors such as ideas of masculinity ideology (male gender norms) and cultural beliefs influence their acceptance of this practice. Knowledge gained from this study can assist in creating interventions that strengthen partner support and increase breastfeeding initiation and duration for AA women.

Chapter 1 includes an overview of the foundational concepts that outline the need for conducting the study. In the background section, I explore the historical and current landscape of breastfeeding and rates of initiation and duration among AA females. An explanation of the purpose and problem to be addressed in this study and the theoretical framework used to frame ideas are discussed as well. Additionally, I present definitions of terms and the limitations of the study to provide a clear picture of the types of information I hope to capture using a mixed method approach. The chapter ends by

outlining the social change implications of the study, including a discussion of proposed breastfeeding support interventions and strategies for increasing men's understanding of their roles during and following the pregnancy period.

Background

Human milk, also known as breast milk, possesses many benefits for both mother and child. The American Academy of Pediatrics (AAP; 2012) reported that breastfeeding and human milk can significantly reduce an infant's risk for both chronic and acute illnesses including diarrhea, lowered respiratory infections, bacterial meningitis, urinary tract infection, and possibly infant obesity. Breast milk can act as a potential protective factor for sudden infant death syndrome (AAP, 2012), which is also one of the leading causes of infant mortality (Ip, Chung, Raman, Chew, Magula, Devine, & Lau, 2007; MacDorman & Matthews, 2010). Furthermore, recent studies by the CDC/Division of Nutrition and Physical Activity (CDC/DONPA, 2007) found that breast milk can also reduce rates of respiratory infections, ear infections, and gastrointestinal issues experienced by newborn babies.

Breastfeeding has additional benefits to the mother as it can aid in preventing ovulation (delaying another pregnancy), promote mother-child bonding, and act as a financial benefit to the family (Ahluwalia, Tessaro, Grummer-Strawn, MacGowan, & Benton-Davis, 2000; CDC/DONPA, 2007). Moreover, mothers who breastfeed benefit from reduced risk of type 2 diabetes, lower incidence of breast and ovarian cancer, and complications (including anemia) during the postpartum period (Young, Watson, Ellis, & Raven, 2012).

Breastfeeding has been an essential part of the U.S. public health agenda since its inclusion in Healthy People 2000, a national plan for addressing priority health topics by providing goals and objectives to be accomplished during a 10-year target period, in order to improve health and prevent disease for people living in the United States. The Healthy People 2000 included nutrition and maternal and infant health as two of its 22 priority areas. The primary objective of the section on nutrition was to increase breastfeeding initiation and postpartum rates at 6 months. Both Healthy People 2010 and Healthy People 2020 continue to promote the need to increase breastfeeding rates for women in minority communities, especially non-Hispanic Blacks with benchmarks being set for initiation (75% and 81.9%), duration at 6- (50% and 60.6%) and 12-months (25% and 34.1%). A final review of Healthy People 2010 data showed that initiation rates for AA women moved from a baseline of 47% to 56%, but very little change if any had been noted for long-term (6% to 15%) and exclusive breastfeeding rates (through 3 months 18%; through 6 months 7%) (CDC, 2010; NCHS, 2011).

Historical Perspective of Breastfeeding

Since the early 20th century, breastfeeding has been identified as a way to provide nutrition to newborns in order to combat diseases such as diarrhea. Breastfeeding campaigns during the early part of the 20th century focused on the nutritional value of breast milk in comparison to cow's milk, a promotional angle that stemmed from a discovery linking cow's milk with infant deaths and subsequently high rates of infant mortality (Wolf, 2003). As a part of the national push to end infant mortality, the public health community made a concerted effort to encourage mothers to breastfeed instead of

using cow's milk primarily because there were limited practices and policies in place on how to properly pasteurize and preserve this type of milk (Wolf, 2003). New and improved policies around the preservation and manufacturing of cow's milk downplayed the need to continue the promotion and practice of breastfeeding among mothers, causing the once important issue to fade into the background. Until the 20th century, research was limited on the effects of human milk in the prevention of chronic and acute illnesses such as ear infection, bacterial meningitis, urinary tract infection, asthma, sudden infant death syndrome (SIDS), and obesity (AAP, 2012; Wolf, 2003). New research on the effects of human milk in the prevention of childhood diseases and infections has rekindled public interest in the topic of breastfeeding and its place in public health as healthcare providers continue to address infant mortality and other issues regarding infant health.

Current Breastfeeding Landscape

In 2000, U.S. Surgeon General Dr. David Satcher released the HHS Blueprint for Action on Breastfeeding. This document detailed a national framework for promoting breastfeeding that included action steps based on "education, training, awareness, support and research" (HHS, 2000b p. 4). The plan reaffirmed the public health community's position on the issue of breastfeeding and involved an array of collaborators (public and private) who supported the promotion of breast milk in lieu of formula to increase the overall health of infants. The Blueprint came on the heels of the signing of the Innocenti Declaration on the Protection, Promotion and Support of Breastfeeding, a document adopted by the World Health Organization (WHO) and United Nations Children's Fund

(UNICEF), which supported global efforts to raise awareness and practice of breastfeeding. Additionally, breastfeeding has been included as a goal of Healthy People 2000, 2010, and now 2020 with goals of improving rates of breastfeeding initiation in early postpartum and at 6-months postpartum (Department of Health and Human Services [DHHS], 2000).

In 2011, the U.S. Surgeon General Dr. Regina Benjamin reiterated the importance of breastfeeding by issuing The Surgeon General's Call to Action to Support Breastfeeding. The report highlighted once again the need to focus on providing support to women in their efforts to breastfeed the nation's infants and noted that promoting breastfeeding was the combined responsibility of "clinicians, employers, communities, researchers, and government leaders" (U.S. Department of Health and Human Services [DHHS], 2011, p. v). The report noted the need to educate a mother's primary support system (grandmothers and fathers) on the importance of breastfeeding, provide training to clinicians and health care workers on breastfeeding, strengthen lactation support in employment settings, and improve research and surveillance to support breastfeeding promotion.

Additionally, the *Call to Action* documented the potential benefits of breastfeeding including the ability to strengthen an infant's immune system, support of mother-child bonding, and lowered risk of postpartum depression (based on duration) (U.S. DHHS, 2011). Other studies have shown that breastfeeding is also beneficial to the health of the mother because it aids in preventing ovulation, assists in reducing postpartum bleeding, and helps the uterus return to its normal size faster than those of

women who do not breastfeed (CDC/DONPA, 2007). Choosing to breastfeed is also viewed as a financial benefit to the family because it reduces the need to purchase formula (Ahluwalia et al., 2000) and can provide saving for hospital stays, parent wages (when a child is sick), and premature death (U.S. DHHS, 2011).

During the past 20 years, hospitals have begun to adopt more baby-friendly practices to increase their support of breastfeeding mothers through the implementation of gradual changes to maternal practices within their maternity wards. These changes include such practices as helping a woman who just delivered initiate breastfeeding within one half-hour following birth, encouraging breastfeeding on demand, and discouraging providing newborn infants food or drink other than breast milk unless medically necessary; these practices are designed to help hospitals become centers of support for women who want to breastfeed (UNICEF, 2013). Changes in hospital policies have been spurred on by the WHO/UNICEF's Baby-Friendly Hospital Initiative (BFHI), a global initiative launched in 1991 to "implement practices that protect, promote, and support breastfeeding" (WHO/UNICEF, 2009, p. 80). It is also important not to overlook the pivotal role that childcare settings (daycare centers) can play in promoting breastfeeding. Infants spend a substantial amount of time in childcare facilities and therefore policies and other regulations need to be created whereby mothers are able to feed their child on site or other arrangements are made to help the mother continue breastfeeding her child (DNPAO, 2012).

Problem Statement

The American Academy of Pediatrics (AAP), an organization recognized as a leader in child health issues and a strong advocate of breastfeeding, has noted that the practice of providing human milk to infants can be of benefit to the child, mother (parents), and society at large (AAP Work Group on Breastfeeding, 1997). According to a recent report by the Centers for Disease Control and Prevention, data from the National Immunization Survey (NIS) showed that breastfeeding rates had increased from 70.3% to 74.6% between 2000 and 2008 including rates for initiation and duration at 6 and 12 months (CDC/NIS, 2011). Among children who were breastfed in the U.S., only 35% were exclusively breastfed at 3 months, while another 14% were exclusively breastfed at 6 months (CDC/NIS, 2011). Additionally, the 2012 Breastfeeding Report Card released by the CDC showed a 2% increase in breastfeeding initiation and breastfeeding rates at 6 and 12 months. Specifically, initiation increased from 74.6% in 2008 to 76.9% in 2009 (CDC/MMWR, 2007). Factors associated with higher rates of breastfeeding include being White, foreign-born, or a nonsmoker (Kogan, Singh, Dee, Belanoff, & Grummer-Strawn, 2008).

Despite the increases in breastfeeding rates that have occurred over the past 10 years and the recognized nutritional benefits of breastfeeding, there continues to be a disparity in the rates of breastfeeding among AA women, specifically as it relates to initiation and duration. For example, data from the Third National Health and Nutrition Examination Survey, 1988-1994 indicated that the proportion of children ever breastfed was only 26% for Blacks in comparison to rates for Whites and Mexican Americans

(60% and 54% respectively; Li & Grummer-Strawn, 2002). The survey also indicated that for families with a household head education of less than high school, rates of breastfeeding at 4 months were only 2.0%, showing that socioeconomic factors may affect rates for this group. Moreover, information included in Healthy People 2010 showed that non-Hispanic Black (African American) women fared far worse than other races in terms of meeting the Healthy People 2010 goal of 75%, specifically noting that their rate fell 45% below the benchmark (National Centers for Health Statistics [NCHS], 2011). This gap or disparity has also been noted in other research with AA women faring the worst in breastfeeding rates among all races with a 30% initiation rate compared to 65% in their White counterparts (CDC, 2011). This information highlights the need to focus public health intervention efforts on breastfeeding promotion and improvements within the AA community.

There is a need to address the issue of low breastfeeding rates within the AA community for a number of reasons. First, breastfeeding has been known to prevent a variety of diseases including cholera (infant diarrhea), obesity, and asthma (AAP Work Group on Breastfeeding, 1997; Wolf, 2003). In developing countries, pneumonia and diarrhea are the two leading (primary) causes of morbidity and mortality in children under five years of age (Christi et al., 2011). These diseases affect rising health care cost and infant health (Wolf, 2003). Second, in the U.S. there has also been evidence to show the effects that breastfeeding may have on an infant's risk for obesity in adulthood. The AAP (2012) reported that rates of obesity were significantly lower in infants fed breast milk, with some evidence of a 15-30% reduction in obesity among adolescents and adults

who were provided some breast milk during infancy. Additionally, there was a 30% reduction in the incidence of type 1 diabetes mellitus for infants who were exclusively breastfed for at least 3 months and a 40% reduction in the incidence of type 2 diabetes mellitus (AAP, 2012). An examination of the SEARCH in Diabetes for Youth Study showed that AA youth have a higher health burden due to Type 1 and 2 diabetes. Specifically, AA youth under the age of 10 showed a lower prevalence of type 1 diabetes; however, both girls and boys of this ethnicity between the ages of 10 and 19 showed an increased prevalence (2.17/1000 for girls and 1.91/1000 for boys; Mayer-Davis et al., 2009). Additionally, results from the 2009-2010 National Health and Nutrition Examination Survey (NHANES) showed that both non-Hispanic Black adolescents girls (24.8%) and boys (22.6%) had a higher likelihood of being obese compared to non-Hispanic Whites of the same age (girls 14.7% and boys 17.5%). A report by the Institutes of Medicine (IOM, 2011) provided support for adopting breastfeeding as a standard practice for preventing early childhood obesity. In fact, the IOM recommended that adults working with infants and families should promote exclusive breastfeeding for a minimum of 6 months. Finally, breastfeeding has been shown to reduce infant mortality, especially in preterm infants, and reduce the risk of sudden infant death syndrome (SIDS).

The AAP (2012) stated that in a meta-analysis conducted by Ip et al. (2007) breastfeeding was associated with a 36% reduced risk of SIDS. Ip et al. found that SIDS was among 13 infant outcomes influenced by breastfeeding. Additionally, Batrick and Reinhold (2010) showed that more than 911 U.S. deaths per year (95% from infants)

could be prevented if 90% of U.S. families exclusively breastfed for 6 months. This amounts to a cost savings of \$13 billion per year. Batrick and Reinhold concluded that the cost savings for SIDS would be approximately \$4 billion with 447 deaths prevented per year. According to Wolf (2003), embracing breastfeeding as “preventive medicine” (p. 2006) could promote infant health and reduce health care costs.

The low breastfeeding rates experienced by AA women are a major public health problem that requires interventions that can assist in improving both initiation and duration rates within this group. Researchers contend that convincing more AA women to breastfeed and increasing their breastfeeding duration could assist in reducing disparities in infant mortality experienced by this population (Wolf, 2003). Studies on breastfeeding show that a partner’s support and engagement in breastfeeding can positively impact these rates (Okon, 2004). In particular, a father’s positive attitude and approval of breastfeeding can determine whether a woman will engage in or continue breastfeeding (Okon, 2004). The perceptions of men or male partners are often influenced by knowledge of benefits (Shaker et al., 2003), understanding of gender roles (Okon, 2004), and awareness of the media (Henderson, McMillan, Green, & Renfrew, 2011).

Purpose of the Study

In this study, I examined the attitudes of AA males on breastfeeding and whether factors such as ideas of masculinity, cultural beliefs, and exposure to media influence their acceptance of this practice. The two-phase concurrent mixed methods study examined the socio-ecological relationships that influence an AA male’s perspective and acceptance of breastfeeding practices. The theory used to examine these relationships

was the socio-ecological model (SEM). The SEM is appropriate for this study because the model takes into account the various social and ecological levels that can influence a person's behavior. I examined various concepts of masculinity or gender-role identification, the media, and cultural norms and beliefs to determine whether these variables influenced a male's acceptance and perceptions (both positive and negative) of breastfeeding. The participant sample included AA males of varying socioeconomic status who resided in the Washington, DC area. The goal was to collect data to determine how beliefs about breastfeeding are formed and whether they can be linked to the three main levels of influence being studied. The knowledge gained from this study can be used to create interventions that strengthen partner support and increase breastfeeding initiation and duration for AA women.

Research Questions and Hypotheses

A concurrent mixed methods approach was used to examine whether masculinity (masculine ideology) and sociocultural beliefs (norms) influenced the way in which African American men perceive breastfeeding practices. In this study, four primary research questions (three quantitative and one qualitative) were examined.

Quantitative Research Questions

1. Is male masculinity ideology associated with attitudes on breastfeeding among AA men?

H_0 1: There is no relationship between a man's masculinity ideology and his attitude on breastfeeding.

H_a1 : There is a negative relationship between a man's masculinity ideology and his attitudes on breastfeeding.

2. Is there a difference in breastfeeding attitudes between men who hold a traditional view of masculinity ideology and men who hold a nontraditional view?

H_01 : There is no difference in attitudes toward breastfeeding between men who hold a traditional view of masculinity ideology and men with a nontraditional view.

$H_a 1$: Men who hold a traditional view of masculinity ideology will have a negative attitude toward breastfeeding, while men with a nontraditional view will have a positive attitude toward breastfeeding.

3. Is masculinity ideology associated with spouse/partner breastfeeding behaviors among AA men?

a) H_01 : There is no association between masculinity ideology and breastfeeding behaviors.

b) H_a1 : There is a positive association between masculinity ideology and breastfeeding behaviors.

The qualitative research portion of the study focused on gathering descriptive data, particularly themes, that could provide additional information on how perceptions and attitudes about breastfeeding are formed. The qualitative inquiry looked at sociocultural norms and beliefs.

Qualitative Research Question

What are the sociocultural factors that influence AA men's perceptions of breastfeeding?

Theoretical Framework

The theoretical base for this research was derived from the ecological model of health behavior that acknowledges that “individual beliefs and behaviors occur in a social context” (Schneider, 2011, p. 233) and that changing health behavior may be best addressed by affecting a person’s social environment. The socio-ecological model (SEM) has its origins in the human ecology model, which was first founded by Urie Bronfenbrenner. The model was first used to examine the influence of external environments on the functioning of the family. This model was later refined to take into consideration the effects that external environments (meso- and exosystems) have on the child within the family (Tiedje et al., 2002, p. 156).

The Centers for Disease Control and Prevention (CDC) uses a four-level socio-ecological model designed by Dahlberg and Krug (2002) as a framework for understanding prevention strategies needed to combat violence (CDC, 2009). The four levels are individual, relationship, community, and societal; the CDC looks at the interplay of these levels and a person’s risk for either being a victim or perpetrator of violence (CDC, 2009).



Figure 1. Socio-ecological Framework for Violence Prevention (CDC, 2009; Dahlberg & Krug, 2002)

Using a similar concept of the SEM (*Figure 2*), I created the following diagram to demonstrate the potential multiple effects and interrelatedness of the four levels and the social elements in the environment that may influence perceptions of AA male partners (fathers) toward certain behaviors and beliefs toward breastfeeding.

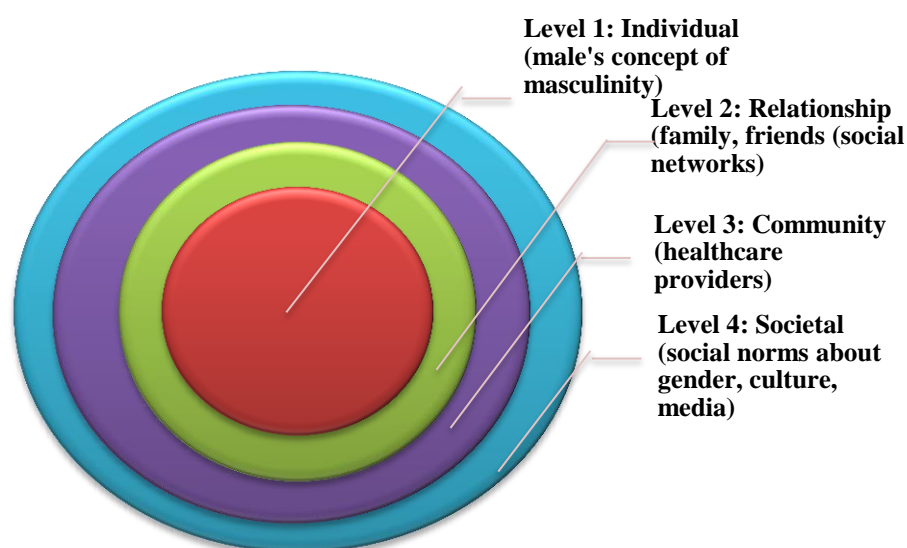


Figure 2. Proposed Socio-Ecological Framework for Understanding Male Perceptions toward Breastfeeding

In relation to breastfeeding, the SEM provides a pictorial representation of how potential environmental barriers (e.g., culture, media, social networks, etc.) may influence individual perceptions toward breastfeeding. This study particularly focused on Levels 1, 2, and 4. These levels were analyzed to get a better understanding of how male perceptions and attitudes toward breastfeeding are formed. Specifically, the themes

drawn from the analysis of qualitative data gathered from the focus group sessions were categorized using Bronfenbrenner's socio-ecological model.

Current ecological models indicate whether the various levels of one's environment (interpersonal, institutional, community, and public policy) promotes unhealthy behaviors. This concept has been examined in the context of community health to explore the effects of the environment on changing behavior to prevent obesity and increase physical activity. In particular, Egger and Swinburn (1997) discussed the global plight of the obesity pandemic and noted that biology, behavior, and environment were the three influencers for the two mediating factors (energy intake and energy expenditure) that determined a person's weight. By changing or having an impact on these areas, one could potentially change the course of obesity.

In the past, the idea of changing one's behavior has been researched from an individual perspective with the concept of self-efficacy being a main factor for determining such change. Two theories that have self-efficacy as a primary concept for analyzing the process for changing behavior are the health belief model and social cognitive theory (SCT). The health belief model explains the reasons why a person chooses not to participate in programs that result in positive behavior change and identifies self-efficacy as the process of a person recognizing his or her ability to perform a specific behavior (Schiavo, 2007). The SCT looks at self-efficacy, too but adopts a more systematic view to health behavior noting the reciprocal factors influencing behavior change—behavior, personal factors, and outside events (Schiavo, 2007).

Bandura's SCT incorporates a list of individual factors that influence behavior, and adopts an ecological approach to behavior change by emphasizing the effect of the environment on personal choices. Additionally, the theory of reasoned action brings to surface the idea of subjective norms that impact behavior. These subjective norms are defined as "the opinion or judgment, positive or negative, that loved ones, friends, family, colleagues, professional organizations, or other key influentials may have about a potential behavior" (Schiavo, 2007, p. 40). Once again the idea that the environment (community and family) can determine behavior is examined and shown to be a factor in the adoption of healthy behaviors.

The ecological approach to studying breastfeeding support for women, specifically how partners come to understand breastfeeding and its benefits to the woman, child, and family, is needed if men are to adopt this practice and assist their partner in sustaining appropriate breastfeeding levels during the postpartum period.

Nature of the Study

The study design was a mixed method that occurred in two phases. In the first phase, quantitative research questions were used to address the relationship between masculinity ideology and breastfeeding acceptance. A correlational design using cross-sectional survey methodology was used to collect information from AA males on multiple variables including masculinity (gender roles), cultural influence, and breastfeeding attitudes. The data collection tool involved two survey instruments, one measuring paternal attitudes toward infant feeding practices and the other measuring masculinity ideology (gender norms). I used a correlational design to compare scores

from questions on gender norms with scores from questions on infant feeding attitudes. Information from the first phase was explored further in the second phase of the study, which included qualitative research methods.

In the second phase of the study, focus groups were conducted with a select group of survey participants to examine sociocultural beliefs (norms), media, and social norms about masculinity and gender roles as they relate to breastfeeding. A total of three focus groups were conducted. The focus groups were used to gather additional information on specific ideas that influence men's perceptions and acceptance of breastfeeding. Focus group data were analyzed to identify themes related to cultural norms and beliefs about masculinity ideology (gender norms) and breastfeeding acceptance. Themes gathered from the focus group data provided additional support to the data gathered from the questionnaire administered to participants. The combined data provided a full picture of how men's perspectives on breastfeeding are formed. I examined whether men who have a traditional view of masculinity have a lower acceptance of breastfeeding and whether this is also influenced by cultural factors such as whether they had a sister or mother who breastfed. Greater detail on the methodology used for this study is provided in Chapter 3.

Conceptual Definitions of Technical Terms

There were five primary terms used throughout the course of this study that required additional explanation. These terms were *breastfeeding*, *masculinity ideology (traditional and nontraditional)*, *attitudes*, and *sociocultural norms*. After researching the use of these terms through various other studies, I chose the following definitions for this study:

Breastfeeding: This is the process of providing breast milk to one's infant in lieu of formula. Breastfeeding includes providing milk directly from the breast or pumping milk and providing it to the infant in a bottle.

Masculinity ideology: This refers to the normative prescriptions of masculinity (Lee & Owens, as cited in Wade, 2008, p. 6) including endorsement and internalization of cultural belief systems about masculinity and male gender, and is rooted in the structural relationship between the two sexes (Pleck, Sonenstein, & Ku, as cited in Walker, Tokar, & Fisher, 2000, p. 99).

Traditional masculinity ideology: This belief restricts men from exhibiting signs of behavior or thought attributed to the female role (Wade, 2008, p. 6).

Nontraditional masculinity ideology: This belief diverts in some way from traditional masculinity ideology (Wade, 2008, p. 6).

Attitudes: These are associations between a given object and a given summary evaluation of the object (Fazio, 2007, p. 5). Evaluative summaries associated with the attitude may come from beliefs, affects, and/or behavioral information (Fazio, 2007, p. 5).

Sociocultural norms: These customs combine social and cultural factors that influence the rules and expectations of conduct prescribed to a specific behavior.

Assumptions

As stated in the Nature of the Study section, this mixed methods study relied on both quantitative and qualitative methodology and analysis. The aim was to gather and examine data on how men form their perceptions of breastfeeding and how this

ultimately influences their acceptance of the practice. There were a few common assumptions that could be made based on this type of research.

1. Self-reported data collected from participants via the online survey is valid and based on the participants' understanding of the stated questions.
2. Ethnicity (i.e., whether participant is AA) is self-reported and does not take into account men who have dual ethnicities.
3. African American men have a perception on breastfeeding.
4. African American men can identify who has influenced or does influence their masculinity ideology.

Scope and Delimitations

The delimitations of the study were the following:

1. The study will only include AA men residing in the DC/MD/VA area.
2. The study only looked at men age 18 and older. This would exclude adolescent males who may be fathers.
3. The study looked at the attitudes of all men, not just those men who have children.
4. The study did not look at the opinions of female partners of breastfeeding women.
5. The study will only look at two reported feeding types—breastfeeding and formula feeding. The study only focused on men with female partners (hetero-domesticities) and no other relationship types.

Limitations

The limitations of this study were the following:

1. Results of the study are generalizable only to AAs living in urban or suburban areas.
2. The concurrent mixed method design chosen for the study did not allow enough time for the data from the online survey to be used to develop questions for the focus groups. There was difficulty recruiting participants for the study. Recruitment of participants for both the quantitative and qualitative phase was done simultaneously so as not to cause further delay in the study. Additionally, because this was not a sequential design, I chose to create questions for the focus group protocol prior to implementation of the study. This process was approved by the Walden University IRB.
3. The majority of the participants were provided some form of compensation for participating in either the online survey or focus group sessions. A large proportion of the participants for the online survey were recruited using a survey company (Cint Inc.) while those who participated in the focus groups were provided a \$5 Subway gift card. Both types of payment could have influenced the participants' responses to questions in either phase of the study.

Significance of the Study

The role of men in the decision on infant feeding choice (breastfeeding versus bottle feeding) has not been thoroughly researched as a potential factor for promoting breastfeeding and encouraging breastfeeding duration. Current breastfeeding interventions that primarily target the mother do not reflect the influence or role of the father (male partner) on breastfeeding decision making. Such strategies may be based on the idea of the mother-infant dyad that is at the center of mainstream maternal and child health promotion activities. Additionally, the public health community continues to see low rates of breastfeeding within the African American community. Given the evidence that a male partner's feelings toward breastfeeding can influence his partner's decision to breastfeed, more research needs to be conducted on how these perceptions and attitudes are formed and more specifically on what contributes to a positive attitude toward breastfeeding, which can lead to increased breastfeeding rates within this population.

If a man's perception of breastfeeding and his subsequent decision to encourage breastfeeding for his partner is influenced by such factors as sociocultural norms or his sense of masculinity ideology (gender roles norms), interventions can be created to promote a healthier image of masculinity in which decisions related to the care and health of the infant or child are not solely left up to the discretion of the mother. Inclusion of the father in health care decisions related to the mother, child, and family represents a shift in public health philosophy and could provide evidence for the need to include males in other aspects of maternal and child health including family planning, domestic violence prevention, and treatment of post-partum depression.

Summary

Current research provides evidence that a woman's support system can be a positive influence on the way she views her health and makes health choices (both positive and negative). One of the health choices that are influenced by this system is whether she should breastfeed her infant or provides the infant formula. A woman's social support circle can involve not only the father of the child, but her mother (or maternal grandmother) as well. The maternal grandmother can have either a positive or negative effect on a woman's decision to breastfeed (Clifford & McIntyre, 2008). Men can also offer guidance to their partners on this decision as well. However, men are often removed or left out of the discussion on infant feeding choice even though the literature shows that their support can be a determining factor in the breastfeeding decision. Additionally Rempel and Rempel (2004) and Vaaler et al. (2011) showed that the way a man perceives his masculinity or defines male and female gender roles can affect whether he is accepting of the practice of breastfeeding. This attitude or feeling can ultimately influence his partner's decision to start or continue breastfeeding.

Sociocultural beliefs (norms) can impact whether a woman chooses to breastfeed or whether her partner supports such a decision. These sociocultural norms include whether a woman (or her mate/partner) was breastfed as an infant or whether this practice is accepted on a larger cultural level. Both of these factors can influence a woman's decision to breastfeed. Health care practitioners can provide additional support to women and their partners on breastfeeding, but they need additional training on how to provide this support to the family and training on ways to include the partner/spouse. For

breastfeeding to be better supported, family and friends need to be more aware of the importance of breastfeeding and how to help mothers, health professionals need more effective training in supporting breastfeeding, peer counselors and breastfeeding support groups need to be more accessible to breastfeeding women, and employers and the community need to be more breastfeeding friendly (Clifford & McIntyre, 2008).

Medical dominance, patriarchy, promotion of breastfeeding may influence a partner's perceptions of breastfeeding. It is necessary to create interventions that aim to increase the length of time an AA woman intends to breastfeed and highlights the role of the father in successful breastfeeding.

Breastfeeding is promoted as a healthy feeding choice for infants with multiple benefits for baby, mother, family, and society (AAP Work Group on Breastfeeding, 1997). Rempel and Rempel (2004) noted the importance of men in influencing their partner's decision to breastfeed, and Tohotoa et al. (2009) provided evidence that men can be a support system for women to continue breastfeeding. Although much is known about why a woman chooses to breastfeed, very little is known about how her partner perceives breastfeeding and his process for accepting it as a normal and healthy practice. The studies that have been conducted on the perceptions of men regarding breastfeeding have indicated that knowledge about the benefits of breastfeeding and advice from health professionals can play an important role in a man's opinion about breastfeeding (Sherriff, Hall, & Pickin, 2009). More research is needed not only to understand the perceptions men have about breastfeeding, but also to understand how these perceptions are formed and whether they influence men's acceptance of the behavior.

Chapter 2 presents a review of the literature and provides additional information on the relationship between partner support and breastfeeding initiation and duration rates. Chapter 2 begins with a description of the historical context of breastfeeding, the breastfeeding disparities between AA women and women of other races or ethnic groups, and the national agenda to increase breastfeeding rates to combat infant health issues including infant mortality. Additionally, Chapter 2 addresses barriers and facilitating factors for breastfeeding, paternal involvement in breastfeeding, and the various determinants of breastfeeding perceptions and acceptance for men, including cultural beliefs, media, and masculinity ideology. The chapter concludes with a framework for examining male breastfeeding perceptions and acceptance, and indicates areas for future research.

Chapter 2: Literature Review

In this chapter I provide a systematic review of literature that describes the issue of breastfeeding, its effect on different infant and maternal health outcomes, paternal attitudes toward breastfeeding, and concepts of masculinity ideology. The following literature review was conducted using articles gathered from the Walden University Library, PubMed, and Google Scholar. The search included articles published from 2000 to 2013. Articles were from various databases using the following terms: *breastfeeding*, *paternal involvement*, *racial disparities*, *African American/black*, *support*, and *barriers*. Both qualitative and quantitative studies were included in the review to understand the barriers that deter AA women from initiating or continuing breastfeeding during and beyond the postpartum/interconception period. The information that follows provides details on the findings gathered from various studies and helps one understand the next steps for future research. As part of the literature review, research studies denoting the perceptions of men toward breastfeeding and possible sociocultural influencers are examined as well to help determine areas where further research is warranted.

The purpose of this study is to gather additional knowledge on how AA males form their perceptions and attitudes about breastfeeding. Particularly, I explored the concepts of masculinity or gender-role identification, the media, and cultural beliefs to determine whether these variables influence a male's acceptance and positive perceptions of breastfeeding. Moreover, factors needed to support their partner in initiating or continuing these practices are also discussed. At the conclusion of the review, additional gaps in research are identified to provide the direction for future research.

There are a number of issues associated with a woman's decision to initiate and continue with breastfeeding, including some that relate directly to her male partner. These issues include (a) the idea of masculinity and traditional feminine roles and how they may shape a man's opinion about breastfeeding, (b) the relationship of cultural beliefs on attitudes and knowledge about breastfeeding, and (c) how social networks such as the church and friends may influence breastfeeding. As part of this literature review, special attention is placed on whether individuals in social networks communicate misinformation about breastfeeding, which can consequently inhibit a woman from choosing to breastfeed.

Background on Breastfeeding

The topic of whether to breastfeed not only provides additional thought on the issues of infant nutrition, but is also seen as a prevention strategy for combatting infant mortality, specifically neonatal mortality. The Millennium Development Goals (MDGs; 2012), a blueprint created by the United Nations and agreed upon by all of the world's countries and leading development institutions presents eight goals that are to be achieved by 2015. Preventing child mortality is listed as goal four. The document proposes to "reduce by two-thirds, between 1990 and 2015, the under- five mortality rate" (MDGs, 2012, p. 1). Promotion of exclusive breastfeeding in rural areas has been shown to be an effective strategy in preventing child death by making children less vulnerable to disease (MDGs, 2012). Furthermore, early exposure to breastfeeding (within one hour of birth) and exclusive breastfeeding for the first 6 months has been shown to aid in the reduction of malnutrition (MGD, 2012).

Breastfeeding is also recognized globally as a possible factor in the prevention of sudden and unexpected death in infancy (SUDI) or sudden infant death syndrome (SIDS). SIDS and SUIDS are defined as death that occurs in an infant less than one year of age that is both sudden and unexpected; however with SUIDS the death may have been caused by an external factor (unsafe bedding, co-sleeping) (American SIDS Institute, 2012). Garcia et al. (2011) provided supporting evidence that breastfeeding can aide in the reduction of neonatal mortality. The study showed that late initiators, defined as infants who were breastfed after 24 hours, were 3.91 times more likely to die during the neonatal period compared to early initiators. Early initiators, those who were breastfed between 12 and 24 hours, had only a 1.20 fold increase in mortality risk when compared to infants who were breastfed before 12 hours (Garcia et al., 2011, p. 399). In another study, Chen and Rogan (2004) found that breastfeeding reduces the rate of post neonatal death as well. In their study addressing data from the 1988 National Maternal and Infant Health Survey (NMIHS), researchers found that children who had ever breastfed had a lower risk of death even among those infants included in the case (post neonatal death) group. Furthermore, prolonged breastfeeding was shown to be associated with lower risk of post neonatal death as well (Chen & Rogan, 2004). Additionally, in a study on infant feeding patterns and risks of death or hospitalization, Bahl et al. (2005) found that infants who were never breastfed had a 10.5% higher risk for dying and a 3.39% higher risk for hospitalization compared to infants who were predominantly breastfed (*predominant breastfeeding* was defined as an infant fed breast milk and some non breast-milk liquids but not animal milk, formula, or solids).

Much controversy has existed around the issue of feeding methods for infants. Wallace and Chason (2007) noted that choosing the most appropriate infant feeding method is ultimately a woman's personal choice. This shift in the normal paradigm of breastfeeding practices has changed based on the need to include men in the discussion of maternal and child health issues, specifically those related to the health of a woman and the development of children. Susin and Giugliani (2008) highlighted the need to include fathers in the promotion of breastfeeding in order to provide both "emotional and practical support to the breastfeeding woman" (p. 389). Specifically, Susin and Giugliani (2008) showed that the inclusion of fathers in breastfeeding promotion programs at the maternity ward could significantly increase breastfeeding duration rates during the infant's first 6 months of life. Their research brought to the forefront the importance of the significant other in the breastfeeding process.

Research on factors affecting breastfeeding initiation and duration has focused primarily on characteristics of the mother that can influence her breastfeeding decision (Hector, King, Webb, & Heywood, 2005, p. 52). This view has included an analysis of sociodemographic factors and self-reported personal factors that may act as a barrier for breastfeeding. The limitations of this research are connected to the fact that it lacked a conceptual framework. A conceptual framework is needed to show sources of influence that go beyond the mother-infant dyad. Research conducted in the past decade has shown the power of social systems on breastfeeding initiation and duration (Tiedje et al., 2002, pp. 155-156).

Despite the numerous health promotion campaigns and research on the benefits of breastfeeding and infant health, the United States continues to lag in breastfeeding rates compared to other developed countries. Data from the Centers for Disease Control and Prevention, Morbidity and Mortality Weekly Report (MMWR) (2010) indicated that although there has been an increase in breastfeeding rates since 1990, a major disparity between breastfeeding rates among non-Hispanic Black women and non-Hispanic White women continues to exist. Specifically, AA women have the lowest rates of both initiation (54.4%) and duration at 6 (26.6%) and 12 (11.7 %) months (CDC, 2010). Celi, Rich-Edwards, Richardson, Kleinman, and Gillman (2005) contended that breastfeeding rates among both non-Hispanic Blacks and Hispanic women have consistently been below the Healthy People 2010 benchmark of 75%. Because of the perceived benefits of breastfeeding on infant health, there is a need to increase breastfeeding promotion and duration within the AA population. Clifford and McIntyre (2008) showed that various entities can influence an AA woman's ability to initiate and continue breastfeeding. These entities include social support systems (families and friends) and health care providers. One particular aspect of the social support system is the effect that men or fathers have on women's decision to breastfeed.

Facilitating Factors of Breastfeeding

Due to the widening gap in breastfeeding rates experienced by AA women, it is important that communities find additional ways to promote breastfeeding within this population. Studies have indicated the impact that social support systems such as family members and friends have on a mother initiating and continuing breastfeeding beyond the

postpartum period (Clifford & McIntyre, 2008). Some researchers contend that health care providers, nurses, and even family members can influence a woman's decision to breastfeed (Arora, McJunkin, Wehrer, & Kuhn, 2000; Clifford & McIntyre, 2008; Lewallen & Street, 2010). In a study involving both AA and Hispanic women, Humphreys, Thompson, and Miner (1998) concluded that a participant's intention to breastfeed was more positively associated with her compliance with social contacts who also supported breastfeeding, maternal age (older rather than younger), educational level, breastfeeding experience, awareness of the benefits of breastfeeding from a variety of sources, and being Hispanic. For women who had no previous breastfeeding experience, Humphreys et al. (1998) found a positive correlation between breastfeeding intention and "hearing about breastfeeding benefits from family members, the baby's father or a lactation consultant" (p. 171).

Fathers and Paternal Support for Breastfeeding

One support factor that has been studied numerous times is the impact that men, particularly fathers, may have on breastfeeding initiation and duration rates. In a literature review on breastfeeding promotion, fathers were found to be the most influential person to a mother in helping her decide to breastfeed (Clifford & McIntyre, 2008). In a qualitative study Tohotoa et al. (2009) interviewed both men and women to explore issues in transitioning to parenthood and perceptions of what could be considered breastfeeding support. A primary purpose of the study was to gather information on paternal perceptions of breastfeeding including facilitating factors and barriers (Tohotoa et al., 2009). Tohotoa et al. found that men want more information on breastfeeding,

need assistance learning their role, and want to be an advocate for their spouse. Women interviewed as part of this study also felt that men could provide more encouragement, anticipate their partner's needs, and be committed to the process of breastfeeding (Tohotoa et al., 2009). Earle (2002) also recognized the need for increased paternal involvement in infant feeding, and found that this played a major role in women choosing to formula feed. Specifically, women who chose to formula feed found it important for men to be involved in assisting with daily household tasks in the early stages of motherhood and helping with infant feeding. These women were also highly concerned with sharing the infant with the father and found that formula feeding presented a greater possibility of this occurrence (Earle, 2002).

Although evidence exists on the importance of involving fathers in the discussion on breastfeeding, men are often excluded from the discussion on breastfeeding practices and promotion (Susin & Giugliani, 2008). Although previous researchers focused on understanding perspectives of men and women (including expectant and potential fathers), more research is needed to examine the opinions of people in committed relationships who are, or have engaged in, breastfeeding for one or all of their children.

Social Support System

In a literature review Clifford and McIntyre (2008) revealed that a woman's social support system, including assistance from the child's father and support from other family members and friends, positively influenced breastfeeding rates. For fathers, factors such as length of relationship with the mother and ongoing encouragement during the breastfeeding process were found to be most beneficial in promoting breastfeeding.

On the other hand, a father's absence from the home and his lack of knowledge about breastfeeding were seen as deterrents or hindrances to breastfeeding (Clifford & McIntyre, 2008). Clifford and McIntyre also revealed that a lack of empathy or absence of approval from the woman's mother was viewed as a barrier to breastfeeding. The maternal grandmother's attitude toward breastfeeding was especially harmful to women who had breastfeeding difficulty or who showed a lower level of commitment to breastfeed in the first place (Clifford & McIntyre, 2008).

Supporting the findings of Clifford and McIntyre (2008) on the importance of both the family or social support system in influencing a woman's infant feeding choice, Arora et al. (2000) examined factors influencing a mother's infant feeding decision and those factors that would have encouraged bottle-feeding mothers to breastfeed. The study involved 245 mothers who completed a survey of 28 questions addressing demographics as well as timing of infant feeding choice, factors that influenced decision, sources of breastfeeding information, type of feeding choice selected, and other issues related to infant feeding. The mother's perception of the father's preference was determined to be a primary reason for not breastfeeding. Results from the survey showed that women cited support from the father (80%) as well as support from the maternal grandmother and other family members (90.9%) as factors that would have encouraged breastfeeding (Arora et al., 2000).

In comparison to data gathered from Arora et al. (2000), Andrew and Harvey (2009) showed that breastfeeding mothers often received support and advice from the maternal grandmother, and that women who chose to breastfeed were more likely to have

been breastfed as infants. This cultural factor provides insight on a specific behavior from a woman's childhood that can influence infant feeding choices. More research is needed to determine whether similar factors can influence men's ideas on breastfeeding (i.e., if a man was breastfed as an infant, would he more likely accept the practice as a feeding choice for his child or would he support the behavior by his partner).

Clifford and McIntyre (2008) noted that maternal grandmothers can either positively or negatively influence a breastfeeding mother. A grandmother's prior knowledge of breastfeeding practices and her experience (or lack thereof) in this area can impact her daughter's decision to initiate or continue breastfeeding. Researchers have found it increasingly necessary to create not only interventions that encourage paternal involvement but also to develop breastfeeding campaigns geared toward expanding a grandmother's involvement. Grassley and Eschiti (2008) explored a mother's perception of the grandmother's breastfeeding knowledge and support. The results of the study were to be used to facilitate the creation of an intervention focused on grandmother support of breastfeeding. Grassley and Eschiti analyzed qualitative data from four focus groups, using a standard questionnaire and reflective listening cues to encourage responses from each participant. There were five main themes gathered through content analysis. These themes were identified as the main types of support women needed/expected from grandmothers and the type of assistance grandmothers needed to offer this support. One of the main things mothers stated that they wanted from the grandmothers was for them to be their breastfeeding advocate and offer encouragement. Three additional themes were identified and categorized as the type of support grandmothers needed in order to be

advocates. These themes included acknowledging barriers, confronting myths, and possessing current breastfeeding knowledge (Grassley & Eschiti, 2008). Mothers considered valuing breastfeeding to be an important aspect of a grandmother's breastfeeding advocacy, noting that the way grandmothers could show their support is by "acknowledging breastfeeding as important and desirable, and to affirm rather than criticize or question their decision" (Grassley & Eschiti, 2008, p. 331). Themes about current breastfeeding practices (i.e., importance of supply and demand), opposing generational myths (i.e., inadequacy of breast milk), and acknowledging that their own perceptions about breastfeeding were actual barriers to support were identified as ways in which grandmothers could become better advocates (Grassley & Eschiti, 2008). Another factor that facilitates support of breastfeeding is the level of communication that grandmothers have with breastfeeding mothers. Grassley and Eschiti (2008) found that grandmothers who communicated positive thoughts about breastfeeding (e.g., stating that they enjoyed breastfeeding their children) showed that they valued breastfeeding. This study provided an example of how grandmothers can support breastfeeding and the need for increased training and education to strengthen their advocacy for their daughters.

Peer and Social Networks

Other research has been conducted on the effect of peer relationships and social networks on breastfeeding duration as well. Peer support includes friends in which you have a personal relationship, as well as women in the community who have had experience breastfeeding, but who you do not have a personal connection with you. Peer support has been used by health promotion programs to educate participants and provide

additional support in promoting breastfeeding (Arlotti, Cottrell, Lee, & Curtin, 1998). Specifically, research by Arlotti, Cottrell, Lee, and Curtin (1998) examined the effect of peer support on breastfeeding exclusivity and duration of low-income woman who were enrolled in the Women, Infants and Children (WIC) Program in Florida. The study looked at breastfeeding rates at 3-months postpartum, and found that woman who participated in a peer counselor group had a higher rate of exclusive breastfeeding than those not participating in the program (Arlotti et al., 1998). Those women selected a peer counselors were eligible for WIC services, had personal experience (i.e., had breastfed) in breastfeeding, and underwent a 20-hour training in breastfeeding and communication as part of the program (Arlotti et al., 1998). Results indicated that both a woman's intention to return to work and/or school were the two predictor variables significantly correlated with breastfeeding duration rates. Women who returned to work breast-fed 6.75 weeks less and those who intended to returned to work and school breast-fed 9.30 weeks less than those women who stayed home (Arlotti et al., 1998). Arlotti et al. (1998) noted that attendance at breastfeeding class and knowing someone who breast-fed increased breastfeeding as well (3.14 weeks and 3.24 weeks respectively).

A similar study was conducted by Mickens, Modeste, Montgomery, and Taylor (2009) focused on the effects of peer support on breastfeeding intentions during the prenatal period. This particular study involved AA women who attended WIC clinics in the Inland Empire area of California (Mickens, Modeste, Montgomery, & Taylor, 2009). Participants were administered a questionnaire containing 45 questions based on the conceptual framework of the social learning theory and measured "behavioral capability,

expectations, self-efficacy, observational learning, and reciprocal determinism” as key constructs in the study (Mickens et al., 2009, p. 159). Factors such as knowledge of breastfeeding, feeding beliefs and previous breastfeeding all positively correlated with breastfeeding intentions. Additionally, attendance at a breastfeeding support group also had a positive effect on breastfeeding intentions (OR = 2.17) regardless of prior knowledge and barrier beliefs (Mickens et al., 2009). Both these studies provide evidence on the importance peer support in promoting breastfeeding intention, duration and exclusivity.

The U.S. Surgeon General also identified poor family support systems as a barrier to successful breastfeeding. Of great importance is the fact that if a woman has a friend who has been successful at breastfeeding, she is then more likely to choose to breastfeed (U.S. DHHS, 2011). Fathers were also identified as possible influencers on a woman in her decision to breastfeed and her likelihood to continue. Specifically, when AA men are provided appropriate education on the benefits of breastfeeding, studies have shown an increase in breastfeeding rates for this population (U.S. DHHS, 2011).

Barriers to Women Initiating Breastfeeding

There are many barriers that prevent women from initiating or continuing breastfeeding. As determined through research conducted by Li, Fein, Chen, and Grummer-Strawn (2008), the most cited reasons for terminating breastfeeding during the first year was related to lactational, psychosocial, nutritional, medical, milk pumping, self-weaning, and changes in lifestyle. There were significant differences between reasons why Hispanic mothers stopped breastfeeding as compared to White mother.

Overall, Hispanic mothers and those with a lower household income (<350% of federal poverty rate) more frequently cited that “breast milk alone did not satisfy my baby” as opposed to White mothers and those with higher incomes (>350% of the federal poverty rate) (Li, Fein, Chen, & Grummer-Strawn, 2008, p. S73).

Deterrents to breastfeeding include both environmental and societal barriers such as a woman’s personal preference, her family support system, health care provider, and assistance provided when transitioning back to work. All of these factors can affect whether a woman chooses to initiate breastfeeding or continue breastfeeding during the postpartum period.

Personal Preference

While there may exist many environmental and social factors that impact a woman’s ability to breastfeed, much research has been conducted to explore a woman’s individual reasons for choosing not to initiate breastfeeding. Findings from a study conducted by Ogbuanu et al. (2009) revealed that among reasons for not wanting to breastfeed, women who participated in the study cited individual reasons, household responsibilities and circumstances as reasons for not initiating breastfeeding. Individual reasons for not breastfeeding included “not liking breastfeeding, not wanting to be tied down, feeling embarrassed, and wanting one’s body to self” (p. 4). Household responsibilities were stated as having other kids to take care of and having too many household duties, while circumstances referred to going back to work or school and having an unsupportive partner (p. 4). African American women (67.4%) were more like to identify individual reasons for not wanting to breastfeed, while Whites (36.9%),

Hispanic women (26.7%) and women of other races cited household responsibilities as a primary reason for not breastfeeding (Ogbuanu et al., 2009). While these differences were not viewed as significant (after adjusting for certain demographic characteristics), the results did provide supporting evidence on the need to explore internal household factors (presence of father) and community factors which may influence breastfeeding decisions.

Feminist scholars have also proposed that the sexualization and objectification of women's breast can also influence a woman's decision to breastfeed. College students who participated in a study conducted by Johnston-Robledo, Wares, Fricker, and Pasek (2007) reported that women who had a more positive view about breastfeeding were less concern about body image and embarrassment. Additionally, women who scored higher on the "Breastfeeding as Indecent" measure also had a more negative view toward breastfeeding. Earle (2002) also found a certain level of uncertainty about breastfeeding for both breast and formula feeding women, specifically as it relates to breastfeeding in front of others, which may relate to feelings of embarrassment. The qualitative study was conducted with 19 women recruited from 12 antenatal clinics in West Midlands (UK) (Earle, 2002). Most of the women in the study identified themselves as White, were between the ages of 20 – 29 years, and were employed in various occupations including management positions and manual occupations (Earle, 2002). The results of the study showed that both breastfeeding and formula feeding women are ambivalent toward breastfeeding and that a sense of embarrassment is expressed by women of different socioeconomic status. Overall, formula and breastfeeding women perceived

breastfeeding to be “embarrassing, disgusting and inconvenient” (Earle, 2002, pp. 212), but knowingly acknowledged that “breast is best”. This further acknowledges the tension that breastfeeding in a woman’s perception of the sexual objectification of women’s bodies and the role of the breast as a natural method of infant feeding (Earle, 2002).

Health Care Provider

The American Academy of Pediatrics (AAP) recommends that pediatricians help support and promote breastfeeding. Several of the more notable recommendations that lend support to this study include having pediatricians be knowledgeable about supportive evidence and studies that have shown the benefits of breastfeeding, understanding the different aspects of breastfeeding management, working closely with obstetricians and other health care providers to ensure that women receive appropriate education about breastfeeding during the perinatal period, promoting hospital practices and policies, encouraging proper promotion of breastfeeding through the media, encouraging employee involvement in breastfeeding (i.e., time for mothers to pump), and encouraging that family and other social support of breastfeeding (Workgroup on Breastfeeding, 1997). Additionally, the AAP recommends that students receive education about breastfeeding in medical school and during their residency (Work Group on Breastfeeding, 1997).

Studies on breastfeeding promotion have also shown the impact that various health care providers can have on women continuing breastfeeding. Getting additional assistance from lactation consultants and connecting women who are having difficulty with breastfeeding to telephone-based support, can increase their ability to maintain

breastfeeding practices (Clifford & McIntyre, 2008). Physicians were noted to lack knowledge on how to support women who choose to breastfeed; however, studies showed that when their doctor recommended breastfeeding instead of formula, women complied with their doctor's advice (Clifford & McIntyre, 2008).

In a study by Beal, Kuhlthau, and Perrin (2003), researchers examined whether there were racial differences between the type of breastfeeding advice received from a medical provider (i.e., physicians, nurses, midwife, etc.) and Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) nutrition counselors to Black and White mothers participating in the program. These specific health care providers were chosen as persons of interests since past studies have shown the effect that advice from these health services providers can have on breastfeeding rates. The study surveyed 3,966 White and 4,791 Black low-income women. Results from the study determined that while no racial differences existed in the type of breastfeeding advice received by physicians, there existed a difference in the type of advice received by AA women from the WIC nutritionist. Specifically, bottle feeding was promoted more for AA women in the program as opposed to White women (Beal, Kuhlthau, & Perrin, 2003). This shows a great need to continue working with health providers to educate them on the need to promote breastfeeding, especially with AA mothers since electing to breastfeed can protect against infant mortality and other health disparities affecting this community (Beal et al., 2003).

Breastfeeding knowledge and attitudes among pediatric nurses have also been examined. Findings from research conducted by McLaughlin, Fraser, Young, and Keogh

(2011) which analyzed the knowledge and attitudes of pediatric nurses as it related to hospitalized mothers and their infants found that (a) longer periods of having worked with families and infants corresponded to higher/greater levels of breastfeeding knowledge, (b) nurses possessed a lower knowledge of the preventive aspects of breast milk and many were unaware of the effects of formula feeding on breastfeeding success, (c) only 32% recognized the importance of skin-to-skin contact and how it aids in increasing breast milk production, and (d) participants did not know about nipple confusion as a result of introducing a pacifier while an infant is learning to breastfeed. However 96% agreed that partners were important to breastfeeding success. Results from this study show that while pediatric nurses understand the importance of breastfeeding, more education is needed on “common breastfeeding problems, attachment, maintenance of milk supply, expressing, impact of supplements (fluid and formula), protective benefits, and supportive advice and strategies” (McLaughlin et al., 2011). These improvements are especially necessary in supporting a breastfeeding mother whose infant has been hospitalized and can be the difference between women continuing to breastfeed.

Community health workers (CHWs) too, may also play a vital role in helping women sustain breastfeeding practices. A CHW is defined as a trusted member of the community who is viewed as a “frontline public health worker” and assists individuals in navigating the health care system (American Public Health Association [APHA], 2012). While CHWs have received training that allows them to carry out a certain level of health care, they are also viewed as community advocates, organizers, and agents for social

change (Lehmann & Sanders, 2007). Studies have been conducted to show the possible connection between CHWs in assisting with breastfeeding rates for children less than six months of age. In particular, Balaluka et al. (2012) examined the effects of a community-based nutrition program given by trained community health workers and whether it could improve breastfeeding rates for women in two areas of the Democratic Republic of Congo, which were affected by high infant mortality and child malnutrition. The study compared the rates of exclusive breastfeeding (EBF) for the intervention and control groups and found that the EBF rate at six months of age for the intervention group was 57.7% compared to only 2.7% for the control group. Even at four months, there was a significant difference in breastfeeding rates between the intervention and control groups (92% and 51% respectively), yielding 40% difference in EBF rates. Moreover, women in the intervention group had a higher proportion of deliveries at health care facilities (93%) and higher preschool consultations (PSC) (i.e., medical visits) (11) showing that they accessed services more frequently as well (Balaluka et al., 2012). These results provide evidence that community health workers are not only able to increase exclusive breastfeeding rates, but can also aide in increasing a woman's access to health care. The latter can ensure that children stay on track with their immunization schedule which inherently protects from childhood diseases and infections that have been associated with infant mortality (Balaluka et al., 2012).

Transition Back to Work

In addition to the areas already mentioned, a mother's transition back to work may present another barrier to her being able to continue breastfeeding. As stated in The

Surgeon General's Call to Action to Support Breastfeeding (2011), employment challenges noted in being a deterrent to breastfeeding continuation include lack of privacy or a place to express and store milk, inconvenient or inflexible work hours, inability to locate a child care facility near place of employment, and lack of maternity leave. Although the U.S. Department of Labor requires that employers provide "reasonable break time for an employee to express breast milk for her nursing child for 1 year after the child's birth each time such employee has need to express the milk" and a specific place other than the bathroom for women to express milk, many women still find it difficult to maintain breastfeeding practices. In particular, small companies who employ less than 100 persons are less likely to have lactation rooms to support breastfeeding moms (U.S. DHHS, 2011). Likewise, women may feel that the time allotted for them to express milk is not sufficient or may find that they lack support from co-workers in their choice to breastfeed.

Research by Scott, Landers, Hughes, and Binns (2001) noted return to work as a potential barrier to breastfeeding duration. Results of their study showed that mothers who intended to return to work within the six months following delivery, either full- or part-time, were less likely to continue breastfeeding following hospital discharge. While there was no significant difference seen in duration rates for women who intended to return to work at six months (43%) versus those who planned on staying home (47%), other research suggests that return to employment can both hinder initiation and duration of breastfeeding. In fact, research by Chen, Wu, and Chie (2006) provides additional support for the Scott et al. (2001) study by noting similar barriers experience by female

factory workers. In this study, Chen et al. (2006) examined whether a connection existed between workplace policies and a woman's ability to achieve the WHO recommendation of exclusive breastfeeding for the first six months. Results of the study showed that knowledge of onsite lactation room and breastfeeding policy (i.e., breast pumping breaks) was highly correlated with continuation of breastfeeding. Furthermore, number of years employed with the company (i.e., at least 10 years) and worksite location (office vs. fabric work) were both negatively related to breastfeeding rates.

Media

Although breastfeeding has been identified as being of increased nutritional value to infants, preventing immunological disorders and infant diseases, and providing additional benefits to mothers and their families, there still exists some resistance among women in initiating and sustaining breastfeeding practices. Public health campaigns on the benefits of breastfeeding are in every type of media, so much that women growing up in this day and age have now adopted the slogan the "Breast is Best" (Acker, 2009). Despite the preponderance of evidence promoting breastfeeding, breastfeeding rates in the United States continue to drop and are significantly below the benchmarks set by Healthy People 2010 (NCHS, 2011).

The media's role in the promotion of breastfeeding is related to both its less than positive portrayal of breastfeeding mothers and the pharmaceutical companies' ability to entice consumers to use infant formula. Pharmaceutical companies more often have the financial backing to advertise infant formula, whereas breastfeeding advocates have limited resources to counteract these campaigns (Brown & Peuchaud, 2008). U.S. culture

is also not as accepting of breastfeeding, especially in public, as other countries may be. The culture of breastfeeding can be changed through media campaigns that provide simple and clear messages tailored for specific audiences. These messages should be targeted to expectant mothers and promote the positive health effects of breastfeeding (Brown & Peuchaud, 2008). While such data provides insight into the role media can play in tailoring breastfeeding messages for women, very little research has been conducted on the role of the media in influencing male support for breastfeeding. By studying this area, public health practitioners can gain knowledge on the types of health education campaigns that can be initiated to increase partner support of breastfeeding and increase men's understanding of his role in infant feeding.

These areas provide just a glimpse of the types of barriers that exist to women starting and continuing breastfeeding. Interventions focused on improving breastfeeding rates should consider the types of education provided to companies on supporting breastfeeding women and ways to strengthen her support system at home and on the job.

Effects of Paternal Involvement on Breastfeeding

Many studies have been conducted to show the impact that paternal involvement can have on breastfeeding initiation and duration. Tohotoa et al. (2009) found that support from others, especially fathers, were important factors in promoting breastfeeding. Specifically, fathers included in the study wanted to be more involved in the discussion or decision-making process for breastfeeding, but felt they were not adequately prepared for this role and that they had been left out of the discussion on infant feeding choice. Okon (2004) supports the findings of Tohotoa and reiterates the

importance of making the discussion on whether to choose breastfeeding more inclusive of fathers.

It is critical that men get involved in supporting their partners decision to engage in breastfeeding early in the breastfeeding process. This is particularly important following a woman's release from the hospital. In a study by Scott et al. (2001), researchers examined the breastfeeding rates and reasons for cessation prior to six months postpartum in a sample size of 1056 women (556 urban, 503 rural). Participants completed both a baseline questionnaire to identify feeding practices within the hospital and known or suspected factors associated with initiation of and continuation of breastfeeding practices, and a follow-up questionnaire on feeding practices, types of problems experienced by women during lactation process, and information on when the infant was weaned or reasons for ceasing to breastfeed prior to six months. While results showed that 87.7% (929) of participants breast-fed during their hospital stay, only 66.9% were breastfeeding at 6-weeks and 46.9% at 24-weeks (6 months) (Scott, Landers, Hughes, & Binns, 2001).

There are different ways in which men can support their partner during the breastfeeding process. In a study by Sherriff et al.(2009), men stated that they supported their partners by waking up in the middle of the night if the baby was unable to sleep, taking on domestic tasks around the house (cooking, cleaning, watching the other children, ironing, etc.), and allowing the partner to get more rest. Fathers also acted as encouragers of breastfeeding and showed empathy toward their partner's needs. Fathers however must be prepared to take on these tasks otherwise the implication that they must

increase their involvement in household chores and the care of other children in order to encourage breastfeeding may have negative consequences and subsequently have a negative impact on breastfeeding rates within the first 6 months of life (Susin & Guigliani, 2008).

Additionally, a study by Susin and Guigliani (2008) provides evidence to support the notion that fathers do impact breastfeeding rates. The study was a controlled clinical trial involving 586 mother-father-infant triads who were divided into three groups: not exposed to intervention (control group); intervention with mothers only, and intervention with both mothers and fathers (p. 387). The intervention, an educational session about breastfeeding, was provided to the mothers only and mother and father groups. One segment of the intervention included an 18-minute video on the subject of breastfeeding, which discussed various aspects of breastfeeding and made reference to the fact that fathers could provide support to breastfeeding mothers and showed images of fathers helping out with household tasks. The results of intervention showed that paternal involvement in a breastfeeding promotion program when introduced in the maternity ward does in fact increase rates of exclusive breastfeeding. Specifically, fathers in experimental group 2 who had received the intervention (postpartum advice on breastfeeding) showed a significant change in breastfeeding knowledge compared to fathers in the control and experimental group 1 (scores on the breastfeeding knowledge questionnaire were 58.3%, 19.4%, and 20.6% respectively, with p-value of 0.0001) (Susin & Guigliani, 2008). The study showed that when men are provided appropriate education on the benefits of breastfeeding for both the mother and the child, and given a

realistic picture of what to expect during the breastfeeding period, they can prove to be a vital source of encouragement to the woman. Specific interventions for men conducted during the antenatal (prenatal/pregnancy) period has shown the value added when a man is educated on the stages of breastfeeding and can more adequately support his partner.

In a study conducted by Pisacane, Constinisio, Aldinucci, D'Amora, and Constinisio (2005) researchers were able to provide evidence on the influence fathers have on promoting breastfeeding at 6-months postpartum and providing breastfeeding management support to their partner. The study involved women ($N=280$) and their partners ($N=280$) and was divided into a control and intervention group. Mothers of both groups received advice on breastfeeding, while only men in the intervention group received additional training on management of breastfeeding (Pisacane et al., 2005). The results of the study showed that mothers in the intervention group had significantly higher breastfeeding rates at 6-months than those in the control group (25% vs. 15% respectively). Furthermore, while both groups of mothers experienced issues with breastfeeding, a significantly higher proportion of women from the intervention group (128 [91%] of 140) reported receiving support and help on infant feeding from their partners (Pisacane et al., 2005).

In a second study by Susin and Guigliani (2008), researchers also used a control trial design to investigate the impact that fathers have on breastfeeding promotion rates. As in the Pisacane et al. (2005) study, there existed both a control and two intervention groups (mother-only and mother-and-father). Only mothers or both mothers and fathers from the intervention groups were exposed to the intervention, which involved an

educational session on breastfeeding, including a 18-minute video that stated WHO recommendations and benefits of breastfeeding and how fathers could support breastfeeding mothers (Susin & Guigliani, 2008). Results were similar to the Pisacane et al. (2005) study in that it showed higher rates of exclusive breastfeeding (16.5%) among the mothers-and-fathers intervention group as opposed to the mother-only intervention group (11.1%) and control group (5.7%) (Susin and Guigliani, 2008). Both studies showed that the inclusion of fathers in breastfeeding promotion interventions significantly affected cessation rates at 6-months postpartum (Pisacane et. al., 2005; Susin and Guigliani, 2008).

Paternal Involvement in Other Family Decisions

The aforementioned studies provided evidence on the role of men in making breastfeeding decision. Other studies have shown that men also play significant role in other family decisions including family planning and contraceptive use. A study by Grady, Tanfer, Billy and Lincoln-Hanson (1996) examined the perceptions of men and their roles and responsibilities in decisions of sex, contraception and childrearing. Researchers analyzed data from the 1991 National Survey of Men (NSM) and looked at the role of men in decision making on the previously stated topics and examined the individual characteristics that may affect his beliefs and perceptions on these specific topics (Grady et al., 1996). The sample included a total of 2,526 men (958 Black and 1,568 White) who were in heterosexual relationships and provided additional information on their partners during the interview portion of the study. Results were based on participant responses to five questions that measured male-oriented, female-oriented and

egalitarian oriented pattern of thinking. In relation to decisions about contraception, Black men reported a higher female-dominant (female-oriented) than White men, while 90% of all men participating in the study believed that men have a shared responsibility for children (Grady et al. 1996). This study adds to the growing body of evidence on the influence of men on topics related to the health of the woman and family and supports the idea that men can play an important role in decisions related to the care and upbringing of children, including infants.

Influencers of Male Perceptions on Breastfeeding

The decision for women to breastfeed is influenced by different ecological spheres including medical, societal, cultural circles. These factors can have both positive and negative effects on perceptions of breastfeeding forcing women to have a skewed or uncertain view about breastfeeding. Issues such as the sexual objectification of women's breast, the scrutiny women receive from public breastfeeding, lack of social support, and the inconvenience in pumping once a woman returns to work can be deterrents to the initiation and continuation of breastfeeding. While these areas have been explored in the context of how they influence women, limited research has been conducted on the how these areas guide a man in his view and thoughts about breastfeeding. Moreover, because men have been shown to impact their partners' decision to breastfeed, it is necessary that we explore his spheres of influence as well.

Cultural Factors

Disparities in breastfeeding rates among minority cultures, especially African America and Hispanics, have been shown to be affected by cultural beliefs embraced by

individuals within these communities. For example, in a quantitative study by Vaaler et al. (2011), data from the Texas sample of the 2007 Behavioral Risk Factor Surveillance System (BRFSS) survey was analyzed to examine men's attitudes toward breastfeeding. Results showed that Hispanic couples had higher breastfeeding rates than other ethnic groups. The authors postulated that these results could be partly due to Hispanic gender-role identification (Vaaler et al., 2011). In particular, Hispanic men who participated in the study viewed women as being in charge of children's health and domestic tasks, while the male is responsible for the financial outlook for the family (Vaaler et al., 2011). In contrast, a qualitative study on partner perceptions on breastfeeding conducted in London, England and undertaken by Okon (2004) found that men of different ethnic backgrounds (Nigerian, Jamaican, Black British, Philippino, British, Turkish and Morrocan) felt that breastfeeding was a gender-defined role and that men were to act as a way of support and the protector of the offspring (pp. 389).

As noted by Battersby (n.d.) various cultural perceptions related to the woman's breast can inhibit breastfeeding as well. Western culture views the female breast as a sexual object. As a result of this sexualization, both men and women may view breastfeeding as "primitive and crude" (Battersby, n.d., p. 208). Women may feel conflicted in their choice to breastfeed since society has conditioned them to think of their breast as sexual objects. They may also feel that breastfeeding will cause their breast to be seen as unattractive (Johnston-Robledo, Wares, Fricker, & Pasek, 2007).

Messages From the Media

The media presents another area of interest when understanding factors that effects breastfeeding initiation and duration. In relation to the socio-ecological model, the media is presented in level four (societal) as it has the ability influence on a mother's breastfeeding decision. Specifically, studies have examined how the media influences a woman's attitudes toward breastfeeding in public places and male views about the female breast (Henderson et al., 2011). Messages from the media (i.e., magazines and TV ads) have been shown to promote the sexual objectification of women and the thought that a woman's breast are for her partner (Johnston-Robledo et al., 2007). Henderson et al. (2011) placed attention on this very issue when they conducted a qualitative study using five focus groups to delve further into the issue of cultural associations and beliefs about infant feeding practices. A portion of the knowledge gained from this research discussed the effects the media can have on a father's perceptions of breastfeeding to include portrayal of a woman's breast as a sexual object. Additionally, the media has promoted breastfeeding as being primarily for middle class women and bottle or formula feeding as being for ordinary families (Henderson et al., 2011).

Research by Ward, Merriweather, and Caruthers (2006) provides additional evidence of the effects that media can have on male beliefs particularly its connection to masculine ideology and how this may influence their perceptions about female reproductive functions (i.e., childbirth and breastfeeding). In this study, 656 college males between the ages of 17-27 were surveyed to determine whether media load, defined as identification with popular male TV characters and frequency of reading male

magazines, had any effect on their acceptance of traditional masculine ideology and whether this in turn affects their views on breastfeeding and childbirth. Results showed that men who have related more to male TV characters and read more male magazines viewed breast in a more sexual manner (Ward et al., 2006). Knowledge gained from this study also helps us understand why some women may not want to breastfeed in public since society views their breast as something to be enjoyed by men rather than a source of nutrition for infants (Battersby, n.d.).

Barriers to Male Partner Support for Breastfeeding

There exist many studies that provide understanding on the various cultural and societal aspects that may influence a woman's choice to breastfeed. While the information provided in these studies shed additional light on the process for breastfeeding initiation and duration, other research is needed to increase our knowledge on the individual, cultural and social determinants that may influence a man's ability to promote breastfeeding and support his partner in her decision to breastfeed. Such factors as lack of breastfeeding knowledge, the formation of gender-roles, and masculine identity are but a few areas that will be explored as possible influencers.

Lack of Breastfeeding Knowledge

Rempel and Rempel (2004) found that fathers of breast-fed babies were knowledgeable about the benefits of breastfeeding as compared to fathers of bottle or formula fed infants. This study was not able to identify where the father received his knowledge on breastfeeding or whether the father's knowledge was a reflection of his partner's knowledge and beliefs. Shaker, Scott, and Reid (2003) also found that mothers

and fathers of breastfeed infants were more knowledgeable about the nutritional value of breast milk, compared to parents of formula fed infants.

Additionally, Tohotoa et al. (2009) noted that fathers feel less knowledgeable about breastfeeding than their partners. This gives way to the need to focus more time and attention on educating men about the benefits of breastfeeding in order to garner their support. Sherriff et al. (2009) found that although fathers understood that breastfeeding was the best choice for their child, information on breastfeeding was not discussed during antenatal care nor was it covered fully during antenatal classes. Some men also felt that there was limited literature available to educate them on the breastfeeding process (Sherriff et al., 2009).

The Sherriff et al. (2009) study also brought to light the need for health care providers to explain the realities of breastfeeding to the father and what the process would be like during the postpartum period. Most fathers do not understand the difficulties their partners may experience trying to breastfeed. They may also feel like they are not able to connect to the baby or that breastfeeding separates them from their significant other (Sherriff et al., 2009).

Gender Roles: Masculinity and Traditional Female Roles

Although much is known about the positive affect that men can have on breastfeeding initiation and duration rates, many barriers still exist to prohibit fathers from actively engaging in the breastfeeding process or providing support to their partners. Current research has shown that one barrier to paternal involvement and breastfeeding is the father's adherence or acceptance of traditional gender-roles for both men and women.

As revealed by Ward et al. (2006), men who held traditional views of masculine ideology also had a less positive view of the reproductive function of a woman's body to include childbirth and breastfeeding. In this study, 656 undergraduate males ages 17-27 who were attending a large Midwestern university in the United States participated in research that examined whether traditional masculine identity (MI) and dominant media content identified men as sexual agents and sexually objectified women and their bodies (Ward et al., 2006). The study measured media exposure, media involvement, gender ideologies and reproductive body attitudes. Gender ideologies were measured using two scales – Attitudes toward Women Scale for Adolescents and a comprehensive measure of Attitudes about Dating and Sexual Relationships- while reproductive body attitudes focused on breastfeeding and childbirth (Ward et al., 2006). The regression analysis conducted showed that men's masculinity ideology was strongly correlated with men's beliefs of breastfeeding and childbirth. Overall, not only was a traditional belief about gender associated with negative attitudes toward childbirth, but also less support of breastfeeding (in public) and the idea that breastfeeding interfered with marital/sexual relationships (Ward et al., 2006).

In the Ward et al. (2006) article, we begin to see a connection between traditional masculinity ideology and its connection to male perspectives on the reproductive functions of a woman's body including breastfeeding. Other research can provide insight on how men of different racial backgrounds form their ideas around gender roles and who influences these attitudes. One such article by Blee & Tickmayer (1995) identified differences among AA and White men in their formulation of female gender roles. Using

linked mother-son files from the National Longitudinal Surveys from the mid-1960s to 1981, researchers were able to identify characteristics that (a) influence attitudes about women gender roles, (b) determine how these attitudes change over time, and (c) maternal and life-course influencers of these attitudes (Blee & Tickmayer, 1995). Past research has not shown much difference between AA and White males and their attitudes toward gender roles. Instead, research has shown that AA and White males show difference in attitudes about masculinity and marriage, but share similar thoughts on domestic work (household labor) and a woman's role within the context of the family (Blee & Tickmayer, 1995).

Results from the Blee and Tickmayer (1995) study showed that for AA males, income and education did not influence their attitude about gender roles. AA males were also more liberal in their attitudes about their wives working outside the home. This could possibly be related to the fact that they grew up in a household with a working wife/mother (Blee & Tickmayer, 1995). Additionally, maternal influence did not prove to be of any significance in men establishing attitudes about gender roles. While the Blee and Tickmayer (1995) article provides limited information on differences in masculinity ideology between AA and White males, it does however provide information on additional areas of research that need to be explored in order to identify the levels or types of influencers of a man's masculinity ideology and how such perspectives are formed.

Masculine Identity

The construction of a man's concept of masculinity is often affected by both social and cultural factors experienced in his everyday life. Gender-stereotypes are constructed by society and are viewed as roles and characteristics that are typically categorized as being feminine or masculine (Courtenay, 2000). Men's attitudes toward gender-roles are subjected to both generational beliefs on a "woman's place" and the attitudes about the ingredients for true manhood. Furthermore ideas on gender identity are also formed through one's participation in social practices (Paechter, 2003 and Wenger, 1998 as cited in Creighton & Oliffe, 2010) and influences by the collective environment. Abreu, Goodyear, Campos and Newcomb (2000) stated that traditional masculinity ideology is developed as boys and then internalized by men through one's exposure to cultural norms and beliefs about "appropriate" male behaviors identified by families, relational groups and society (p. 75).

There is no mistake that men and women fall prey to the social definitions of proper gender-roles and that these ideas guide their decisions on other issues such as health and well-being, and in this case breastfeeding decisions. As men conform to the stereotypical ideas of masculinity, this then influences their thinking about certain health beliefs and can impact their decision to take on unhealthy behaviors (Courtenay, 2000). A system that adopts the idea of women as the "weaker sex" and men as being stronger and more independent embodies the notion of power and perpetuates that thought of inequality among the sexes. Power is also established through the practice of health behavior and the "systematic subordination of women and lower-status men – or

patriarchy” (Courtenay, 2000, p. 1388). Men are then able to demonstrate male dominance or masculine characteristics that position them as true males. The idea of hegemonic masculinity, the socially dominant gender construction which shows women as being inferior to men, is characteristic of “heterosexual, highly educated, European American men of upper-class and economic status” (Courtenay, 2000, p. 1388).

Creighton and Oliffe (2010) posit that masculine identity also plays a role in male health behavior. Specifically, the construction of masculinity and its effects on men’s health have been researched as primary reasons for men’s participation in risky behavior leading to the high rates of morbidity and mortality within this group. Biology has normally been viewed as a significant contributor to the development of masculinity with biological sex as a central determinant of health behaviors (Connell & Messerschmidt, 2005 as cited in Creighton & Oliffe, 2010). However, during the 20th century this mindset shifted to a focus on theories of gender, sex role socialization and the role of gender norms adopted by society as common roles and practices seen in men and women. These practices include the idea of women in the position of wife and mother being the leader in caretaking for both men and children (Lee & Owens, 2002 as cited in Creighton & Oliffe, 2010), and men taking on the role as breadwinner (Scholfield et al., 2000 as cited in Creighton & Oliffe, 2010). The social construction of masculinity embodied the ideas of culture and social class and led to additional research on hegemonic masculinity.

Hegemonic masculinity. One theory of masculinity was developed by Raewyn Connell who along with his Australian colleagues studied the idea of masculinity from a feminist perspective. One of the main concepts of Connell’s theory of masculinity is the

idea of hegemonic masculinity (Wedgwood, 2009). Hegemonic masculinity focuses on three forms of masculine power: domination, subordination, and oppression (Moller, 2007). Hegemonic masculinity is also noted as the more commonly accepted and popular idea of masculinity and the patriarchal relationships between men and women (Gorman-Murray, 2008).

As it relates to the home and domestic roles, hegemonic masculinity views men as the “bread winners” and “master of the house” (Chapman, 2004 as seen in Gorman-Murray, 2008). The home is often viewed as a feminine site whereas Gorman-Murray (2008) has distinguished it as a place that can reconfigure masculinities influencing the construction on masculine domesticities and domestic masculinities. Gorman-Murray (2008) discusses three types of interrelationships between masculinity and the home – hetero-masculine, bachelor, and gay domesticities. For purposes of this research, we will only discuss hetero-domesticities.

Hetero-domesticities was originally viewed as being absent of the understanding of the females place in the home. It originally held to the idea of “a man’s place being his castle” and a woman purpose to serve her husband when he returned home (Gorman-Murray, 2008). As this concept was examined against the changing role of family during the Victorian era, a new philosophy emerged noting that just as women are attentive to men when they come home, men also are to be attentive to the needs of their wife. Additionally, the idea of fathers and their connection to children’s emotional and social needs (Tosh, 1999 as cited in Gorman-Murray, 2008).

Religion and masculinity. Religion or spiritual beliefs are viewed as another domain having influence over a man's masculine identity and his understanding of gender roles. Feminist scholars have examined what they view as a patriarchal understanding of masculinity, defined by current culture and society as embracing male dominance and supremacy, with sexism, misogyny and homophobia being central components of this mindset (Neal, 2011). Neal (2011) notes that AA men in particular have been identified as not only encompassing these traits, but also having it being promoted or connected to their masculinity. This critique of their male identity came as a result of feminist critique of the American masculinity and provides only a small view of how AA masculinity has been developed through a social lens. The patriarchal view of masculinity is shaped by both religion and cultural factors. Neal (2011) labels this type of masculinity as Abrahamic masculinity since it adopts the characteristics of the biblical figure, Abraham, who was the father of the nation of Israel. The tradition of Abrahamic masculinity is inclusive of servants, a subordinate wife and relatives and rest in the idea that such behavior is ordained or sanctioned by God (Neal, 2011). This type of masculinity is oftentimes promoted in the black community through pastors, bishops and religious institutes (Neal, 2011).

The idea of "Godly manhood" has also been promoted by the Promise Keepers (PK), a non-denominational, Christian organization whose main purpose is to bring men to Christ. One of the leaders of PK, Edwin Louis Cole, promoted the idea of instrumentalist masculinity, which embraces the idea of women having a natural ability for nurturance, while manhood is defined as "aggression, strength and rationality"

(Bartowski, 2000, p. 36). This idea readily associates with the Abrahamic masculinity since it is characterized by female subordination or subservience and male domination or superiority. On the other hand, Gary Oliver, another leader of the Promise Keepers, adopts the idea of expressive masculinity, noting that masculinity does not embrace the traits more socially accepted as being inherently male specific (i.e., stoicism, bravery, insatiable sex drive, etc.). Instead, this masculinity argues the concept of real masculinity teaches men “how to be human, how to feel, how to love, how to be better fathers, husbands and friends” (Bartowski, 2000, p. 37). This new view of masculinity as seen through the lens of expressive masculinity offers an opportunity for us to redefine manhood and dispel the idea of gender specific characteristics.

Theories Associated with Paternal Involvement

In the past, research on breastfeeding initiation and duration has focused on understanding the individual issues that prevent women from breastfeeding. Researchers have often conducted studies to examine personal factors such as socioeconomic (i.e., maternal level of education) and socio-demographic characteristics that can influence a woman’s decision to breastfeed (Hector, 2005). Moreover, research on breastfeeding has not used a conceptual framework to identify other external factors (i.e., environmental [family, work, and community], and societal [i.e., cultural norms, role of men and women in society, and sexuality]) that may predict a woman’s ability to breastfeed (Hector, 2005). There is a need to look at the issue of breastfeeding initiation and duration from an ecological perspective in order to take into account additional predictors of breastfeeding, especially for AA women, since they continue to have lower breastfeeding

rates. These additional factors can help determine the types of interventions to create in order to strengthen breastfeeding practice within this population. Research that continues to look at individual maternal factors that prevent breastfeeding will not have a full picture of other stressors that can negatively influence this behavior. The following section examines three theories that can provide insight on how environmental and societal factors influence breastfeeding decisions.

Social Cognitive (Learning) Theory

The SCT formerly the social learning theory uses an ecological approach to understand behavior change. Specifically, the SCT states that behavior change occurs based on three reciprocal factors: behavior, personal factors, and outside events (Schiavo, 2009). The theory was developed by Albert Bandura and specifically focuses how people learn. The theory, which was originally known as the social learning theory, discusses how people learn through the observation of one another's behaviors, attitudes and the outcomes of those behaviors.

Bandura (2002) states that SCT adopts an “argentic perspective to human development” (p.270), whereby three types of agency are examined – personal, proxy, and collective agency. An agent affects how one may function and their life circumstances (Bandura, 2002). The SCT can help researchers improve their understanding of the behavior (breastfeeding), personal factors (cultural beliefs, masculine ideology) and outside events (media and antenatal education/knowledge) that can determine his perceptions on breastfeeding.

Breastfeeding Self-Efficacy Theory

In order to test the social cognitive theory (SCT) construct of self-efficacy, a new theory - breastfeeding self-efficacy theory (BSET) - was created to determine the correlation between a woman's perceived self-confidence to breastfeed (Pollard, Guill, Hanover & Medical, n.d.). The breastfeeding self-efficacy theory was developed by Dr. Cindy Lee Dennis as a way to examine a mother's breastfeeding confidence and her ability to breastfeed her infant. The theory incorporates elements of Bandura's SCT, most notably the construct of self-efficacy. The BSET predicts (a) a woman's choice to breastfeed, (b) effort she will expend (to breastfeed), (c) self-enhancing and self-defeating thought patterns, and (d) her response to breastfeeding (Dennis, 2010).

In their study to examine the self-efficacy (breastfeeding confidence) of women in North Carolina, Pollard et al. (n.d.) employed the use of the Breastfeeding Self-Efficacy Scale (BSES). Results of the study showed a positive correlation between self-efficacy and breastfeeding duration, specifically mothers that scored higher on the BSES breastfed longer (Pollard et al., n.d.).

Theory of Gender and Power

The theory of gender and power was developed by Robert Connell as a way of examining sexual inequities as well as gender and power imbalances (Wingood & DiClemente, 2000). There are three main constructs to TGP: sexual division of labor (SDL), sexual division of power (SDP) and the structure of affective attachments and social norms (SAASN). The theory was used by Wingood and DiClemente (2000) in their research on social and biological factors that increase AA females' exposure to

HIV/AIDS and again by DePadilla, Windle, Wingood, Cooper, and DiClemente (2011) to examine the relationship of condom usage in AA adolescent females. In the second study, researcher used the constructs of the TGP (i.e., SDL, SDP, and SAASN) to define domains of risk associated with HIV. The domains were further analyzed as either being an acquired risk or a risk factor. One important thing to note is that the acquired risks associated with SAASN were viewed as social risk, to include the promotion or enforcement of gender norms (DePadilla et al., 2011).

The foundation for the TGP comes from Connell's original research that helped create the concept of hegemonic masculinity. In this research that occurred over two decades ago, Connell discussed the relationship of masculinities and male bodies, which gave way to additional thinking on males sex roles (Connell & Messerschmidt, 2005). There were many concepts that gave way to Connell's idea of hegemonic masculinity, including feminist theories of patriarchy, the gay liberation movement, empirical research studies on gender hierarchy, as well as ideas developed by psychoanalyst on the gender identity (Connell & Messerschmidt, 2005). The concept of hegemonic masculinity has been used in research on criminology, boys and bullying, media representation of men and more recently in understanding men's health practices (Connell & Messerschmidt, 2005). The interconnectedness of the concept of hegemonic masculinity and men's health is explored in Courtenay's study on masculinities and men health.

Courtenay (2000) examined the role that masculinity influences how men address their health needs and the societal gender norms placed on men and women. In particular, Courtenay (2000) notes the various gender stereotypes created by society that

has determined what characteristics and roles are exclusively associated with women and those associated with men. This research notes that health-related beliefs help to define one's masculinity. Men then take on unhealthy behaviors because they equate it to a demonstration of their masculinity (Courtenay, 2000). For example, if a man states that he hasn't been to the doctor or takes infrequent sick leave, he is "situating himself in the masculine arena" (Courtenay, 2000, p. 1389). Additionally, men are not to take on duties that may identify him as being too feminine (i.e., cooking, baking, and sewing). More positive health beliefs and even the utilization of health care are seen as feminine behavior (Courtenay, 2000). Furthermore, Courtenay (2000) notes that men who take on health promoting behavior could possibly reduce his status among other males. It stands to reason then, that if a man prefers breastfeeding (a positive health belief) as the feeding method of choice for his child, he could potentially be viewed as taking on feminine characteristics or responsibilities since women are seen as being the health conscious individual.

Theory of Planned Behavior

Many theories are associated with improving our understanding of breastfeeding initiation and duration has often analyzed this issue by focusing solely on the woman and her intentions to breastfeed. One particular theory that tries to make the connection from research to practice is the Theory of Planned Behavior which some researchers have used to delve into the topic of breastfeeding. The Theory of Planned Behavior (TBP) was developed by Icek Ajzen and can be understood as an extension of the theory of reasoned action. The TBP is based on three concepts-- behavioral beliefs, normative beliefs and

control beliefs--used to understand human behavior. Behavioral beliefs can produce either a positive or negative attitude toward the behavior; normative beliefs are the results of social pressures (subjective norms) and control beliefs are connected to perceived behavioral control (Ajzen, 2006, p. 1). Additionally, both the theory of planned behavior and theory of reasoned actions captures the idea of intentions as a central factor in predicting the intended behavior. Intentions can be viewed as the “motivational factors that influence behavior” (Ajzen, 1991, p. 181) and indicates the level of effort or amount of energy a person is willing to exert in order to perform a particular behavior.

A central construct of the TPB is the idea of perceived behavior control (PBC), which helps one understand the cognitive avenue taken by an individual to perform a particular task or behavior (McMillan et al., 2008). The TPB has been used in numerous studies to examine the intentions of women on breastfeeding duration. One such study by McMillan et al. (2008) focused on the three additional determinants of breastfeeding intention – DN, moral norms, and self-identity - and behavior among women who experienced economic hardship. Moral norms are viewed as “personal feelings of responsibility”; DN is connected to cultural influences, while self-identity is “characteristics that people ascribe to themselves” (McMillan et al., 2008, p. 771). Results of the study showed that DN (cultural influences) was a high predictor of breastfeeding rates at 10 days while PBC was seen as a predictor of breastfeeding at 6 weeks. Additionally, DN, moral norms and PBC were seen as predictive factors later in breastfeeding (McMillan et al., 2008).

A study by Swanson & Power (2005) looked at the power of subjective norms (SN) and its influence on a woman's decision to breastfeed. The theory of planned behavior defines subjective norms as "perceived social pressures to perform or not to perform a behavior" (Ajzen, 1991 as seen in McMillan et al., 2008 and Swanson & Power, 2005). While McMillan et al. (2008) and other studies found SN to show little significance in breastfeeding intention, the Swanson & Power (2005) study found that breast feeders reported significantly more positive breastfeeding norms as compared to bottle feeders. When analyzing social referents, breast feeders/combined feeders social norms had significantly more agreement with the social norms expressed by either their partner, own mother (maternal grandmother), close female friends, and midwives/nurses in comparison to bottle feeders (Swanson & Power, 2005).

When interpreting the result of both the Swanson & Power (2005) and McMillan et al. (2008) studies and relating it to the current study on the spheres of influence for men, one can infer that when the TPB model is used DN (cultural norms), self-identity (i.e., masculine ideology), and subjective norms can be positive predictors of how a man creates his perceptions on breastfeeding.

Ecological Approach

The ecological approach is based on the human ecology model, created by Urie Bronfenbrenner. The human ecology model was created to examine the three types of systems that aide in human development. Bronfenbrenner proposed that there is a relationship between an organism and its environment (Bronfenbrenner, 1977). The model was originally created to examine the influence that certain systems had on child

development. Specifically, the model looked at the microsystems (family, school, peer groups), mesosystems (external systems) (relationships between home and school, school and workplace), exosystems (i.e., parent's world of work, social networks, and their communities) impact on development and macrosystems which looks at the interconnectedness between the micro-, meso-, and exosystem including culture, customs and belief systems (Tiedje et al., 2002; Bronfenbrenner, 1994). Bronfenbrenner (1994) added a fifth layer, the chronosystem, which involves changes over time that involves the not only the person, but their surrounding environment (e.g., changes over the life course to include family structure, place of residence, socioeconomic status). These things are now considered social determinants of health and have a large impact on a person's ability to thrive in their environment. The use of the ecological model to examine breastfeeding rates is then used to look at how a woman's environment influences her decision to initiate and continue breastfeeding. This same model can be applied to male decision making in supporting or promoting breastfeeding for his partner.

A study by Tiedje et al. (2002) tested the appropriateness of using the human ecological model to examine breastfeeding by creating a priori categories that looked at both the meso- and exosystems that can exert influence on the family (i.e., mother/infant, family health care delivery system, community, and society/culture). In this study, ninety-five women were recruited to participate in a telephone interview to gather data on (a) incidence of breastfeeding during first week, (b) preparedness for feeding, and (c) and an open-ended question on topics women may have wanted more information about (Tiedje et al., 2002). Results from the interview data analysis showed that comments

received from the mothers fit into the predetermined categories with four themes emerging under the mother-infant dyad category (information, illness/medical conditions, milk supply, and maternal characteristics), social support needed for breastfeeding, and the use of community resources for breastfeeding support (Tiedje et al., 2002). There was mixed responses (positive and negative) about the support received from health care providers and few, if any, responses related to cultural/societal influences. Overall, the study showed that the human ecology model is an appropriate framework for examining breastfeeding rates and future efforts to increase these rates should focus on the many outside or environmental factors that can have a layered effect on breastfeeding duration (Tiedje et al., 2002).

The ecological approach to health has not only been used in examining breastfeeding, but also in understanding other health disparities as well. In an article by Alio et al. (2009), researchers examined factors contributing to the disparities in infant mortality most notably between Blacks and Whites through a socio-ecological and historical lens. By using the socio-ecological model, Alio et al. (2009) believed that one could understand fetal and infant mortality by acknowledging the various factors that connect with one another to influence this negative outcome. These factors fall into three categories - infant, parental, and community and represent the micro-, meso-, and exosystems outlined by Bronfenbrenner (1994). In terms of behavioral and family characteristics contributing to fetal and infant mortality, researchers have suggested that both gender issues and the absence of a supportive partner play a critical role in alleviating high stress levels experienced by black mothers.

Conclusion

In this chapter, the factors that effect a man's perception and acceptance of breastfeeding were explored. Through this literature review, three primary factors were identified. These factors included the media, masculinity ideology, and cultural beliefs. Henderson et al. (2011) found that the media not only promotes the female breast as a sexual object, but it also associates breastfeeding with middle-classed women. Ward et al. (2006) also found that media load affected a man's concept of association with traditional masculine ideological views, which in turn negatively influenced their acceptance of female reproductive functions such as breastfeeding. Cultural factors associated with breastfeeding acceptance among men included body image (distortion of breast following breastfeeding) and gender-role identification. In particular, Hispanic men felt women were the primary caretakers of the children and home, while the men were responsible for the household finances (Vaaler et al., 2011). There is a need to continue research on how men form ideas bout masculinity and how this can potentially affect their adoption of healthy behaviors for themselves and their families (Courtenay, 2000).

A theoretical framework yet to be explored is the social ecological framework for breastfeeding and how it can help researchers understand the spheres of influence on male perceptions and attitudes of breastfeeding. This framework has been explored by Bentley, Dee, and Jenson (2003) to determine specific environmental and social factors that impact a woman's beliefs about breastfeeding. Such research has determined that factors such as the media, family and friends, health care providers, and the workplace

can determine if a woman will choose to initiate or continue breastfeeding (Bentley, Dee, & Jenson, 2003). Similar influencers (e.g., media, social networks, and culture) have been shown to affect male attitudes toward breastfeeding. It stands to reason then that the social ecological framework may work as a potential guide to provide a better understanding of the types of interventions that need to be developed in order to help men support their breastfeeding partner.

After exploring these primary influencers of male perceptions and acceptance of breastfeeding, it is clear that more research is needed to understand how these perceptions are developed and whether masculine ideology and gender-role identification can affect father support of breastfeeding initiation and duration.

Chapter 3 includes an overview of the methods that will be used for the study. The chapter will provide information on the data to be collected, survey instruments that will be used, process for selecting participants, and process for conducting the focus groups. Chapter 3 will also include information on how and why the survey tools were chosen and connect the focus group questions with the proposed research questions for the study.

Chapter 3: Research Method

This chapter is a description of the methodology for the study. The first section of this chapter provides a description of the mixed methods design including an overview of the concurrent triangulation approach. This process was used to test the primary questions of the influence of sociocultural beliefs (norms), masculinity ideology, and peer influence on the breastfeeding perceptions and attitudes of AA males. Following the overview of the research design, information is provided on the research questions examined and hypothesis for each. Included in the next section are details of the role of the researcher, population of study, sample size, sampling procedures, instrumentation, and data collection tools. The section is divided into specific areas for the quantitative and qualitative questions that were answered through this research. The final sections of this chapter contain details on the process used for analyzing the data as well as an overview of the ethical and human subject considerations for this study.

Setting of Study

The quantitative portion of the study was conducted online. I identified several community organizations that agreed to participate in the study (see Appendix C and Appendix D). These organizations included two non-profits and four churches located in Washington D.C. and Maryland. Their names are listed in the Table 1 below.

Table 1

List of Partner/Community Organizations Participating in Study

Name of Organization	Organization Type	Location
Men Aiming Higher Inc.	Non-profit	Bowie, Maryland
The East of the River Clergy Police Community Partnership Inc.	Non-profit	Washington, D.C.
The New United Baptist Church	Faith-based	Washington, D.C.
Community Bible Baptist Church	Faith-based	New Carrollton, Maryland
Norbeck Community Church	Faith-based	Silver Spring, Maryland
Spirit of Christ Baptist Church*	Faith-based	Forestville, Maryland

*I am a member of this church.

The administrator for each organization sent a study invitation (see Appendix H) via email to potential participants using their organization's membership database or listserv. Potential study participants were asked to complete a web-based, self-administered electronic survey that included questions that helped me determine the participants' attitudes toward breastfeeding and their masculinity ideology. As part of the online survey, participants were also asked to complete a series of demographic questions (i.e., age, educational level, income, relationship status, child status, and breastfeeding status of spouse/significant other), which were used to conduct additional analysis on areas that may influence breastfeeding attitudes. Participants were able to complete the electronic (online) survey from their own personal computer. I chose to conduct the survey online rather than in person to allow for the highest level of anonymity in completing the survey. Additionally, an online survey allowed the participants to

complete the questionnaire at their leisure without the presence or influence of the researcher.

The qualitative part of the study involved three focus group (FG) sessions with at least five participants each (FG 1 = six participants; FG 2 = six participants; FG 3 = five participants). A total of 17 men participated in the focus groups sessions. Focus group participants were recruited through the same organizations that partnered with me to conduct the quantitative portion of the study. The administrator for each organization used the same process as with the online survey and sent an invitation (see Appendix J) to potential participants about the focus group. The email included my contact information so potential participants could contact me directly if they wanted to volunteer for one of the focus group sessions. Individuals who contact me were then provided additional information on the proposed dates for the focus group sessions. Additionally, the focus group sessions were held at a neutral location (i.e., conference room at the local library). This allowed for anonymity and provided the participants a neutral place where they were free to share their opinions about breastfeeding without judgment. In one case, the FG session was held at the site of one of the partner organizations (Spirit of Christ Baptist Church) where six of the participants were recruited for the study.

Research Design and Rationale

The intent of this concurrent mixed methods study was to understand the effects of masculinity ideology, sociocultural beliefs (norms), peer influences, and the media on breastfeeding perceptions and attitudes. The triangulation not only included an analysis

of both quantitative and qualitative data, but also a review of the literature on the topics of breastfeeding and masculinity ideology (see Figure 3 below).

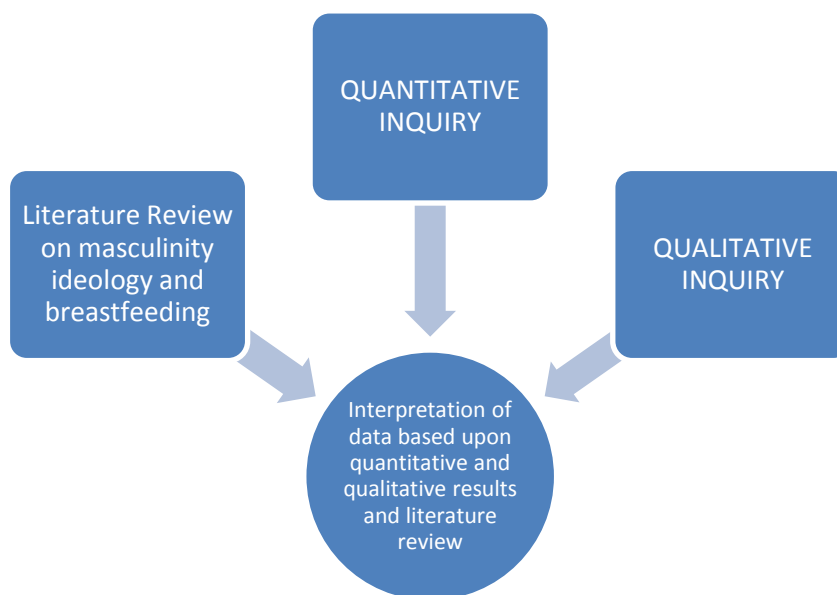


Figure 3. Concurrent Triangulation Design

For this study, an online survey was used to collect data that could be used to measure the relationship between masculinity ideology and breastfeeding perceptions and attitudes. At the same time, sociocultural (beliefs) norms, ideas from the media, and peer influences were explored using focus groups with AA males ages 18 and older. The purpose for combining both quantitative and qualitative data was to better understand the problem by triangulating trends from the quantitative research and rich detail from the qualitative research (Creswell, 2009, p. 121). Data collected through the combined process were used to show cross-validation of the results gathered from each method. In this manner, I was able to understand what type of masculinity ideology (traditional vs. nontraditional) impacted AA male perceptions and was able to explain those results further through the three follow-up focus group sessions with selected participants. The

dependent variables in this study are breastfeeding perceptions and attitudes, and the independent variable is masculinity ideology. This data was collected through the use of two survey instruments and a focus group protocol that are described further in the Instrumentation and Materials section of this chapter.

Research Questions and Hypotheses

The research questions for this study were divided into quantitative and qualitative sections. The primary quantitative question was whether African American male perceptions of breastfeeding are influenced by their type of masculinity ideology (traditional vs. nontraditional). Additional quantitative questions were used to explore whether masculinity ideology influenced spousal/partner's breastfeeding behavior.

Quantitative Research Questions

1. Is male masculinity ideology associated with attitudes on breastfeeding among AA men?

H_0 1: There is no relationship between a man's masculinity ideology and his attitude on breastfeeding.

H_a 1: There is a negative relationship between a man's masculinity ideology and his attitudes on breastfeeding.

2. Is there a difference in breastfeeding attitudes between men who hold a traditional view of masculinity ideology and men who hold a non-traditional view?

H_01 : There is no difference in attitudes toward breastfeeding between men who hold a traditional view of masculinity ideology and men with a nontraditional view.

H_a1 : Men who hold a traditional view of masculinity ideology will have a negative attitude toward breastfeeding, while men with a nontraditional view will have a positive attitude toward breastfeeding.

3. Is masculinity ideology associated with spouse/partner breastfeeding behaviors among AA men?

H_01 : There is no association between masculine ideology and infant feeding behaviors.

H_a1 : There is a positive association between masculine ideology and infant feeding.

In the qualitative portion of the study, I focused on gathering descriptive data that could provide additional information on how perceptions and attitudes about breastfeeding are formed, including issues of sociocultural norms and beliefs.

Qualitative Research Question

1. What are the sociocultural factors that influence AA men's perceptions of breastfeeding?

Role of the Researcher

In the quantitative part of the study, I administered a questionnaire that combined two validated tools (i.e., Iowa Infant Feeding Attitudes Scale and Male Role Norms Scale). I chose these tools because one was used to measure breastfeeding attitudes while

the other was used to measure masculinity ideology. The instruments were pilot tested in the online survey format to (a) determine the length of time it would take to complete them electronically and (b) to assess the validity and reliability of the combined tools. I was also responsible for gaining IRB approval of the research proposal, partnering with organizations to request permission to use their membership databases or listservs to distribute the survey tool, and collecting data. Informed consent was a part of the online survey and was received and confirmed electronically. The opening page of the survey included information on informed consent (see Appendix F and Appendix I). When participants reviewed the online consent form and checked “yes” for the last two questions, they were redirected to the site for the online questionnaire. When participants answered “no” to either of the last two questions, they were redirected to a “Thank you” page and were not allowed to access the survey.

During the qualitative part of the study, I was responsible for collecting and analyzing the data. This included conducting the focus group sessions and recording notes. Prior to data collection, I identified all personal biases, values, and assumptions. I also determined whether such issues were detrimental to the quality of the study. I provided participants, including participating organizations, with information on my qualifications in conducting the study.

I was also responsible for facilitating the focus group sessions, developing the facilitator’s guide, keeping a record of the recorded information received during the focus group sessions, transcribing the notes, conducting any follow-up meetings, sending a transcript of the session to participants (if requested), and reporting findings in aggregate

form to participants. The participants in this study were from several organizations in the DC/MD/VA area. Although I was affiliated with one of the organizations (Spirit of Christ Baptist Church), I did not have direct association with any of the individuals who chose to participate in the study. I was therefore able to conduct the study without influencing the results of the survey or thoughts presented during the focus group sessions.

Overall, my primary role as researcher was to be responsible for ensuring that the human rights of individuals who participated in the study were not violated in any way. I examined the codes of conduct used during this study and ensured that participants understood the type of research they were agreeing to participate in and understood their right to end their participation at any time.

Methodology

Population of Study

African American men, ages 18 and older, residing in the Washington metropolitan area (including the District of Columbia, Maryland, and Virginia) were eligible to participate in the study. The study used nonprobability sampling, specifically convenience sampling, to gather eligible participants. The specific technique used was snowball sampling, which is a process of chain referral.

The population was drawn from a sampling pool of men from various organizations including professional groups, local community groups, and churches. Email requests (see Appendix A) were sent to a list of organizations in the DC/MD/VA areas that provided services to men or who had men as part of their membership. The

email requests included an overview of the study and my contact information. The initial email request was found to be too technical and therefore a revised email request (see Appendix B) was sent to solicit partners for the study. Those organizations whose administrators approved them to participate in the study completed and submitted a letter of cooperation stating their interest in supporting the project (see Appendix C and Appendix D). This process yielded several community organizations that showed an interest in assisting with the study (see Table 1).

Initial recruitment of participants occurred using the membership databases and listservs of the organizations who agreed to participate in the study. An invitation email with the link to the survey already included was sent to the participating organizations. The organizations then sent the invitation email to persons in their membership database or listserv. Based on the number of responses received for the online survey, I determined that additional participants were needed.

I requested several modifications to the IRB application (e.g., change in procedure) to solicit additional organizations for the study and to forward information to participants I felt were eligible to participate in the study. Information on the changes requested for the IRB applications are included in the Quantitative section of this chapter. Additionally, the organizations that assisted in recruiting participants for the online survey agreed to recruit participants for the focus group portion of this study. More information on this process is provided in the Quantitative and Qualitative sections of this chapter.

Sample Size of Study

To determine sample size for the quantitative phase of the study, I determined the statistical power, alpha, and effect size needed for the study results to be significant (Burkholder, 2009). Because there were two instruments being used for the electronic online survey, I first reviewed what previous researchers used to calculate sample size. The Iowa Infant Feeding Attitudes Scale (IIFAS) was used by Shaker et al. (2003) to determine infant feeding attitudes of expectant parents (both men and women) and used a sample size (N) of 108 couples (108 men and 108 women). Cronbach's alpha was calculated at $\geq .85$ and based on research by De la Mora, Russell, Dungy, Losch, and Dusdieker (1999).

In the original study De la Mora et al. (1999) analyzed the reliability and validity of the IIFAS and conducted three studies using the following sample sizes: Study 1 $n = 125$ postpartum women; Study 2 $n = 130$ postpartum women; and Study 3 $n = 725$ women who had initiated breastfeeding prior to leaving the hospital. The studies also had the following alphas (α): Study 1 $\alpha = .86$ to $.85$; Study 2 $\alpha = .86$; and Study 3 $\alpha = .68$ (De la Mora et al., 1999). Because the responses from Study 3 were shown to be less reliable than those in Study 1 and Study 2, when conducting analysis for the reliability of the IIFAS I looked for an alpha of $.85$.

The standard deviations (SD) and means (M) for each study were divided into two categories: women who planned to breastfeed (positive attitude) and women who planned on exclusive formula-feeding (negative attitude) (Study 1: $M = 64.84$, $SD = 8.22$ and $M =$

48.61, $SD = 6.96$ respectively; Study 2: $M = 65.61$, $SD = 8.38$ and $M = 50.02$ and $SD = 7.21$ respectively) (De la Mora, Russell, Dungy, Losch, & Dusdieker 1999).

Based on the Male Role Norms Scale (MRNS) research by Abreu, Goodyear, Campos, and Newcomb (2000), who examined ethnic belonging and traditional masculinity ideology, the sample size included 378 males. The participants in the study were AA, European American, and Latino males, with AA males representing only 20% ($n = 76$) of the total sample size. I calculated alpha coefficients for each of the ethnic groups based on the three subscales included in the MRNS (Respect-Status [Status], Antifemininity, and Tough Image [Toughness]) and reported the standard deviation (SD) and mean (M) for these subscales as well. The alphas coefficients, standard deviation, and mean (M) for AA males by subscale were Respect-Status: $\alpha = .83$, $SD = 5.98$, $M = 25.09$; Antifemininity: $\alpha = .63$, $SD = 4.68$, $M = 22.59$; and Tough Image (Toughness): $\alpha = .74$, $SD = 4.03$, $M = 15.15$ (Abreu et al., 2000). In another study, Vincent, Parrott, and Peterson (2011) calculated the alpha reliability coefficients, SD , and M for each subscale as follows: Respect-Status: $\alpha = .78$, $SD = 11.8$, $M = 52.7$; Antifemininity: $\alpha = .72$, $SD = 8.2$, $M = 22.2$; and Tough Image (Toughness): $\alpha = .65$, $SD = 8.5$, $M = 34.1$. Both the sample size and the alpha coefficients used in previous studies were considered when determining the sample size for this study.

I used the accepted statistical power for detecting “real or true” effect size which is .80 (80%) (Burkholder, 2009). I chose to use the standard alpha level of .05 for this study since the De la Mora et al. (1999), Abreu et al. (2000) and Vincent et al. (2011) studies only presented alpha coefficients to test internal consistency (reliability). Using

an alpha of .05 meant there would only be a 5% chance that the study would reach the wrong conclusion. If I had chosen a higher alpha level, it would have increased the likelihood for rejecting the null hypothesis (Burkholder, 2009). The effect size for this study was calculated using the standard deviation (*SD*) and mean (*M*) derived from the De la Mora et al. (1999) article on IIFAS and Abreu et al. (2000) article on MRNS. I chose not to use the *SD* and *M* from the Vincent et al. (2011) study since these calculations were not based on race and ethnicity as was the *SD* and *M* in the Abreu et al. (2000) study.

Table 2

List of Standard Deviations (SD) and Means (M) Used to Calculate Effect Size

		Standard Deviation (<i>SD</i>)		Mean (<i>M</i>)		
		Study 1	Study 2	Study 1	Study 2	
IIFAS						
Women who planned to breastfeed (positive attitude)		8.22	8.38	64.84	65.61	
Women who planned on exclusive formula-feeding (negative attitude)		6.96	7.21	48.61	50.02	
MRNS	Respect- Status	Antifemininity	Tough Image	Respect- Status	Antifemininity	Tough Image
	5.98	4.68	4.03	25.09	22.59	15.15

Because my study combined two different scales (IIFAS and MRNS) for the online electronic survey, I chose to determine the effect size for each scale. The IIFAS scale uses two comparison groups (women who planned to breastfeed (positive attitude) and women who planned on exclusive formula-feeding (negative attitude)); therefore I decided to calculate the effect size for each group using the following procedures:

Steps 1: I subtracted the *SD* for the two categories in the two IIFAS studies:

Women who planned to breastfeed (positive attitude)

$$SD_1 = \text{Study 2 (8.38)} - \text{Study 1(8.22)} = .16$$

Women who planned on exclusive formula-feeding (negative attitude)

$$SD_2 = \text{Study 2 (7.21)} - \text{Study (6.96)} = .25$$

Step 2: I subtracted the *M* for the two categories in the IIFAS studies:

Women who planned to breastfeed (positive attitude)

$$M_1 = (\text{Study 2}[65.61] - \text{Study 1 [64.84]}) = .77$$

Women who planned on exclusive formula-feeding (negative attitude)

$$M_2 = (\text{Study 2 [50.02]} - \text{Study 1[48.61]}) = 1.41$$

Step 3: I calculated Cohen's *d* by subtracting the *Ms* for both IIFAS categories and dividing it by the appropriate *SD*:

Women who planned to breastfeed (positive attitude)

$$\text{Cohen's } d_1 = M_1/SD_1 = .77/.16 = 4.81$$

Women who planned on exclusive formula-feeding (negative attitude)

$$\text{Cohen's } d_2 = M_2/SD_2 = 1.41/.25 = 5.64$$

Step 4: I determined the final Cohen's d for the effect size by subtracting Cohen's d_1 from Cohen's d_2 ($5.64 - 4.81 = .83$). A Cohen's d of .83 is considered a large effect size (Large = $d > .80$) (Burkholder, 2009). Based on these calculations, 26 participants would be needed for each category (Total $N=52$).

Since the MRNS does not have comparison groups, I only had to follow step 3 to calculate Cohen's d for each subscale:

$$\text{Respect-Status} = M/SD = 25.09/5.98 = 4.19$$

$$\text{Antifemininity} = M/SD = 22.59/4.68 = 4.83$$

$$\text{Tough Image} = M/SD = 15.15 / 4.03 = 3.75$$

I determined the Cohen's d calculated for the MRNS to be insufficient for calculating an appropriate sample size. Additionally, the sample size calculated for the IIFAS was not reflective of sample sizes used in previous studies. Kass and Tinsley (1979) recommend that at least 5 - 10 subjects should be used to determine sample size for factors analysis. Using this recommendation, I recalculated possible sample sizes for both the IIFAS and MRNS. The IIFAS has 17 items, therefore a minimum of 85 and a

maximum of 170 participants are needed for the study. In terms of the MRNS that has 26 items, a minimum of 130 and a maximum of 260 participants are needed for the study. I averaged the minimum and maximum sample sizes and determined that the study needs between 107 - 195 participants (150 is the mean number of participants needed to satisfy the study). Based on the maximum sample size, chain referral or snowball sampling was needed to satisfy the sample size requirement since I was unable to get a sufficient amount of participants from the partner organizations. This issue of sample size is discussed further in the Quantitative section of this chapter.

For the qualitative section of the study, I delve a bit further into the issue of masculinity ideology (male gender norms) to examine what specific ideas of masculinity as well as specific sociocultural factors (family, social network, etc.) influence attitudes and perceptions of breastfeeding. I anticipated that a minimum of two focus groups would be needed to support this part of the study. Each focus group would have a maximum of 10 individuals participating for a total of 20 participants. Although the sample size appears small in comparison to the sampling for the quantitative section, Marshall (1996) notes that the sample size for the qualitative study is one that is able to adequately answer the research question. Since the qualitative section of the study is not the focal point of the research but used to support the data in the quantitative section, 20 participants represent an adequate amount for reaching saturation.

Focus groups (or group interviewing) were chosen as the method for conducting the qualitative portion of the study because of the ability to reach saturation using less participants. Saturation is met when new categories of information stop emerging from

within the sessions (Marshall, 1996). Additionally, in determining the sample size used in the study, I considered three primary issues that would apply to my study: (a) the scope of the study, (b) the nature of the topic, and (c) the quality of the data (Morse, 2000). The researcher Morse (2000) noted that research questions that are broad will often require more participants, more interviews, more data, and a larger allocation of time to collect and analyze data. Although a researcher may end up with more data, this may not make for a better study (Morse, 2000). When the topic of discussion is not clear and easily understood by participants it may be difficult to obtain the type and level of data needed to reach saturation, as participants may not be able to easily express their opinions about the topic or relate to it through their lived experiences (Morse, 2000).

Although my topic has been narrowed to only look at male perspectives and attitudes toward breastfeeding, and its connection to sociocultural norms and masculinity ideology, these topics may still prove difficult for men to discuss. Specifically, the chosen topic may be challenging since (a) breastfeeding is a behavior of women, (b) more often men are not involved directly in breastfeeding decisions, and (c) masculinity ideology is not a common term used to describe gender norms.

Focus groups were used to gather qualitative data because participants in this study may not readily identify with the questions being asked if these ideas were posed in individual interviews. Focus group settings allowed participants to share ideas among group members. To assist in ensuring that participants fully understood the purpose of the study, a focus group protocol (Appendix N) was developed to (a) clearly explain the purpose of the study, (b) simplify terms, and (c) ensure that participants in the study

provided useable data that could then be categorized and theoretically framed to determine patterns of influence on breastfeeding attitudes and perspectives.

Instrumentation and Materials

The survey used for this study was created using a preexisting online survey creation program (Survey Gizmo). The electronic online survey combined questions from the Iowa Infant Feeding Attitudes Scale (IIFAS) and the Male Role Norms Scale (MRNS). The IIFAS has 17 items while the MRNS has 26 items. Additionally, the survey included several demographic questions that the participant completed. The online survey consisted of 47 items in all.

Iowa Infant Feeding Attitudes Scale

The Iowa Infant Feeding Attitude Scale (IIFAS; De la Mora et al., 1999) can be utilized to measure maternal attitudes toward infant feeding methods (e.g., breastfeeding, formula feeding). The scale was designed to cover various dimensions of infant feeding. For example, questions were written concerning the costs of infant feeding (e.g., “Formula feeding is more expensive than breast-feeding”), nutrition (e.g., “Breast milk is the ideal food for babies”), convenience (e.g., “Breast-feeding interferes with a couple’s sexual relationship”), and infant bonding (e.g., “Breast-feeding increases mother-infant bonding”) (De la Mora et al., 1999). Respondents are asked to indicate the extent to which they agree with each statement, on a five-point Likert scale ranging from “strongly disagree” to “strongly agree.”

The scale consists of 17 items, with items worded so that approximately half of the questions are favorable toward breastfeeding and the remaining questions favorable

toward formula feeding. These scores are then computed so that a high score reflects a preference for breastfeeding. The reliability and validity of the IIFAS was confirmed through three studies conducted by De la Mora et al. (1999) that showed that the scale could be used to assess attitudes toward infant feeding methods. The tool was tested among women who either breast-fed or formula-fed their infants. The IIFAS also appears to be reliable with Cronbach's alpha ranging from .85 to .86. While the IIFAS has been primarily used to measure maternal attitudes toward infant feeding, it has also been used to measure male or paternal attitudes toward breastfeeding as well (Shaker et al., 2003).

The researchers Shaker et al. (2003) conducted a study in Scotland with expectant mothers and their partners using the IIFAS. In this study, they compared the infant feeding attitudes of parents who breast-fed to those who did not. The data collected by Shaker et al. (2003) revealed that mothers and fathers of breast-fed infants were more knowledgeable about the benefits of breastfeeding compared to parents of non-breastfed infants. Additionally, fathers of breast-fed infants agreed that breast milk was the ideal food for babies (92.5% vs. 56.4%, $P < 0.001$) and that breastfeeding increased mother infant bonding (88.7% vs. 61.8%, $P < 0.001$). The results of the study shed light on the need for more research on the role of father's on infant feeding choices and ways for health professionals to involve them in the discussion on infant feeding choice (Scott et al., 2003). This was the first study to use the IIFAS on expectant fathers. The data collected from the study showed that mothers and fathers of breast-fed infants had significantly higher scores than mothers and fathers of formula fed infants (Scott et al.,

2003). Additionally, the outcomes of the study show (a) the scale had good internal reliability for mothers and fathers (Cronbach's alpha of 0.79 and 0.77 respectively) and (b) the scale had validity in predicting choice of feeding methods for both mothers and fathers.

Male Role Norms Scale

The Male Role Norms Scale (MRNS) is a 26-item scale derived from the 58-item short-form of the Brannon masculinity scale (BMS). Whereas the BMS centers on four themes derived from Brannon's analysis of the American cultures ideas of male characteristics (No sissy stuff, Big wheel, Sturdy oak, and Give 'em Hell) (Thompson, Pleck, & Ferrera, 1992), the MRNS measures only three factors: "(a) Status ($\alpha = .81$) reflecting the need to gain respect and status, (b) Toughness ($\alpha = .74$) reflecting the expectation of men's being independent and rugged mentally, emotionally, and physically, and (c) Antifemininity ($\alpha = .76$) referring to the expectation that men should avoid behaviors and activities that are perceived as stereotypically feminine" (Fischer, Tokar, Good, & Snell, 1998, p. 136). The scores calculated from this scale help to determine whether a man has a traditional versus non-traditional masculinity ideology. Higher scores reflect more traditional attitudes toward male role norms (Fischer et al., 1998). In previous studies, these scores were computed using average raw score of all items rather than a summary scale score as the sum of item responses (Fischer et al., 1998). Questions from the IIFAS and MRNS will be combined to create the final survey and will be used to ascertain scores for breastfeeding attitude and masculinity ideology of those men participating in the study.

Pilot Test

Prior to initiating the online survey, I conducted a pilot study. The pilot study was needed to (a) assess the amount of time needed for participants to complete the survey and (b) test for ease of use and clarity. Participants were selected using the same inclusion criteria for selecting participants for the full study. The questions from the MRNS and IIFAS remained unchanged, protecting the reliability of the tool; however, during the pilot study I chose to assess both the validity and reliability by comparing the results to information shown in previous studies. Specifically, I looked at the total IIFAS scores to determine positive breastfeeding attitudes and also the MRNS scores for the different subsections of the scale to confirm type of masculinity ideology (e.g., Status: Items 1, 4, 7, 10, 11, 14, 15, 18, 21, 24, 26; Toughness: Items 2, 5, 8, 12, 16, 19, 22, 25; and Antifemininity: Items 3, 6, 9, 13, 17, 20, 23). I received comments about questions included in the combined survey from pilot study participants. These results were reviewed, but the issues did not need to be addressed prior to conducting the full study.

In order to conduct the pilot study, I requested permission from one of the partner organizations to recruit potential participants to test the online survey. The Spirit of Christ Baptist Church (SOCBC) agreed to the request. Participants from this organization were recruited for both the pilot and full study. Since the organization had already provided a letter of cooperation agreeing to assist with recruitment of participants for the full study (e.g., the online survey and focus group), an updated letter of cooperation was obtained stating their agreement to be in the pilot study as well (see Appendix C).

For the pilot study, the SOCBC was asked to send an invitation email to their members (see Appendix E). I provided the site administrator the exact message to use for the invitation email. The invitation email was then distributed to church members using the SOCBC membership database (listserv). The email was sent by the organization in order to preserve confidentiality of church member email addresses. The pilot study invitation included a link to the test site for the electronic online survey. The opening page of the online survey was the pilot study informed consent form (see Appendix F). As with the full study, individuals who reviewed the pilot study description and checked “yes” for the last two questions of the informed consent form were provided access to the test site for the pilot study of the online survey. Likewise, individuals who answered “no” to either of the last two questions were redirected to a “Thank you” page and not allowed to access the survey. As with the full study, the pilot study survey combined questions from the IIFAS and MRNS and demographic questions for participants to answer. Additionally, comment boxes were placed at the end of each section, and used by the participant to note any questions or sections of the survey they found to be difficult or not well understood.

The pilot study for the online survey was open for data collection until the pilot study size had been met (10% of the total number need for the full study or $N=15$). The survey opened on June 3, 2015 and closed on June 30, 2015. During the initial recruitment for pilot study participants, an insufficient number of men agreed to participate. The pilot study needed to be completed in order for me to move forward with the full study. I determined that similar issues could also be encountered during

implementation of the the full study with partner organization. As a result, I requested and received approval for three modifications (i.e., change in procedure) to the IRB application to solicit additional participants for the pilot and avoid the issue during the full study. These changes are as follows:

1. Permission to allow site administrators for the SOCBC and other individuals who have consented to participate in the pilot study the ability to forward the study invitation to other males they thought met the criteria for the pilot study (e.g., AA males at least 18 years of age)
2. Permission to allow site administrators for the partner orgizations and other individuals who have consented to participate in the full study (online survey and focus group) the ability to forward the study invitation to other males they thought met the criteria for the pilot study (i.e., AA males at least 18 years of age)
3. Permission to add a line in the letter of invitation for both the pilot study and full study indicating that participants can forward the letter of invitation to others who they think may meet the study criteria and may be willing to participate (see Appendices E, H, and J).

When the targeted sample size for the pilot study was reached, I closed the pilot study link and analyzed the collected data to: (a) finalize time needed to complete online survey, (b) analyze participants' scores to assess the validity and reliability of the individual the on the IIFAS and MRNS, (c) compare scores to the reliability and validity

scores found in past studies of the tools, and (d) review any comments about questions included in the survey and make changes as needed.

Focus Group Guide

Participants for the focus groups were recruited using the same organizations used to recruit participants for the online survey. Invitations were sent by the organizations via email. I expected to conduct at least two focus groups with 10 male participants each; however a total of three focus groups were conducted and yielded a total of 17 participants. I selected participants based on men who responded to the study request, and allowed them to choose one of three focus group dates convenient for their schedule. Informed consent forms were distributed to participants prior to beginning each focus group session (see Appendix J). Each focus group sessions were held at a neutral location.

A focus group protocol (see Appendix N) was used to conduct sessions with men from the participating organization. The instructions in the protocol included information that was shared with the participants prior to the start of each the focus group session. This information included (a) introduction of facilitator, (b) purpose and overview of research study, (c) information on confidentiality, and (d) the process for recording the discussion. The protocol included questions on infant feeding, sociocultural factors, and masculinity ideology (gender norms). At the end of each session, participants were given time to provide additional thoughts and comments. Focus group questions were created based on past research on gender norms and father involvement in breastfeeding. Because the data was analyzed and framed using the socio-ecological model, the guide

also included questions that would help me gather information on possible influencers (i.e., family, social network, culture, etc.) of both breastfeeding perceptions and gender norms.

Recruiting

Site Recruitment

I recruited partner organizations by conducting research via the Internet. The search focused on community groups and professional organizations that served men or had a male membership. Organizations (i.e., PTAs, churches, professional organizations, ect.) were contacted via email and invited to participate in the study. Specifically, these organizations were then sent a recruitment email message (see Appendix A) that provided an overview of my intended research study and requirements of interested organizations. When I did not receive responses from these organizations, a revised recruitment email message with less scientific information was sent to additional organizations to gather interest for participating in the study (see Appendix B). This email yielded several organizations who were interested in assisting with the study (see Table 1). Once an organization expressed an interest in the study, I sent them an additional email requesting them to complete a letter of cooperation (see Appendix D) stating that they would support me in conducting the study. Only one organization, SOCBC, submitted a letter of cooperation stating their consent to participate in both the pilot and full study (see Appendix C). The organizations who partnered with me for the study provided a signed letter of cooperation, and none required additional information to participate in the study.

Participant Recruitment

The process for the pilot study was explained in the Instrumentation and Materials section. For the full study, site administrators for each organization sent the study invitation email (see Appendix E) to potential participants through their database (listserv). The study invitation included a link to the online survey. The opening page of the survey was the informed consent (see Appendix I). Participants who checked “yes” for the last two questions of the informed consent form were granted access to the site for the online survey. Participants who answered “no” to either of the last two questions were redirected to a “Thank you” page and not allowed access to the survey.

Based on the number of responses received for the online survey, additional participants were needed to meet the sample size requirement. I requested several modification to the IRB application to (a) solicit additional organizations and (b) forward information to participants I felt were eligible to participate in the study.

Data Collection Procedures

The concurrent mixed methodology plan examined whether a man’s masculinity ideology affected his attitude or perception toward breastfeeding, and other factors that affected his thoughts on breastfeeding. The pool of participants eligible for the study included (a) men who were married or single; (b) men whose partners formula-fed or breastfed; and (c) men with or without children. These characteristics were selected to explore perceptions and attitudes pre- and post-conception (e.g., prior to and after having a child). The study used a concurrent triangulation design to collect both quantitative and qualitative information from the males participating in the study.

Quantitative Procedures

As stated in the Instrumentation and Material section, a pilot study had to be conducted prior to starting the full study. Once the IRB application was approved, an email was sent to the Spirit of Christ Baptist Church to begin the pilot study. At the conclusion of the pilot study, each site administrator was contacted and informed that the email invitation could be distributed through their listservs to recruit potential study participants.

Participants were initially recruited through the membership database (listserv) of the six organizations who agreed to participate in the study. Based on the number of responses received from the initial recruitment process, additional participants were needed to meet the sample size requirement. I requested several modifications to the IRB application in order to solicit additional participants for the study. The following changes were requested at specific intervals of the study and approved for both the quantitative and qualitative phase of the study:

July 2014

1. Permission to have study posted on Walden Participant Pool website.
2. Permission to post the study to identified listservs that include the target population for the study.

August 2014

1. Permission to offer focus group volunteers an incentive (e.g., \$5 Subway gift card) for their participation in the study.

2. Permission to change text in both invitation email and informed consent to include additional statement about incentive.

September 2014

1. Permission to contact other organizations to seek additional partner.
2. Permission to contact organizations (including partner organizations) and ask whether they would be willing to post my study information (for both the online survey and focus groups) via their social media accounts (i.e., Facebook, LinkedIn, Twitter, etc.).
3. Permission to ask current partner organizations to post flyers in their facility and distribute church bulletin insert with study information.
4. Permission to conduct direct outreach and face-to-face delivery of survey at public venues (i.e., park, playground, etc.).
5. Permission to distribute flyers to local businesses (i.e., gym) and public facilities (i.e., community center, library, etc.).
6. Permission to use my personal social media accounts to promote study and solicit potential volunteers for both the online survey and focus group.

October 2014

1. Permission to purchase a panel through a partner organization of my survey company (Survey Gizmo) to complete the data collection for the online survey portion of her study.

The survey tool was created using an online survey program (i.e., Survey Gizmo). The survey combined questions from both the two scales used for the study:

the Iowa Infant Feeding Attitudes Scale (IIFAS) and the Male Role Norms Scale (MRNS). The IIFAS was used to measure breastfeeding attitudes, while questions from the MRNS were used to measure masculinity ideology. Additional information on these two instruments was stated in the Instruments and Materials section. The survey tool also included a demographics section to collect information on income, marital status, number of children, age of participant, and education. This data from the demographic section was used for stratifying data when conducting the multiple regression analysis for the MRNS and IIFAS.

An email was sent to the site administrator at each of the participating organizations. A link to the survey was included in the study invitation letter (see Appendix E) and Appendix H) to be sent to potential participants using the organization's membership database or listserv. Once the individual clicked on the link, they were taken to the first page of the survey. The opening page of the survey included information on informed consent (see Appendix F and Appendix I). Participants who read the online consent form and checked "yes" for the last two questions of the form were provided access to the site for the online survey. Participants who answered "no" to either of the last two questions were redirected to a "Thank you" page and denied access the survey. The entire data collection process for the quantitative analysis occurred online and took 5 months to complete and lasted from July 2014 – November 2015.

Qualitative Procedures

Qualitative data for this study was collected through focus group sessions. Each session involved a minimum of five participants. Participants were initially recruited through the partner organizational listservs used to solicit volunteers for the quantitative phase of the study. As stated in the Quantitative section, a few changes were made to the recruitment process due to low participation. These changes included: (a) asking organizations to post flyers about the study in their facilities; (b) soliciting volunteers through personal social media contacts; and (c) asking additional organization to post study information through their social media pages. Additionally, announcements about the study were made by partner organizations during regularly scheduled meetings and events. Additionally, I received permission from the IRB to provide a \$5.00 Subway gift card to boost recruitment efforts for the focus groups.

Focus groups were conducted at a neutral location selected by me or suggested by the partner organizations. A focus group discussion guide (Appendix N) was developed and included probing questions to help determine sociocultural influences that contribute to the participant's breastfeeding perceptions. Each focus group sessions lasted for at least one hour and was recorded. The entire recruitment process lasted from July 2014 – March 2015.

I facilitated each focus group discussion since I had experience conducting discussion groups in the past. During the focus sessions, I also captured notes on the flip charts. Participants were encouraged to write down additional discussion points they felt were not captured on the charts, or those opinions they did not feel comfortable

discussing openly with the group. As previously mentioned in the Role of the Researcher section, it was noted that since I was responsible for both conducting the session and writing notes this could potentially impede my ability to capture all of the information being discussed. To address this issue, each session was recorded. The recording process was disclosed to the participants prior to the start of each session.

At the beginning of each session, I reviewed the informed consent with the participants and answered any questions they had about their participation. I reiterated (a) the voluntary nature of their participation, (b) the payment for participating, and (c) the confidentiality of the information discussed. Additionally, since some men may have found it difficult to discuss their feelings on breastfeeding, masculinity, and sociocultural influences associated with this topic, this issue was discussed at the beginning of each focus group session to reassure the participants about confidentiality and how information from the study would be shared in my dissertation. The focus group protocol reiterated these very issues and helped explain the intended outcome of the study. Once I answered all of the participants' questions, the informed consent forms were signed and given to me. Copies of the signed forms were provided at the conclusion of each session. Information on the data analysis process is discussed in the next section.

Data Analysis Plan

Quantitative Analysis

The statistical package for social sciences (SPSS) version 21 was used to conduct the data analysis for the quantitative data collected in the study. As a basic part of the

analysis, SPSS software was used to produce descriptive statistics including the measures of central tendency (e.g., mean, mode, median), frequency distribution, confidence interval, and standard deviation (Green & Salkind, 2011). Table 3 presents the research questions examined during the study: (a) Is male masculinity ideology associated with attitudes on breastfeeding among AA men? (b) Is there a difference in breastfeeding attitudes between men who hold a traditional view of masculinity ideology and men who hold a non-traditional view? and (c) Is masculinity ideology associated with spouse/partner breastfeeding behaviors among AA men?

Multiple regression analysis was used for all questions to determine correlations between the breastfeeding attitudes (positive vs. negative) and masculinity ideology (traditional vs. non-traditional). Multiple regression analysis was the most appropriate to analyze data for the proposed hypotheses because it allows me to analyze several independent variables to determine which had the greatest effect on the dependent variable. The information gathered from a multiple regression analysis added to the simplified answers of “yes” and “no” that I derived for each hypothesis and provided an additional layer of detail to explain why the hypothesis was either accepted or rejected.

Question 1: To answer research question 1, multiple linear regression analysis was used to determine the association between scores received on the MRSN and those received on the IIFAS. A positive breastfeeding attitude was analyzed based on the scores calculated from higher score of IIFAS, while a traditional attitude toward male gender norms determined by higher scores on the MRNS. I also determined if men with a negative attitude toward breastfeeding also showed higher or lower scores in each of the

subscales of the MRNS (Status, Toughness, and Antifemininity). This was done to show areas that need to be discussed and included in future intervention around males and breastfeeding support.

Question 2: To answer questions 2, multiple linear regression analysis was used to determine if what additional differences exist between the men who have a more traditional view of male gender norms versus those who have a non-traditional view. In particular, I looked at how each of these groups compared to one another using scoring from the three MRNS subscales.

Question 3: To answer question 3, multiple linear regression analysis was used to look at whether a correlation existed between men whose spouse/partner breast-fed in comparison to those whose spouse/partner formula-fed.

The final analysis looked at whether any differences in scoring on both the IIFAS and MRNS existed when reviewing or categorizing the participants according to demographic data received from the survey. An overview of the quantitative analysis plan is stated in Table 3.

Table 3

Statistical Tests Used to Analyze Quantitative Questions

	Instrument	Variable	Analysis/Test
Q1.	Is male masculinity ideology associated with attitudes on breastfeeding among AA men?	<p>MRNS is determined by average score of all questions; higher score equals more traditional masculine ideology.</p> <p>When looking at scoring for individual subscales, the following questions/items should be analyzed:</p> <p>Status Factor: Items 1, 4, 7, 10, 11, 14, 15, 18, 21, 24, 26</p> <p>Toughness Factor: Items 2, 5, 8, 12, 16, 19, 22, 25</p> <p>Antifemininity Factor: Items 3, 6, 9, 13, 17, 20-R*, 23</p> <p>IIFAS score from questions 1,2,4,6,8,10,11, 14 and17 show a positive attitude toward breastfeeding (these items are reversed scored and the scores for each item are then summed)</p>	<p>masculinity ideology (independent)</p> <p>breastfeeding attitudes (dependent)</p> <p>Multiple Linear Regression – average score for MRNS and score for IIFAS; analysis of scores for each subscale of MRNS (i.e., Status, Toughness and Antifemininity) and total IIFAS scores</p>

(table continues)

		Instrument	Variable	Analysis/Test
Q2.	Is there a difference in breastfeeding attitudes between men who hold a traditional view of masculinity ideology and men who hold a non-traditional view?	MRNS IIFAS	masculine ideology (independent) breastfeeding attitudes (dependent)	Multiple Linear Regression– looking at the percentage of men in the study who were scored as being traditional on the MRSN versus those who were scored as being non-traditional and compare the score IIFAS score for these two group; analysis of scores for each subscale of MRNS (i.e. Status, Toughness and Antifemininity) for each group (non-traditional and traditional) along with total IIFAS scores
Q3.	Is masculinity ideology associated with spouse/partner breastfeeding behaviors among AA men?	MRNS	masculinity ideology Demographic – marital status Survey question: Did you spouse/significant other breastfeed?	Multiple Linear Regression– to determine the ex-tent to which marital status and influence breastfeeding attitudes and masculinity ideology
Q4.	Correlations between demographics (predictor variables) to understand difference in infant feeding attitudes and masculinity ideology: 1. Men, who are married, have higher SES and more education will have more traditional masculine ideology. 2. Men with lower educational level and SES have less positive attitude toward breastfeeding.	IIFAS MRNS	Demographic survey items: <ul style="list-style-type: none"> • Marital Status • SES • Education level • Age • Breastfeeding status of spouse/partner • Child status 	Multiple Linear Regression– to determine the extent to which these variables influence breastfeeding attitudes and Masculine ideology

Qualitative Analysis

The recorded focus group discussions were transcribed by me. The computer program NVivo 10 was used to code information gathered from the focus groups and to determine relevant themes. NVivo was created by QSR International (2011) to complete a variety of tasks needed to assist researchers in analyzing and organizing qualitative data. Specific tasks include gathering and managing data in a single workspace, conducting group analysis and coding, creating and tracking bibliographical data, and coding data collected through focus groups, observations, and other qualitative techniques.

There are two primary ways to organize the data from the focus group session(s): (a) organize data at the node or (b) conduct auto-coding based on similarly structures questions from the focus group guide (QRS International, 2011). I found the process of auto-coding to be cumbersome and decided to organize information at the node. By using this tool, data was coded within sources and information was gathered based on themes and topics. The node was color coded to highlight text in each of the source documents (e.g., focus group transcripts) that related to a particular theme. Themes were categorized based on the four levels of Bronfenbrenner's socio-ecological model discussed previously in Chapter 1. By dividing the themes in this way, I was able to see which level was most influential in shaping a man's perception and attitude toward breastfeeding.

It was important that the analysis of themes captured the complete thoughts and feelings of the focus group participants. To ensure that participants had provided as much information as possible in reference to questions posed during the focus group

session of the study, participants were given my contact information to provide additional following the focus group discussion.

Human Subject Research and Ethical Considerations

Patient privacy and confidentiality were the two main ethical concerns for this study. The purpose of the study was explained thoroughly to the participants, and they were provided an opportunity to receive additional clarification on any questions they had. The informed consent forms developed outlined details on (a) the purpose for the study, (b) the protection of participant information, and (c) the opt-out clause stating that the participants could leave the study at any time without penalty (Creswell, 2009).

Approval for the study was received by Walden University Institutional Review Board (IRB), and letters of cooperation signed by each of the partner organization prior to beginning any data collection for the study.

As part of the process for conducting my study, the informed consent for the online surveys was electronic and signed prior to participants gaining access to the survey. This process allowed for participants to anonymously decline participation in the online survey. As stated previously in both the Data Collection Procedures section, individuals who read the consent form and checked “yes” for the last two questions of the informed consent form were provided access to the online survey. Those individuals who answered “no” to either of the last two questions were redirected to a “Thank you” page and not allowed to access the survey. Additionally, individuals participating in the focus group(s) signed an informed consent letter prior to the start of each focus group session.

I received permission from each author of the MRNS and IIFAS to use the scales for the study (see Appendix O). Data collected from both the focus groups sessions and survey results are stored on my personal computer and files are password protected. When transcribing the information received from the focused groups, the participant names were not used; instead the participant was identified by the first and last initial of their name; this information was attached to reference any quotes used in the results section of the research.

The privacy of the participants was protected during the data collection phase using the following steps:

1. The data from the online survey was stored on the survey collection site (Survey Gizmo) and is password protected.
2. Once the files were downloaded to my personal computer, the SPSS files used in the analysis was password protected and locked so no files could be accessed or changed without my permission.
3. Additionally, the audio files from the focus group were uploaded to my personal computer (analyzed through NVivo) and password protected as well.

Additionally, I preserved the confidentiality of information received throughout this study. All data, including information received through pilot study, were kept secure using the following procedures:

1. Using a secure password to access data from the online survey. The password was created by me and not made available to anyone not affiliated with the study.
2. Backing up all data and storing backups in a location separate from the original.

3. Protecting all documents and transcripts related to this study using a password. I placed a “lock” on all documents related to data analysis to prevent individuals from seeing participant information or changing any data.
 4. De-identifying, where necessary, all information related to the participant.
- As required by Walden University, the data will be kept for a period of at least 5 years.

Summary

In this chapter, I presented a review of the methodology chosen to conduct this study and outlined information presented on the qualitative and quantitative questions answered through this research. Additionally, a description of the processes used for recruiting study participants, instruments used for the online survey, and issues related to the ethics of human subject research completed the outline of this section. Information on the results of the study is presented in Chapter 4.

Chapter 4: Results

In this mixed method analysis, the quantitative research questions were designed to investigate (a) attitudes and perceptions toward breastfeeding and whether they were associated with masculinity ideology (male gender norms), and (b) whether men who were seen as possessing traditional masculinity had a more negative attitude toward breastfeeding as opposed to men with nontraditional masculinity. To address these questions, responses from both the Iowa Infant Feeding Attitudes Scale (IIFAS) and the Male Role Norms Scale (MRNS) were analyzed. Additionally, qualitative methods were used to explore the origins of masculinity ideology as well as influences of male breastfeeding perceptions and attitudes. This chapter provides an overview of the data collection, a presentation of multiple regression analysis, and themes from the focus group data.

Data Analysis: Pilot

Pilot Study Overview

Prior to implementing the online survey, a pilot study was conducted to test the effectiveness of the data gathering methods. Specifically, I used the pilot study to test for ease of use of the survey, time needed to complete the survey, reliability of the instrument, and whether participants understood the questions being asked on each of the scales. The online survey was pilot tested through one of the partner organizations (Spirit of Christ Baptist Church) during the month of June 2014. An email soliciting male volunteers was sent through the organization's listserv. The method of using a partner organization did not yield the required number of participants ($N = 16$) to complete the

pilot study and a “Request for Change in Procedure” was submitted to the university IRB to solicit additional participants using a snowball effect (e.g., participants forwarded the survey link to other males). As a result of receiving IRB approval to expand recruitment pool, the sample size for the pilot study was reached by the third week in June 2015.

Demographic Characteristics of Pilot Study Participants

In total, 20 participants signed an electronic informed consent prior to accessing the survey; however, only 16 completed the survey. Participants’ ages primarily fell between 35 and 54 (62.5%, $n = 10$) while the remaining participants were ages 25 and 34 (12.5%, $n = 2$) and 55+ (25%, $n = 4$). Most of the participants had a bachelors or postgraduate degree (68.8%, $n = 11$), were married (75%, $n = 12$), had children (81%, $n = 13$), and had a spouse or significant other who breastfed (62.5%, $n = 10$). There was no significant difference in income (37.5% had incomes of \$50K to \$74.9K; 31.3% had incomes of \$150,000 or more). Of the participants who completed the study, 68.8% ($n = 11$) were from the partner organization and the rest were gathered through snowball sampling.

Results of the Pilot Study

The time needed to complete the survey was determined by combining the average time needed to review and sign the informed consent form with the average time needed to complete the survey (e.g., 3 minutes + 16 minutes = 19 minutes). I rounded this number to the nearest 10 and concluded that for the full launch of the survey, 20 minutes would be needed for participants to take the survey. This information would be included in the recruitment emails used by the other partner organizations. The reliability of the instrument was determined by comparing the Cronbach’s alpha (α) for the IIFAS

and MRNS used in the online survey with Cronbach's alpha used in previous studies. The Cronbach's alpha was used to measure internal consistency and determine scale reliability for both the IIFAS and MRNS.

A simple reliability test was conducted to analyze the items included in each scale. The first reliability test included all items in their original state (i.e., without reversed scores) and the second reliability test was used to analyze all items including those in their reversed score state. Results for the IIFAS are seen in Table 4.

Table 4

Reliability Test for IIFAS

Scale	Reliability Statistics			Scale Statistics			
	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items	Mean	Variance	Std. Deviation	N of Items
IIFAS with reverse item scores	.762	.761	17	58.56	66.663	8.165	17
IIFAS without reverse item scores	.661	.686	17	53.06	49.796	7.057	17

Research conducted by De la Mora (1999) indicated the IIFAS to be reliable when using Cronbach's alpha (α) ranging from .68 to .86. The Cronbach's alphas were ascertained from three studies conducted by De la Mora (1999): Study 1 $\alpha = .86$ to .85; Study 2 $\alpha = .86$; and Study 3 $\alpha = .68$. Based on this information, I used $\alpha = .85$ to determine the reliability of the IIFAS questions used for the online survey. As required by De la Mora et al. (1999) several questions (items 1, 2, 4,6,8,10,11, 14 and17) in the

IIFAS needed to be reversed scored. When these items were left in their original state (not reverse-scored), their Cronbach's alpha was .661. When these items were reverse-scored the Cronbach's alpha = .762. Because I would be basing future analysis of the IIFAS with reverse-scored items, I focused on this alpha for comparison. In a third study by De la Mora (1999) responses on the IIFAS were shown to be unreliable based on $\alpha = .68$. Since the second Cronbach's alpha ($\alpha = .762$; based on reverse-scored items) was $\geq .68$, I determined the results of the IIFAS from the pilot study to be consistent with that of past studies conducted by De la Mora (1999); this meant that the electronic version of the IIFAS was reliable and therefore no changes were needed for the instrument.

Additionally, Cronbach's alphas for the MRNS are presented in Table 5.

Table 5

Reliability Test for MRNS

Scale	Reliability Statistics			Scale Statistics			
	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items	Mean	Variance	Std. Deviation	N of Items
MRNS with reverse item scores	.857	.875	25	101.06	228.996	15.133	25
MRNS without reverse item scores	.903	.908	25	103.19	303.629	17.425	25

The MRNS also had one item (item 20 and 25) that needed to be reverse-scored.

The Cronbach's alpha for the MRNS with reverse-scored items and without reverse-

scored items were $\alpha = .857$ and $\alpha = .903$ respectively. In previous studies, Abreu et al. (2000) and Vincent et al. (2011) examined reliability of the scale by analyzing the alphas for each of the subscales (Status, Toughness, and Antifemininity). For the pilot study, the same process was used. The alphas for the subscales are stated in Table 6. As with the full MRNS, two reliability tests were conducted for the Toughness and Antifemininity subscales since they each contained a reverse-scored item.

Table 6

Reliability Test for MRNS Subscales

Subscale	Reliability Statistics			Scale Statistics			
	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items	Mean	Variance	Std. Deviation	N of Items
Status Norm	.843	.843	10	47.31	60.363	7.769	10
Toughness Norm with reverse score items	.652	.689	8	30.88	32.783	5.726	8
Toughness Norm without reverse-score items	.749	.753	8	30.63	40.917	6.397	8
Antifemininity Norm with reverse score items	.733	.767	7	22.88	31.850	5.644	7
Antifemininity Norm without reverse score items	.792	.807	7	25.25	36.867	6.072	7

In the studies conducted by Abreu et al. (2000) and Vincent et al. (2011), the alphas for the three scales were Status: $\alpha = .83$ and $\alpha = .78$; Toughness: $\alpha = .74$ and $\alpha = .65$; and Antifemininity: $\alpha = .63$ and $.72$ respectively. All of the alphas for the subscales in the pilot study were greater than the alphas in the previous studies Status: $\alpha = .84$; Toughness: $\alpha = .652$ (with reverse-scored item) and $\alpha = .749$ (without reverse-scored item); and Antifemininity: $\alpha = .733$ (with reverse-scored item) and $\alpha = .792$ (without reverse-scored items). Since the alphas for the MRNS subscales were \geq the alphas for the subscales used in previous studies, I determined that the responses from the MRNS used in the online survey were reliable and no changes were needed for the instrument.

Finally, I determined whether the questions in the online survey were understood by participants by asking the following question at the end of each section (IIFAS, MRNS, and demographics): “Did you find any of the questions listed difficult to answer?” Comments were received only for the section containing the IIFAS questions. Specifically, three participants made the following comments:

1. [sic] The question about breast milk being healthier than formula. Well I think depends on the mother's diet or rather the mother is on medication that will affect the food.
2. [sic] One the questions are pretty repetitive and if you disagree with it you have no recourse to disagree except on the light basis but I do think the survey can measure read a collective response there is to agree 100%
3. [sic] None of my kids were breast fed for an extended period of time so it is hard for me to intelligently answer some of the questions.

Upon review of the comments, I found that they did not affect the overall survey; however, based on the third comment I decided to compare the scores of men whose spouse (or significant other) breastfed with the scores of men whose spouse (or significant other) did not breastfeed to see whether a significant difference occurred. Since this was already one of my proposed research questions, no changes were needed to any portion of my study. Results from the pilot study indicated that the online survey format was reliable and the study was able to move forward.

Research Setting

The quantitative component of the study was conducted using an online survey instrument. Access to the survey was restricted to individuals who agreed to and signed an electronic informed consent prior to entering the survey site. Because the survey was electronic, individuals could participate from any location as long as they had Internet access. The focus groups were conducted at neutral locations. However, one session was held at the SOCBC. This was because it was more convenient for participants to travel to that site given that they were members of the organization and familiar with its location.

Initially, I partnered with several organizations to obtain volunteers for both the online survey and focus groups. These organizations signed a letter of cooperation stating they would disseminate study invitations through their membership listservs (distribution lists) for both the online survey and focus groups. Although multiple means of communication were used to reach potential participants (link via email, flyer, bulletin announcements, etc.), a limited number of volunteers were gathered through the use of the partner organizations.

Most of the online survey participants were received using a panel I purchased through Cint, a survey company that works with Survey Gizmo to assist researchers in finding volunteers for their study. The company created a customized respondent pool for me, drawing from groups of consumers, niche specialty groups, and B2B networks. I received a panel quote from Cint stating where they would draw the participants from and the cost of each completed survey. Each panelist who completed the survey was paid \$2.25 for his services. Of the participants who completed the survey 4% ($n = 9$) came from a partner organization. The remaining participants (96%; $n = 197$) heard about the survey through other sources (Cint participants = 139; other = 59).

Additionally, no participants were recruited for the focus groups using the methods stated above. Instead, I requested permission from the Walden University IRB to provide Subway gift cards in the amount of \$5.00 to focus group participants. The fact that approximately 67% of participants for the online survey and 100% of the participants for the focus groups were provided some type of payment for their participation could have influenced the results of both the quantitative and qualitative components of the study. This issue is discussed further in Chapter 5.

Demographics for Overall Study

Demographic Characteristics of Participants: Quantitative

The total sample size (N) for the online survey portion of this study consisted of 232 AA (Black) males. There was missing data on the last demographic question “where did you hear about the survey” as well as several questions under the IIFAS and MRNS for 26 participants (11.2%). These participants were removed from the final dataset, leaving 206 participants included in the data analysis.

Age and relationship status. The frequency and percentages of participant demographic data were obtained from descriptive analysis. As stated previously, the final dataset for the online survey consisted of 206 participants. The age of participants is reported by group: 18-24, 25-34, 35-54, and 55 +. Of the 206 participants who completed the online survey, 52% ($n = 107$) were between the ages of 35 and 54. Approximately 45% ($n = 95$) of men participating in the online survey were married, and 33% ($n = 68$) identified as single.

Education and income level. Demographic data was also collected on education and income levels. Fifty-two participants (25.2%) received a postgraduate degree. The other two categories having at least 20% of participants were some college but no degree ($n = 45$ or 21.8%) and bachelor's degree ($n = 42$ or 20.4%). Table 7 presents the demographic characteristics of the study sample.

Table 7

Frequencies and Percentages - Age, Education, Relationship Status, and Income

	Frequency	Percentage
Age		
18-24	6	2.9
25-34	37	18.0
35-54	109	52.9
55+	53	25.7
Total	206	100.0

Note^a: For this question, all participants did not provide a response. Data was missing for two of the participants.

(table continues)

	Frequency	Percentage
Relationship Status		
Single	68	33.0
Married	94	45.6
Not married but living with Intimate Partner	16	7.8
Divorced	20	9.7
Separated	6	2.9
Total ^a	204	99.0
Education Level		
12th grade or less	3	1.5
Graduated high school or equivalent	38	18.4
Some college, no degree	45	21.8
Associate degree	24	11.7
Bachelor's degree	42	20.4
Post-graduate degree	52	25.2
Total	206	100.0
Income		
Less than \$25K	44	21.4
\$25K - \$34K	22	10.7
\$35K - \$49K	31	15.0
\$50K - \$74K	36	17.5
\$75K - \$99K	22	10.7
\$100K - \$124K	16	7.8
\$125K - \$149K	9	4.4
\$150K or more	25	12.1
Total	206	100.0

Child and breastfeeding status of spouse or significant other. Table 8 reports the frequencies and percentages associated with men who reported having children and the breastfeeding status of the participant's spouse or significant other. Fifty-nine percent ($n = 122$) had children; forty-three percent ($n = 90$) stated that their spouse or significant other breastfed.

Table 8

Frequencies and Percentages of Child Status and Spouse/Significant Other's Breastfeeding Status

Child Status ^a	Frequency	Percentage
Yes	122	59.2
No	83	40.3
Total	205	99.5

Breastfeeding Status of Spouse or Significant Other ^b	Frequency	Percentage
Yes	90	43.7
No	110	53.4
Total	200	97.1

Note^a: "Child Status" relates to the question "Do you have children?" where 0=no and 1=yes.

Note^b: "Breastfeeding Status" relates to the question "(Did your spouse or significant other breastfeed?" where 0=no and 1=yes.

Demographic Characteristics of Participants: Qualitative

A total of 17 men volunteered to participate in one of three focus group (FG) sessions that occurred in October 2014, January 2015, and March 2015. The breakdown of men who participated in each session is as follows: 6 volunteers for FG 1; 6 volunteers for FG 2; and 5 volunteers for FG 3. These participants were not required to take the online survey in order to participate in the focus group sessions. Since the online survey

was anonymous, there was no way to tell whether these men had also taken the survey as this question was not posed during any of the focus group sessions.

Means Scores of Study Variables

The sample's mean score for each variable were as follows: (a) attitude toward breastfeeding - 59.51 (out of a maximum score of 85), (b) masculinity ideology – 100.52 (out of a maximum score of 166), (c) Status subscale – 46.40 (out of a maximum score of 70), (d) Toughness subscale – 31.67 (out of a maximum score of 56) and (e) Antifemininity subscale – 22.45 (out of a maximum score of 44). Table 9 identifies the standard deviation, the minimum and maximum scores, the mean, and standard error for each variable.

Table 9

Table Showing the Descriptive Statistics of Quantitative Data Collected in the Study

Variables	Minimum	Maximum	Mean		Std. Deviation
	Statistic	Statistic	Statistic	Std. Error	Statistic
Attitude toward breastfeeding	43 ^a	77 ^a	59.51 ^a	.533 ^a	7.648 ^a
Masculinity ideology	40 ^b	166 ^b	100.52 ^b	1.428 ^b	20.498 ^b
Status subscale	23 ^c	70 ^c	46.40 ^c	.692 ^c	9.932 ^c
Toughness subscale	10 ^d	56 ^d	31.67 ^d	.527 ^d	7.558 ^d
Antifemininity subscale	7 ^e	44 ^e	22.45 ^e	.568 ^e	8.155 ^e

Table 9 provides descriptive statistics for each of the IIFAS and MRNS, including the three subscales of the MRNS. Each variable is defined as follows:

1. Under^a “attitude toward breastfeeding” the results for each participant represents the scores for the 17 questions (from the IIFAS) were added

together and the total score ranged from 0 to 85. A higher score correlates to a more favorable or positive attitude toward breastfeeding;

2. Under^b “masculinity ideology” *the* results for each participant represents the scores for the 26 questions (from the MRNS) were added together and the total score ranged from 0 to 182. A higher score correlates to a more favorable or positive attitude toward breastfeeding;
3. Under^c “Status Subscale” the results represent the scores from the 11 questions (from MRNS) for this subscale that were added together to get the score;
4. Under^d “Toughness Subscale” the results represent the scores from the 7 questions (from MRNS) for this subscale that were added together to get the score; and
5. Under^e “Antifemininity Subscale” the results represent the scores from the 8 questions (from MRNS) for this subscale that were added together to get the score.

Overview of Data Collection

The data collection for this research was acquired using two methods: (a) an online survey that combined questions from the Iowa Infant Feeding Attitudes Scale (IIFAS) (Q = 17) and Male Role Norms Scale (MRNS) (Q = 26) and (b) 3 focus groups with a total of 17 men. A total of 232 men signed an electronic informed consent prior to accessing the online survey. Twenty-six men were able to access the survey after agreeing to the informed consent but only partially completed the survey. Partial survey

data was not included in the analysis. A total of 206 participants completed the survey. The response rate for online survey was 88.79% ($[206/232]*100$).

After the Walden University IRB (IRB approval number 05-22-14-0078608) granted approval, the data was obtained first by launching the online survey through the Survey Gizmo platform in July 2014. Data collection through various means including distributing through listservs of partner organizations, posting through listservs of professional organizations, dissemination of flyers, posting on Walden Participant Pool, and use of social media only yielded 68 completed surveys. I petitioned the Walden University IRB and received approval to collect the remaining survey data by purchasing a panel. The panel was purchased through Cint, a private company that was connected to the researcher's survey platform (i.e., Survey Gizmo). The data collection for the survey was completed in November 2014 and downloaded from the Survey Gizmo site into SPSS format. General guidelines in data management planning including the initial cleaning of data, minimizing variable names, and tracking of coding process were implemented to reduce data processing errors. Additionally, all data was backed up and stored according to University requirements and IRB guidelines.

Data Analysis: Full Study

Quantitative Results

The IIFAS was analyzed both as a continuous variable (total score) and as a dichotomous variable (low score versus high score) for the purpose of bivariate analyses, conducted in previous studies (Holbrook, White, Heyman, & Wojcicki, 2013). Total attitude scores range from 17, reflecting positive formula feeding attitudes, to 85 indicative of attitudes that favor breastfeeding (Holbrook et al. 2013). To compare high

versus low scores on the IIFAS, scores were placed into two groups following directions for visual binning (Pallant, 2007, p.50). Men with a total IIFAS score less than or equal to the median ($M = 60$) were assigned to the low score group, while those with a total score of $61 \leq$ were assigned to the high score group (see Table 10). Approximately, 52.9% of men scored ≤ 60 showing that they had a less favorable attitude toward breastfeeding (or more favorable attitude toward formula feeding); 47% of men had a more favorable attitude toward breastfeeding.

Table 10

Comparison of IIFAS Scores for Bivariate Analysis

	Frequency	Percent	Valid Percent	Cumulative Percent
<= 60.00 (low)	109	52.9	52.9	52.9
Valid 61.00+ (high)	97	47.1	47.1	100.0
Total	206	100.0	100.0	

The MRNS was analyzed both as a continuous variable (total score) and as a dichotomous variable (low score versus high score) for the purpose of bivariate analyses. I received scoring guidelines from the creator of the MRNS (Pleck) stating that high score indicate more traditional attitudes about masculinity. The scoring instructions discuss computing the summary scale scores as the average of the responses to the items. This method is preferable to computing the summary scale score as a sum of the item responses. When the average is used it is possible to use data from individuals who neglected to answer 1 or 2 items. Using this technique, I used SPSS to calculate the

Mean score for MRNS for each participant. Following the creation of a new variable (MRNS_avg2) visual binning was used to divide the participants into two groups based on the median score. Individuals with mean scores ≤ 3.98 were considered assigned to the non- traditional group and those with mean scores ≥ 3.99 were assigned to the traditional group.

Table 11

Comparison of MRNS Summary Scores for Bivariate Analysis

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	≤ 3.98	103	50.0	50.0
	3.99+	103	50.0	100.0
	Total	206	100.0	100.0

After conducting this analysis, I found that the men were evenly distributed in the high (traditional) and low (non-traditional) groups. I also used the visual binning process to calculate a summary score based on the total score for all items to see whether a difference existed between it and the summary scores based on the average of responses to the items. As before men with a total score less than or equal to the median ($M = 99.5$) were assigned to the low score (non-traditional masculinity) group, while those with a total score greater than 99.51 were assigned to the high score (traditional masculinity) group

Table 12

Comparison of MRNS Scores for Bivariate Analysis

	Frequency	Percent	Valid Percent	Cumulative Percent
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Valid	<= 99.50 (low)	103	50.0	50.0	50.0
	99.51+ (high)	103	50.0	50.0	100.0
	Total	206	100.0	100.0	

Once again, the men were evenly distributed across both the high (traditional) and low (non-traditional) groups. Since no difference existed between using the summary score versus the total MRNS score, I determined that using the total MRNS score was just as appropriate for this study. Overall, data showed that there were an equal amount of men ($n = 103$) having a non-traditional masculinity ideology as compared to those having a traditional masculinity ideology ($n = 103$)

Since there were no apparent differences between the two groups, I examined the MRNS subscale scores to see whether any differences existed between those score and the Total IIFAS scores. The same process was used to group individuals according to the MRNS subscales: Status: individuals with score ≤ 45 are in low group; those with score ≥ 46 are in high group; Toughness: individuals with score ≤ 32 are in low group; those with score ≥ 33 are in high group; and Antifemininity: individuals with score ≤ 22 are in low group; those with score ≥ 23 are in high group (see Tables 13a – c).

Table 13a

Comparison of MRNS Status Subscale Scores for Bivariate Analysis

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	<= 45 (low)	110	53.4	53.4
	46+ (high)	96	46.6	100.0
	Total	206	100.0	100.0

Table 13b

Comparison of MRNS Toughness Subscale Scores for Bivariate Analysis

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid <= 32 (low)	123	59.7	59.7	59.7
Valid 33+ (high)	83	40.3	40.3	100.0
Total	206	100.0	100.0	

Table 13c

Comparison of MRNS Antifemininity Subscale Scores for Bivariate Analysis

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid <= 22 (low)	105	51.0	51.0	51.0
Valid 23+ (high)	101	49.0	49.0	100.0
Total	206	100.0	100.0	

The analysis showed that the majority of the participants scored in the low range for each of the subscales – Status: 53.4% ($n = 110$); Toughness: 59.7% ($n = 123$); and Antifemininity: 51% ($n = 105$). A regression analysis was conducted to see whether there were specific correlations that exist between various questions and the total scores on the IIFAS and MRNS.

Summary of Statistical Analysis

A multiple (linear) regression analysis was conducted to analyze specific correlations between IIFAS and MRNS scores, MRNS subscales, and the various demographics. The data analysis allowed me to answer the research question.

Hypothesis Testing of Questions 1 and 2. For research questions 1 and 1a, I created two sets of hypotheses:

RQ1. Is masculine ideology associated with attitudes on breastfeeding among AA men?

H_0 - There is no relationship between a man's masculine ideology and his attitude on breastfeeding.

H_a (Directional Hypothesis) - There is a negative relationship between a man's masculine ideology and his attitudes on breastfeeding.

RQ2. Is there a difference between men who hold a traditional view of masculinity (masculine ideology) and men with a non-traditional view, with regards to their breastfeeding attitudes?

H_0 - There is no relationship between men who hold a traditional view of masculine ideology and his attitude toward breastfeeding (i.e., a more traditional masculinity ideology (high MRNS score) does not equal a more negative breastfeeding attitude (lower IIFAS score).

H_a (Directional Hypothesis) – Men who hold a traditional view of masculine ideology will have a negative attitude toward breastfeeding.

In order to answer the first research question (RQ1.), a multiple (linear) regression analysis was conducted to determine whether a correlation existed between the IIFAS and MRNS score. As part of this analysis, three tables were produced to help determine if a significant correlation exists between IIFAS and MRNS scores (see Table 14a-c).

Table 14a

Summary Output of Multiple Linear Regression Analysis Examining the Association Between Total IIFAS and Total MRNS Scores

Model Summary ^b				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.268 ^a	.072	.067	7.39

a. Predictors: (Constant), Total MRNS Score

b. Dependent Variable: Total IIFAS Score

In Table 14a, the R (.268) is the root of the R-Squared ($R^2 = .072$) and is the correlation between the observed and predicted values of the dependent variables (Total IIFAS Score). The R^2 is the proportion of variance in the Total IIFAS scores that can be explained by the Total MRNS score (independent variable). The R^2 stated in the Table 10a tells us that 7.2% of the variation in the dependent variable (Total IIFAS score) was accounted for by the dependent variable (Total MRNS score) (Institute for Digital Research and Education [IDRE]/University of California, Los Angeles [UCLA], 2015).

The Adjusted R-Square (.067) is an adjustment of the R^2 (.072) that penalizes the addition of extraneous predictor or independent variables to the model. For this analysis, there was only one predictor (Total MRNS Score). Additionally, the Std. Error of the Estimates is standard deviation of the error term and the square root of the Mean Square for the Residuals in the ANOVA table (see Table 14b).

Table 14b

Analysis of Variance (ANOVA) Examining Whether a Correlation Exists Between Total IIFAS and Total MRNS Scores

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
	Regression	863.04	1	863.04	15.82	.000 ^b
1	Residual	11128.44	204	54.55		
	Total	11991.48	205			

a. Dependent Variable: Total IIFAS Score

b. Predictors: (Constant), Total MRNS Score

An ANOVA was conducted as part of the multiple regression analysis. The rows marked Regression, Residual, and Total represent the three sources of variance that can explain the independent variable (Total MRNS Score) and the variance not explained by the independent variable (Total IIFAS Score). The *df* represents the degrees of freedom ($N-1$). The *df* was calculated for the Regression and Residual. A significant F-test in the ANOVA table informed me as to whether there is a linear relationship between the IIFAS score and the MRNS Score. Additionally, the value in the “Sig.” column allowed me to determine if the MRNS Score had a significant effect on the IIFAS score. Since the number in the “Sig.” column is less than the critical value of the alpha (α) set by me ($\alpha = .05$), the effect of the MRNS score on the IIFAS score was determined to be significant. Information from the Table 10c confirms that a significant correlation exists between the IIFAS and MRNS scores.

Table 14c

Coefficient Table Examining the Type of Correlation that Exists Between IIFAS and MRNS Scores

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
	(Constant)	69.57	2.58				26.95
1 Total MRNS Score	-.100	.025	-.268	-3.98	.000	-.150	-.050

Table 14c provides information on B, the Beta (β), and the p -value. The B represents the values for the regression equation for predicting the dependent variable (IIFAS score) from the independent variable (MRNS score). Both the T and $Sig.$ represent the t -statistics and their associated 2-tailed p -values used in testing whether a given coefficient is significantly different from zero. The β represents the standardized coefficients for the both variables (IIFAS and MRNS scores). The Confidence Interval for B is connected to the p -values. Additionally, there is a negative correlation between the positive breastfeeding attitudes (higher total IIFAS Score) and traditional masculinity ideology (lower total MRNS Score) that are denoted by beta ($\beta = -.100$). This means that for one unit increase in IIFAS score the MRNS score would decrease by .100. Based on the scoring of the scales, I interpreted this to mean that AA men who have a more positive attitude toward breastfeeding (higher IIFAS score) would also have a less traditional masculinity ideology (lower MRNS score). The null hypotheses (H_0) for Q1 and Q2 are rejected because there was a significant negative relation between the Total

IIFAS and Total MRNS scores ($p = .000$ and $F = 15.821$). I failed to reject the directional hypothesis (H_a) for Q1 and Q2 because the data showed that there is a negative relationship between a man's traditional masculine ideology and his positive attitude on breastfeeding.

A second multiple (linear) regression analysis was performed to see if a correlation existed between total IIFAS score and MRNS subscales (see *Tables 15a-d*).

Table 15a

Summary Output of Multiple Linear Regression Analysis Examining the Association Between IIFAS and MRNS Subscale Scores

		Correlations			
		Total IIFAS Score	Status Subscale	Toughness Subscale	Antifemininity Subscale
Pearson Correlation	Total IIFAS Score	1.000	-.165	-.166	-.320
	Status Subscale	-.165	1.000	.537	.341
	Toughness Subscale	-.166	.537	1.000	.503
	Antifemininity Subscale	-.320	.341	.503	1.000
Sig. (1- tailed)	Total IIFAS Score	.	.009	.009	.000
	Status Subscale	.009	.	.000	.000
	Toughness Subscale	.009	.000	.	.000
	Antifemininity Subscale	.000	.000	.000	.

(table continues)

	Total IIFAS Score	Status Subscale	Toughness Subscale	Antifemininity Subscale
N	206	206	206	206
	206	206	206	206
	206	206	206	206
	206	206	206	206

Table 15b

Summary Output of Multiple Linear Regression Analysis Examining the Association Between IIFAS and MRNS Subscales Scores

Model Summary ^b				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.327 ^a	.107	.093	7.28

a. Predictors: (Constant), Antifemininity Subscale, Status Subscale, Toughness Subscale

b. Dependent Variable: Total IIFAS Score

The R^2 stated in the Table 15b tells us that 10% of the variation in the dependent variable (total IIFAS score) was accounted for by the independent (predictor) variables (Status, Toughness, and Antifemininity subscale scores).

Table 15c

Analysis of Variance Examining Whether a Correlation Exists Between IIFAS and MRNS Subscale Scores

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1279.91	3	426.64	8.05	.000 ^b
	Residual	10711.57	202	53.03		
	Total	11991.48	205			

a. Dependent Variable: Total IIFAS Score

b. Predictors: (Constant), Antifemininity Subscale, Status Subscale, Toughness Subscale

An ANOVA was conducted to as part of the multiple regression model. The value in the “Sig.” column allowed me to determine if the MRNS subscale score had a significant effect on the IIFAS score. Since the number in the “Sig.” column is less than the critical value of the alpha (α) set by me ($\alpha = .05$), the effect of the MRNS subscales score on the IIFAS score was determined to be significant. Information from *Table 15d* helped determine which subscale(s) had a significant correlation with the IIFAS scores.

Table 15d

Coefficient Table Examining the Type of Correlation that Exists Between IIFAS and MRNS Subscale Scores

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	95.0% Confidence Interval for B	
	B	Std. Error				Lower Bound	Upper Bound
(Constant)	67.74	2.64		25.62	.000	62.53	72.95
Status Subscale	-.058	.061	-.075	-.952	.342	-.178	.062
1 Toughness Subscale	.032	.087	.031	.362	.718	-.140	.203
Antifemininity Subscale	-.291	.073	-.310	-4.01	.000	-.434	-.148

The Correlation table suggests that there are significant correlations between IIFAS score and each of the three subscales (Status $p = .009$; Toughness $p = .009$; and Antifemininity $p = .000$). However after accounting for all scales, the regression results displayed in the Coefficients table suggest that only Antifemininity was significant ($\beta = -.291$; $p = .000$; $F = 8.046$). This means that for one unit increase in IIFAS score the

Antifemininity subscale score decreased by .291 (~.30). The data analysis provided evidence that there is a negative correlation between the total IIFAS score and MRNS subscales Antifemininity subscale. This means that the higher the IIFAS score (more positive the attitude toward breastfeeding) the lower the score for Antifemininity.

Hypothesis Testing of Question 3. I created two hypotheses to answer question 3:
RQ3: Is masculine ideology associated with spouse/partner's breastfeeding behavior among AA men?

H_0 – There is no association between masculinity ideology and infant feeding behaviors.

H_a – There is positive association between masculinity ideology and infant feeding behaviors.

A multiple (linear) regression analysis was conducted to determine whether a correlation existed between the MRNS and BF status (see Tables 16a - d).

Table 16a

Summary Output of MRNS and Spouse/ Significant Other's Breastfeeding Status

		Correlations	
		Total MRNS Score	Breastfeeding status
Pearson Correlation	Total MRNS score	1.000	.065
	Breastfeeding status	.065	1.000
Sig. (1-tailed)	Total MRNS score	.	.180
	Breastfeeding status	.180	.
N	Total MRNS score	200	200
	Breastfeeding status	200	200

Table 16b

Summary Output of Multiple Linear Regression Analysis Examining the Association Between MRNS and Spouse/Significant Other's Breastfeeding Status

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.065 ^a	.004	-.001	20.61

a. Predictors: (Constant), Breastfeeding status

The R^2 stated in the Table 16b tells us that .4% of the variation in the dependent variable (MRNS score) was accounted for by the independent (predictor) variables (Breastfeeding status).

Table 16c

Analysis of Variance Examining Whether a Correlation Exists Between MRNS and Spouse/Significant Other's Breastfeeding Status

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	356.28	1	356.28	.838	.361 ^b
1	Residual	84134.84	198	424.92		
	Total	84491.12	199			

a. Dependent Variable: Total MRNS Score

b. Predictors: (Constant), Breastfeeding status

An ANOVA (Table 16c) was conducted to as part of the multiple regression model. The value in the "Sig." column is more than the critical value of the alpha (α) set by me ($\alpha = .05$), showing that the effect of breastfeeding status on the MRNS score was not significant.

Table 16d

Coefficient Table Examining the Type of Correlation that Exists Between MRNS and Spouse/Significant Other's Breastfeeding Status

Model	Coefficients ^a						
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
	(Constant)	96.46	4.77		20.22	.000	87.05
1 Breastfeeding status	2.68	2.93	.065	.916	.361	-3.09	8.46

a. Dependent Variable: Total MRNS Score

The Correlation table (Table 16a.) suggests that there is no significant correlations between MRNS score and the breastfeeding status of the spouse/significant other ($p = .065$). These results are also seen in the Coefficient table (Table 16d) ($\beta = 2.683$; $p = .361$; $F = .838$).

Analysis of IIFAS and MRNS Across Demographics

Finally, a crosstab analysis was completed to look at differences among participants based on specific categorical characteristics including age, education, income, and marital/relationship status (Table 17a).

Table 17a

Crosstab Analysis of Demographic Data, IIFAS, and MRNS Scores

	IIFAS Scores			MRNS Scores		
	Negative Breastfeeding Attitudes	Positive Breastfeeding Attitudes	Total	Non-Traditional Masculinity Ideology	Traditional Masculinity Ideology	Total
Age of Participant	(n = 109)	(n = 97)		(n = 103)	(n = 103)	
18-24 (n = 6)	4 3.7%	2 2%	6	2 1.9%	4 3.9%	6
25-34 (n = 37)	28 25.6%	9 9.3%	36	16 15.5%	21 20.9%	36
35-54 (n = 109)	53 48.6%	56 57.7%	109	55 53.4%	54 52.4%	109
55+ (n = 53)	24 22%	29 29.9%	53	29 28.1%	24 23.3%	53
Education Level	(n = 109)	(n = 97)		(n = 103)	(n = 103)	
12 th grade (n = 3)	2 1.8%	1 1%	3	1 .97%	2 1.9%	3
Graduated High School or equivalent (n = 38)	36 33%	2 2.1%	38	11 10.7%	27 26.2%	38
Some college, no degree (n = 45)	22 20.9%	23 23.7%	45	23 22.3%	22 21.3%	45
Associate degree (n = 24)	12 11%	12 12.4%	24	10 9.7%	14 13.6%	24
Bachelor's degree (n = 42)	17 15%	25 25.8%	42	25 24.3%	17 16.5%	42
Post-graduate degree (n = 52)	20 15.6%	32 33%	52	31 30.1%	21 20.4%	52

(table continues)

	Negative Breastfeeding Attitudes	Positive Breastfeeding Attitudes	Non- Traditional Masculinity Ideology	Traditional Masculinity Ideology
Income	(n = 109)	(n = 97)	(n = 103)	(n = 103)
Less than \$25K	36 33%	8 8.2%	16 15.5%	28 27.2%
\$25K – \$34K	11 10.1%	11 11.6%	10 9.7%	12 11.6%
\$35K – \$49K	16 14.7%	15 15.5%	12 11.6%	19 18.4%
\$50K – \$74K	18 16.5%	18 18.5%	18 17.5%	18 17.5%
\$75K – \$99K	9 8.2%	13 13.4%	16 15.5%	6 5.8%
\$100K – \$124K	6 5.5%	10 10.3%	9 8.7%	7 6.8%
\$125K – \$149K	2 1.8%	7 7.2%	5 4.8%	4 3.9%
\$150K or more	11 10%	14 14.4%	16 15.5%	9 8.7%
Marital/Relationship Status	(n = 109)	(n = 95)	(n = 101)	(n = 103)
Single, never married	44 40.3%	24 25.2%	24 23.8%	44 42.7%
Married	42 38.5%	52 54.7%	55 54.4%	39 37.9%
Not married, but living with intimate partner	9 8.2%	7 7.4%	9 8.9%	7 6.8%
Divorced	10 9.6%	10 10.5%	10 9.9%	10 9.7%
Separated	4 3.7%	2 2.1%	3 2.9%	3 2.9%

Note: The numbers displayed in each column represents the number of men in each demographic category who responded in a specific way on both the IIFAS and MRNS.

Note: The percentages displayed in each row, represent the number of men in that demographic category that responded in a specific way on both the IIFAS and MRNS.

All 206 participants answered demographic questions related to age, educational level, and income. Of the 206 participants who answered these demographic questions 53% ($n = 109$) scored as having a negative breastfeeding (BF) attitude, while 47% ($n = 97$) scored as having a positive breastfeeding attitude. There was a 50 - 50 split between participants who scored as having a traditional masculinity ideology or non-traditional masculinity ideology ($n = 103$ for each). An overview of this data is stated below.

Age of Participant: There were four answer choices for age (18 – 24, 25 – 24, 35 – 54, and 55+). The largest group in this category was men between ages 35 – 54 ($n = 109$), while the second largest was men ages 55+ ($n = 53$). The crosstab analysis showed that 57.7% ($n = 56$) of men who answered this question scored as having a positive breastfeeding (BF) attitude and were between the ages of 35-54. However, an almost equal amount of men in this age group ($n = 53$; 48.6%) scored as having a negative breastfeeding attitude. Within this age group there was almost an equal amount of men who scored as having either a traditional or no-traditional masculinity ideology ($n = 54$, 52.4% and $n = 55$, 53.4% respectively). Additionally, an equal amount of men age 55+ scored as having both a positive BF attitude and non-traditional ideology ($n = 29$ each; 29.9% and 28.1% respectively) as well as a negative BF attitude and traditional masculinity ideology ($n = 24$ each; . 22% and 23.3% respectively).

Education Level: There were answer choices for educational level ranging from 12th grade to postgraduate degree. Under education, the majority of men who scored as having both a negative BF attitude and a traditional masculinity ideology ($n = 60$, 55.7%, and 49.4%, $n = 51$ respectively) were also those who had a lower educational level (some college, no degree or below). Additionally, men with an associate degree or above

scored as having both a positive BF attitude and non-traditional masculinity ideology (55%, $n = 69$ and 50.5%, $n = 52$ respectively).

Income: The analysis showed that the majority of men earning less than \$25K ($n = 36$) had both a negative BF attitude and a more traditional masculinity ideology (33% and 27.2% respectively).

Marital/Relationship Status: Only 204 participants answered demographic questions related to child status and breastfeeding status of spouse/significant other. The majority of participants identified as being either married ($n = 94$, 45.6%) or single ($n = 68$, 33%) or. The majority of those who were single ($n = 44$, 64.7%) had both a negative BF attitude and a traditional masculinity ideology, while the majority of those who identified as being married had both a positive BF attitude and non-traditional masculinity ideology ($n = 52$, 54.7% and $n = 55$, 54.4%, respectively).

A crosstab analysis was also completed to look at differences among participants based on child status and breastfeeding status of spouse/significant other (*Table 17b*).

Table 17b

Crosstab Analysis of Demographic Child and Breastfeeding Status, IIFAS, and MRNS Scores

	IIFAS Score		MRNS Score	
	Negative Breastfeeding Attitudes	Positive Breastfeeding Attitudes	Non-Traditional Masculinity Ideology	Traditional Masculinity Ideology
Child Status	(n = 109)	(n = 96)	(n = 102)	(n = 103)
Yes	51 46.6%	71 74%	63 61.8%	59 57.3%
No	58 53.2%	25 26%	39 38.2%	44 42.7%
Breastfeeding Status of Spouse/Significant Other	(n = 107)	(n = 93)	(n = 100)	(n = 100)
Yes	34 31.7%	56 60.2%	49 49%	41 41%
No	73 68.2%	37 40%	51 51%	59 59%

Note: The numbers displayed in each column represents the number of men in each demographic category who responded in a specific way on both the IIFAS and MRNS.

Note: The percentages displayed in each row, represent the number of men in that demographic category that responded in a specific way on both the IIFAS and MRNS.

Child Status: A total of 205 participants responded to this question with 59.5% ($n = 122$) responding “Yes” to child status (meaning they have a child/children) and 40.5% ($n = 83$) responding “No” to child status. Of those that responded “Yes”, the majority (74%, $n = 71$) scored as having a positive BF attitude and a non-traditional masculinity ideology (61.8%, $n = 63$). The majority of those responding “No” (53.2%, $n = 58$) scored as having a negative BF attitude and a traditional masculinity ideology (42.7%, $n = 44$).

Breastfeeding Status of Partner/Significant Other: A total of 200 participants responded to this question with 55% ($n = 110$) responding “Yes” to the question on

breastfeeding status of partner and 45% ($n = 90$) responding “No”. Of those that responded “Yes” 60.2% ($n = 56$) scored as having a positive BF attitude while 49% ($n = 49$) had a non-traditional masculinity ideology. Additionally, the majority of those that responded “No” ($n = 73$, 68.2%) scored as having a negative BF attitude and a traditional masculinity ideology (59%, $n = 59$).

Qualitative Results

The qualitative data collection method used for this study was focus group sessions. The focus group method was chosen for this study because it provided the best opportunity for me to collect additional information from men on their perceptions and attitudes toward breastfeeding. Information from the focus group sessions were documented through flipchart notes taken by me. Each session was also digitally recorded as a back-up. The digital recordings were transcribed by me using NVivo 10, computerized program to analyze the qualitative data from the transcription. The notes were then transferred to a Word document for cleaning. Through the utilization of transcription and flipchart notes, themes began to emerge.

Socio-Ecological Model

The socio-ecological model developed by Bronfenbrenner was the framework used to analyze the information gathered from the focus groups. The four levels included in the model for understanding male perspectives toward breastfeeding were similar to those included in the Socio-Ecological Model: A Framework for Prevention (Dahlberg & Krug, 2002) and included the following four levels: societal, community, relationship, and individual. In each of these levels certain factors were identified as being related to a man’s perspective toward breastfeeding (see Table 18).

Table 18

Socio-Ecological Levels Included in Framework for Understanding Male Perspectives Toward Breastfeeding

SEM Level	Common Related Factors
One – Individual	Male concepts of masculinity
Two – Relationships	Family and friends (social networks)
Three - Community	Health care providers
Four - Societal	Social norms about gender, culture and media

The focus group protocol (Appendix N) included questions that were used to collect information related to each of these factors including questions around breastfeeding knowledge, gender roles and norms, media influences, and sociocultural influences. I had originally proposed to use a minimum of two focus groups to gather qualitative information needed for this phase of the study; however after two sessions only 12 individuals had participated in these sessions. The proposed target number of focus group participants was 20 (10% of sample size). A third focus group was held in order to reach the sample size; however this only yielded an additional five participants. In all, 17 men participate in the three focus group sessions.

The audio recording of the focus group was transcribed using NVivo 10. Additionally, field notes taken during the focus group session were uploaded to NVivo as well. When transcribing the recording of each session, the participant's name was not used; instead I use the first letter of their first and last name and denoted them as participant XX. The verbatim transcription proved to be lengthy (PDF document = 35 pages/transcript/focus group) and was found to have grammatical issues that hindered me from beginning the analysis. Instead, I first hand-coded the transcript using Taylor &

Gibbs (2011) a priori coding and constant coding strategies to begin thinking about themes prior to conducting this analysis in NVivo. The “pawing” which utilized colored highlighting was used to look at specific patterns of text throughout the three transcripts. The text was sectioned off and highlighted based on (a) SEM levels, (b) the questions from the focus group protocol associated with each level, and (c) key ideas associated with these questions. Once this was complete, I uploaded the pre-coded documents into NVivo and began the second part of the coding process.

I used the codes found during the precoding phase and created both parent and child nodes in NVivo. The parent nodes were the SEM levels while the child nodes specifically related to the key ideas found during the precoding process. A list of the nodes is stated in Table 19.

Table 19

Example of Coding Beginning with the Study Questions and SEM Levels

SEM Level	Research Questions (Q)	CODES ^a
Level 1 – Individual (male's concept of masculinity)	<p><i>Questions on Infant feeding Practices</i></p> <p>Q1. What do you know about breastfeeding or other infant feeding practices?</p> <p>Q1a. What are your feelings toward breastfeeding?</p> <p>Q2. <i>If married or have spouse/partner breastfed:</i> How were you involved in the selection of the infant feeding method for your child?</p> <p>Q2a. What caused you to select that infant feeding method?</p> <p><i>Questions on Masculine Ideology and Gender Norms</i></p> <p>Q3. Can you talk a little about your thoughts on gender role norms?</p> <p>Q3a. What do you think are male specific tasks?</p> <p>Q3b. What are female specific tasks?</p> <p>Q3c. What are gender neutral tasks?</p> <p>Q4. What were/are some common practices in your household?</p> <p>Q5. Where would you place the topic of infant feeding choice it in relation to gender norms?</p>	<p>Breastfeeding Knowledge</p> <ul style="list-style-type: none"> • Where did you get BF Info <p>Gender Norms</p> <ul style="list-style-type: none"> • Gender Norms - family health • Gender Norms - household • Gender Norms - Shared responsibilities <p>Infant Feeding Preference</p> <p>Involvement in BF decision</p> <p>Masculinity</p> <p>Other Infant Feeding Knowledge</p> <p>Opinion about how women are influenced to BF</p> <p>Self or male opinion about why women BF</p>

(table continues)

Level 2 –	<i>Questions on Sociocultural influences</i>	Family
Relationships	<p>Q1. Where did you get your information on infant feeding practices (breastfeeding)? (i.e., family, friends, health professional, etc.)</p> <p>Q2. Who in particular would you say has influenced your thoughts about infant feeding practices? About breastfeeding?</p> <p>Q3. Is there anyone in your family that breastfeeds or breastfed their child? (i.e., mother, in-laws, friends, siblings, etc.)?</p> <p>Q4. Is there anyone in your social network who breastfeeds? (or Is there anyone in your circle of friends whose partner/spouse breastfeeds?)</p>	Friends Parents Where did you get BF Info
Level 3 –	<p>Q1. Where did you get your information on infant feeding practices (breastfeeding)? (i.e., family, friends, health professional, etc.)</p>	Physicians
Community		

(table continues)

SEM Level	Research Questions (Q)	CODES ^a
Level 4 (social norms about gender, culture, media)	<p><i>Questions on Media</i></p> <p>Q1. What types of images in the media have you seen related to infant feeding practices?</p> <p>Q2. What are your thoughts on images in the media of women breastfeeding?</p> <p>a. Do you find them offensive? Appropriate? Or you have no opinion?</p> <p><i>Questions on Masculine Ideology and Gender Norms</i></p> <p>Q3. Can you talk a little about your thoughts on gender role norms?</p> <p>a. What do you think are male specific tasks?</p> <p>b. What are female specific tasks?</p> <p>c. What are gender neutral tasks?</p> <p>Q4. What were/are some common practices in your household?</p> <p>Q5. Where would you place the topic of infant feeding choice it in relation to gender norms?</p>	<p>Culture Media Public opinion about breastfeeding</p> <ul style="list-style-type: none"> • BF in Public

Note^a: Under “Codes” this information represents the nodes used to categorize/code data in NVivo.

The coding process revealed a total of 19 primary nodes (themes) sorted by SEM Level. After the first review, the breakdown of the nodes was as follows: Level 1 = 12 nodes, Level 2 = 3 nodes, Level 3 = 1 node, and Level 4 = 3 nodes. I conducted a second review of the data and reduced the amount of nodes to come up with more specific themes for the data. The second review collapsed the data into 12 primary nodes. The second review also made a distinction between the placement of gender norms versus

issues or thoughts around masculinity. The process for the review and second sorting can be viewed in Table 20.

Table 20

Review and Sorting of Qualitative Data Themes

SEM Level	First Review of Nodes	Second Review of Nodes
Level 1 – Individual	<ol style="list-style-type: none"> 1. BF - Personal experience 2. Breastfeeding Knowledge 3. Gender Norms <ol style="list-style-type: none"> a. <i>Gender Norms - family health</i> b. <i>Gender Norms – household</i> c. <i>Gender Norms - Shared responsibilities</i> 4. Infant Feeding Preference 5. Involvement in BF decision 6. Lack of BF Knowledge 7. Masculinity 8. Opinion about how women are influenced to BF 9. Other Infant Feeding Knowledge 10. Self-Knowledge on Non-BF Topic 11. Self or male opinion about why women BF 12. Where did you get BF Info 	<ol style="list-style-type: none"> 1. Knowledge <ol style="list-style-type: none"> a. <i>Breastfeeding Knowledge</i> <ul style="list-style-type: none"> • Where did you get BF Info b. <i>Lack of BF Knowledge</i> c. <i>Other Infant Feeding Knowledge</i> d. <i>Self-Knowledge on Non-BF Topic</i> 2. Male Involvement in BF <ol style="list-style-type: none"> a. <i>BF - Personal experience</i> b. <i>Infant Feeding Preference</i> c. <i>Involvement in BF decision</i> 3. Masculinity 4. Opinions
Level 2 – Relationships	<ol style="list-style-type: none"> 1. Family 2. Friends 3. Parents 	Social Networks <ol style="list-style-type: none"> a. <i>Friends</i> b. <i>Relatives</i> <ul style="list-style-type: none"> • Family • Parents

(table continues)

SEM Level	First Review of Nodes	Second Review of Nodes
Level 3 – Community	Physicians	Physicians (medical professionals)
Level 4 – Societal	<ol style="list-style-type: none"> 1. Culture 2. Media 3. Public opinion about breastfeeding <ol style="list-style-type: none"> a. BF in Public 	<ol style="list-style-type: none"> 1. Culture 2. Media 3. Gender Norms <ol style="list-style-type: none"> a. Gender Norms - family health b. Gender Norms - household c. Gender Norms - Shared responsibilities 4. The Public <ol style="list-style-type: none"> a. Public opinion about breastfeeding b. BF in Public

Using NVivo, I was also able to determine the percentage of coding associated with each of the level of the SEM across each of the three focus groups conducted during this phase of the study. *Table 21* reveals that the majority of the coding and major themes are associated with Levels 1 (Individual) and 4 (Societal).

Table 21

Coding by SEM Level Across Focus Group Sessions

SEM Level	Focus Group Coding by Percentage		
	FG 1	FG 2	FG 3
Level 1 – Individual	45.60	34.55	37.55
Level 2 – Relationship	2.50	8.33	7.24
Level 3 – Community	0.00	.87	2.01
Level 4 – Societal	61.91	39.12	54.31

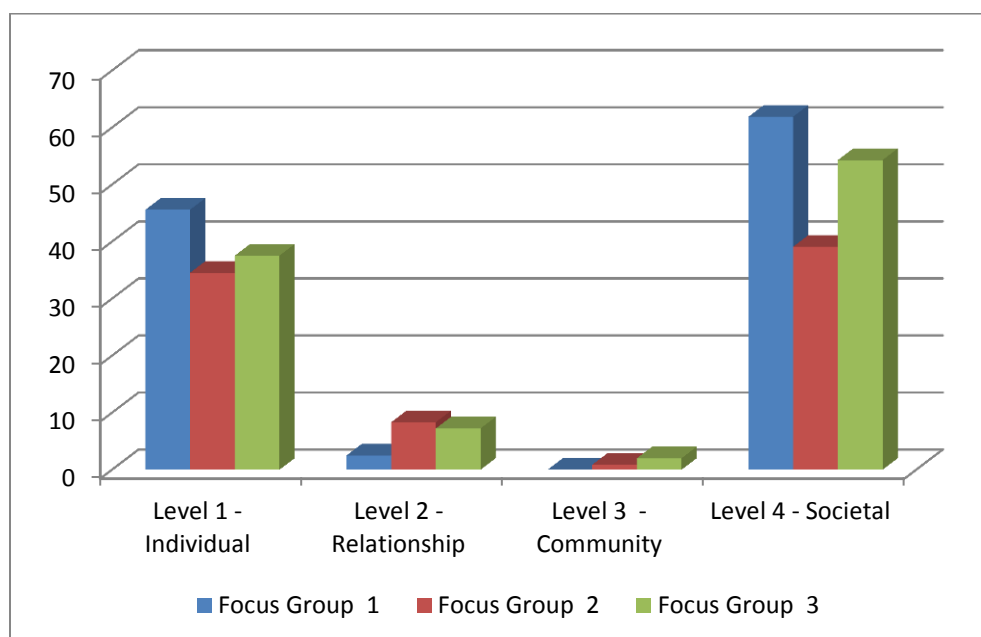


Chart 1. Coding by SEM Level Across Focus Groups

Focus groups (FG) sessions 1 and 3 had a higher level of coding for Level 1 and 4 while FG 2 and 3 had a highest level of coding for Level 2. Level 3 showed similar coding across all three FG group sessions. Focus group session 1 also did not have any coding associated with Level 3 (Community). The following sections provide additional information on specific themes associated with the levels with the highest amount of coding (Levels 1 and 4) and lowest amount of coding (Levels 2 and 3).

Major Themes and Levels

SEM Level 1: Individual. Analysis of the participants' discussion to the five primary and four secondary questions related to infant feeding practices and masculinity/gender norms revealed five major themes: (a) knowledge, (b) male involvement (in breastfeeding), (c) masculinity (what it is to be a man), and (d) opinions.

The themes of Knowledge and Male involvement (in breastfeeding) also uncovered seven sub-themes in these areas (Knowledge = 4 sub-themes, Male Involvement = 3 sub-themes). Table 22 provides additional information on the percentage of coding for each node across the focus group sessions.

Table 22

Coding by Nodes for Level 1 Across Focus Group Sessions

Node	Percentage coverage - FG 1	Percentage coverage - FG 2	Percentage coverage - FG 3
SEM Level 1 - Individual\Knowledge	13.80%	20.11%	23.74%
SEM Level 1 - Individual\Knowledge\Breastfeeding Knowledge	12.29%	2.65%	21.27%
SEM Level 1 - Individual\Knowledge\Breastfeeding Knowledge\Where did you get BF Info	0.00%	0.00%	12.73%
SEM Level 1 - Individual\Knowledge\Lack of BF Knowledge	0.00%	9.10%	0.00%
SEM Level 1 - Individual\Knowledge\Other Infant Feeding Knowledge	0.00%	8.36%	2.47%
SEM Level 1 - Individual\Knowledge\Self Knowledge on Non-BF Topic	1.51%	0.00%	0.00%
SEM Level 1 - Individual\Male Involvement in BF	6.42%	12.86%	9.35%
SEM Level 1 - Individual\Male Involvement in BF\BF - Personal experience	0.00%	3.23%	0.00%
SEM Level 1 - Individual\Male Involvement in BF\Infant Feeding Preference	0.00%	0.00%	5.70%
SEM Level 1 - Individual\Male Involvement in BF\Involvement in BF decision	6.42%	9.63%	7.78%
SEM Level 1 - Individual\Masculinity	4.99%	0.00%	4.47%
SEM Level 1 - Individual\Opinions	20.39%	3.93%	0.00%
SEM Level 1 - Individual\Opinions\Opinion about how women are influenced to BF	0.00%	2.02%	0.00%
SEM Level 1 - Individual\Opinions\Self or male opinion about why women BF	20.39%	1.91%	0.00%

Overall focus group participants' stated that the primary types of infant feeding were breastfeeding and bottle-feeding. Breastfeeding was traditionally seen as "providing milk from the breast", while bottle feeding included providing manufactured milk (i.e., Enfamil) and also breast milk in a bottle. Three additional types of feeding were revealed by participants in focus group sessions one and two: (a) surrogate (having a wet nurse or other relative provide breast milk), (b) combination (providing both breast milk and formula), and (c) spoon feeding (related to providing solid foods). These topics were not discussed in-depth and related more so to some of the participant's cultural experiences. Participants' also stated the benefits of breastfeeding to include being (a) being healthy for the baby, (b) least expensive, (c) able to build-up a child's/infant's immune system, (d) the natural process for feeding the child (infant), (e) more digestible and organic, and (f) relevant in creating a natural/stronger bond between mother and baby. Some skepticism related to the importance of breastfeeding was stated in the last focus group session:

[It] is assumed healthier than formula. That's where the assumption is made (Participant KR from Focus Group Session 3, 3/7/2015).

Participants' also showed their level of knowledge related to formula feeding, specifically noting that it is (a) accessible (easier to get to), (b) a more common practice (for urban/suburban areas), (c) causes less stress on the mother's body, (d) is seen as most expensive approach (compared to breastfeeding), and (e) has more options because of the availability of different types. Participants' showed a lack of knowledge in the area of (a) time commitment (time limit for breastfeeding), storage and pumping of breast milk, and research around the comparison of breast milk to formula. In FG sessions 1 and 3, some

comments were made in reference to a woman's inability to breastfeed to include a non-supportive work environment, wanting to keep up appearance (i.e., don't want to have saggy breasts), inability to produce milk (enough milk), poor diet (child doesn't get the benefit of breastfeeding), and spouse wanting her to stop due to age of the baby (i.e., too old) or it [breastfeeding] interrupts time with him (i.e., couple time – re: cuddle time with hubby). The following is a portion of the discussion on the topic of why women stop breastfeeding.

Participant EW: I'm getting a little personal what I'm about to say on this cause I know from experience my daughter was telling me that her husband keep insisting she stop breastfeeding.

Focus Group Leader (FGL): oh, that's where I am about to go now. Alright so let me (incoherent speech; overlapping speech)

Participant SH: did he say why?

Participant JR: yeah, what was his reason?

Participant EW: just the idea (incoherent speech) I guess the bonding, he wanted = XX = [EW's daughter] to stop [breastfeeding] because he thought she was going too far with it

FGL: ok...

Participant JR: yeah, some fathers are jealous.

Participant CA: um hmmm (agreement). That close bond between the mother and the baby.

Participant JR and Participant SH: some fathers are jealous.

Participant JR: they want the breast for themselves.

(All comments received from Focus Group Session 1, October 18, 2014)

When asked whether they were involved in the decision to breast-feed, most participants stated that they were not involved in this process, but rather informed by

their wife or significant other as to what the choice in infant feeding would be. I asked a follow up question about why they had not been involved in this process and the participants provided the following responses:

I wasn't [involved in breastfeeding decision]; it was my wife's decision and her body (Participant LM from Focus Group Session 2, January 31, 2015).

My wife's option; because I didn't know how long she was to breastfeed, and the accumulation of milk, how it affected [her] body, it raised some concerns in me; 'created a conversation' (Participant KR from FG session 2, January 31, 2015)

I'll also say this [clearing throat], I think the only time I would have possibly gotten into it is if it was something medically that needed a decision [a decision] to be made then I would have, you know, looked at the circumstances or situation and [uhhh] you know, come to a medical consensus. (Participant LM from Focus Group Session 2, January 31, 2015)

For those who were involved in the process, they took a firmer stance with their wives and significant others in making the decision to breastfeed:

I told my partner (my baby's mother [1st child]) and wife (mother of 2nd child) it was "vital" that she breastfed for nutrients part (Participant DR, FG session 2, January 31, 2015)

For 3 oldest, [I] had no say [wasn't present in their lives]; for last child, I told her to breastfeed (Participant EH from FG session 2, January 31, 2015)

There were many opinions about why women do not breastfeed to include body image (i.e., afraid of having sagging breast), non-supportive work environment, painful, time consuming, and poor diet. Some participants also felt that a woman's choice to breastfeed was heavily influenced by her social network (i.e., friends) who may inform her of the pain associated with breastfeeding and the "leakage" of breast milk. In terms of personal experience with breastfeeding, one participant stated that he saw the effect

that that breastfeeding had on his wife which raised some concerns. The following is a portion of the discussion on personal experience with breastfeeding from FG session 2:

Participant KR: I felt the same way. It was my wife's option...you know [umm]...But I did [umm] because I didn't know how long she was supposed to breastfeed and I saw how much [uhhh] milk was accumulating after she pumped daily; then I did [umm] ... I kinda got [uhhh] feel a certain way because it was so much going on for so long and I saw the effect it had on the [her] body...

Focus Group Leader (FGL): so, you didn't know how long it was but you saw the accumulation of milk and how it was affecting her body...

Participant KR: yeah, physically [FGL: okay]

FGL - so what did that do to your opinion then?

Participant KR: [laughter; grunt]

Participant KR: [umm] you know it just [uhhh] raised a little concern, like I said, because I didn't know how long she was going to do it [noise - FGL writing on FC paper] you know [noise - FGL writing on FC paper]. It created a conversation...put it like that.

(All statements are from Focus Group Session 2, January 31, 2015)

SEM Level 4: Societal. Analysis of participants' discussion to the five primary and three secondary questions related to the effects of gender norms, media, and other societal influences on breastfeeding decisions, revealed four main themes: (a) Culture, (b) Media, (c) Gender norms, and (d) the Public. The themes of Gender norms and the Public also uncovered five sub-themes in these areas (Gender norms = 3 sub-themes, The Public = 2 sub-themes). Table 23 provides additional information on the percentage of coding for each node across the focus group sessions.

Table 23

Coding by Nodes for Level 4 Across Focus Group Sessions

Node	Percentage coverage - FG 1	Percentage coverage - FG 2	Percentage coverage - FG 3
SEM Level 4 - Societal\Culture	17.06%	3.29%	11.23%
SEM Level 4 - Societal\Gender Norms	13.62%	18.99%	35.32%
SEM Level 4 - Societal\Gender Norms\Gender Norms - family health	0.00%	11.88%	16.19%
SEM Level 4 - Societal\Gender Norms\Gender Norms – household	8.62%	7.11%	6.67%
SEM Level 4 - Societal\Gender Norms\Gender Norms - Shared responsibilities	0.00%	1.84%	12.45%
SEM Level 4 - Societal\Media	14.42%	8.04%	10.98%
SEM Level 4 - Societal\The Public	16.81%	8.79%	18.99%
SEM Level 4 - Societal\The Public\BF in Public	0.00%	8.79%	18.99%
SEM Level 4 - Societal\The Public\Public opinion about breastfeeding	16.81%	0.00%	0.00%

Participants from all three focus groups felt that there was limited information about breastfeeding in the media. Specifically, individuals from focus group session 2 felt that there were more negative images related to breastfeeding in public and few discussions on the length of time for breastfeeding (the length of time women should breastfeed a child [3 months, 6 months, a year]; breastfeeding a child too long). Individuals from focus group session 2 found that the media more positively promoted formula feeding and did not state enough about the benefits of breastfeeding. All focus

groups felt that additional education was needed on the breastfeeding in general and that the media could be used as an outlet for such an educational campaign.

Participants in focus groups 1 and 3 found culture in fact influence one's thinking on breastfeeding. Specifically, comments were made about how other countries were more open to breastfeeding in public and how the U.S. was seen as behind the times, infantile, and stuffy in their thinking towards breastfeeding. Participants noted that because we live in a "patriarchal" society, where we have a male president, this too could potentially influence our (America's) acceptance or rejection of breastfeeding and more importantly, breastfeeding in public.

Participants in focus group one stated that there were particular household responsibilities associated with a woman including raising of the kids and handling certain domestic duties (i.e., washing dishes, washing clothes, etc.). Additionally, participant EW (from Focus Group Session 1, October 18, 2014) stated a biblical aspect to a woman and man's place in the household:

According to the Bible and proverbs it tells us that the father (man) gives the command and the mother (woman) upholds the command of the father.

Some additional biblical associations to the placement of the man in the household were also captured in comments by participant KQ (from Focus Group Session 3, March 7, 2015):

I would say (biblically) I agree that the man biblically is the head [of household]. But the woman also has to be in agreement. Because if you're in agreement as to [household decisions], you're gonna follow the man as he follows Christ.

[um] I agree that the man is the head and as my pastor says [uh], "the success and failure of a marriage is the man's responsibility"; whether it's good or bad, it's our responsibility.

So you know, I think the woman...the woman has to be [um] willing to follow [the man] ... if she knows that you are, in your heart, you are truly committed to God first and her second then she will be [um] she should be willing to follow.

Overall, men in focus group sessions 2 and 3 found that responsibilities in the household were shared and there were no “gender specific” tasks in the household. When the discussion transitioned to the topic of whether gender norms played a role in how other health decisions are made, men in focus groups 2 and 3 stated that they are involved in health decisions, yet they did not associate the decision of breastfeeding as a family health or reproductive health topic that they should be involved with. Specific opinions shared noted the following:

Participant RK: It’s taboo!

Participant LM: Unless it is health related, the decision is the woman’s [decision]...

Participant KR: Because it is their [the woman’s] body, they get more say.

(All statements are from FG session 2, January 31, 2015)

Participant RK: That is her decision – she is the woman and the nurturer.

Participant LB: As she provides nourishment and nurturing for [the] child, her decision to breastfeed or not, the husband [is] supporting her for her mental nourishment.

Participants AH and RK: That’s her body and she knows what to do.

(All statements are from FG session 3, March 7, 2015)

I asked a follow-up question related to other health decisions, specifically around family planning (e.g., birth control); many men in the focus group felt they should be

fully engaged in this subject. The men separated decisions about breastfeeding from those on family planning because they thought that since they [men] would not be the ones responsible for the physical stress and demand associated with breastfeeding, they should not be involved in the decision making process. Since the men who participated in this focus group separate decisions on breastfeeding from other reproductive and family health topics, this provides an opportunity for health care providers and others to increase therefore outreach to men. Health care providers can find ways to increase male engagement in this discussion and determine the best timeframe for presenting information on the topic of breastfeeding to men, but especially those who will be fathers in the near future.

The final area participants discussed in-depth during the focus group sessions was that of public opinion, but more importantly the issue of breastfeeding in public. Many men felt okay with women breastfeeding in public, but preferred that a cover be used. Others felt that breastfeeding in public was not necessary and often done for “show” and not to fully benefit the child:

Well I ...if [if] somebody's breastfeeding and they [umm] have a pump, most women if they breastfeeding they have a pump. To me, I would prefer [you] not to feed in public. If you have a pump and you are pumping milk, most women have milk saved. You can put that milk in a bottle and then do it then (Participant KR from Focus Group Session 2, January 31, 2015).

People trying to make a statement [overlapping speech]. And then you got people going at each saying "why can't you do that?" Well is that appropriate to do at that time? Do we need to see that? Did that have to be put into Instagram for the whole world to see? I am glad you made it through college with a child. I am glad you did that, but you know I...prime example, I have a niece who has a child and if she graduates and I see that, we gonna have a discussion. That's not for the world to see (Participant RK from Focus Group Session 3, March 7, 2015).

While men understand the need for breastfeeding in public, it is still an uncomfortable

topic and one that requires additional education and knowledge for increased acceptance in the public's eye.

Minor Themes and Levels

SEM Level 2: Relationship. Analysis of participants' discussion to the four questions related to sociocultural factors that influence breastfeeding revealed one primary theme: Social networks. This theme divided into the two most common relationships: relatives and friends. The theme "Relatives" had two sub-categories: parents and family members. Table 24 provides additional information on the percentage of coding for each theme (node) across the focus group sessions.

Table 24

Coding by Nodes for Level 2 Across Focus Group Sessions

Node	Percentage coverage - FG 1	Percentage coverage - FG 2	Percentage coverage - FG 3
SEM Level 2 - Relationship\Social Networks	2.50%	8.33%	6.53%
SEM Level 2 - Relationship\Social Networks\Friends	0.00%	3.13%	2.21%
SEM Level 2 - Relationship\Social Networks\Relatives	2.50%	5.20%	6.53%
SEM Level 2 - Relationship\Social Networks\Relatives\Family	0.00%	2.84%	2.21%
SEM Level 2 - Relationship\Social Networks\Relatives\Parents	2.50%	5.20%	4.32%

There were only a few references to friends since many men stated that they did not know whether the wives' or partners of their male friends breastfed. Only a few had

female friends who breastfed. Many participants' noted that they and their siblings were breastfed and pointed out that their mother and grandmother did have some influence on their decision to "promote" breastfeeding.

I was always told from [my] grandmother and mom that for [a] child to be healthy and strong they need to be breastfed (Participant EH from Focus Group Session 2, January 31, 2015).

[My] Mother, grandmother involved in [the] prenatal care and this was a discussion with both of us and [the] physician; I influenced her [my wife] to do breastfeeding over formula because of past generation (Participant DR from Focus Group Session 2, January 31, 2015).

In terms of family, some participants were exposed to breastfeeding because their siblings (older sisters) breastfed [their children], or because their mother breastfed a younger sibling. However, the topic of breastfeeding was seen as "taboo" and rarely discussed even as some men were transitioning into adulthood. Their fathers did not find that breastfeeding was a topic that should be brought up in regular discussions about being an adult. Some men even felt uncomfortable bringing up the topic with their mothers even though they were now married and had children. Because breastfeeding is not a subject regularly discussed within families, even as both young men and women create their own family, even discussing the topic within the confines of the focus group felt "weird" to the participants since it is not a topic traditionally associated with men and family.

SEM Level 3: Community. Analysis of participants' discussion to the only question related to where they had received their information on infant feeding practices, (whether breastfeeding or formula feeding), revealed their thoughts on a physician's

place in this discussion. In particular, some participants felt that physicians could be a source for providing this information and influencing [their] decisions. Table 25 provides additional information on the percentage of coding for each node across the focus group sessions.

Table 25

Coding by Nodes for Level 3 Across Focus Group Sessions

Node	Percentage coverage - FG 1	Percentage coverage - FG 2	Percentage coverage - FG 3
SEM Level 3 - Community\Physicians	0.00%	0.87%	2.01%

Only four participants (Participants DR and LM from FG session 2; Participants LB and RK from FG session 3) stated they heard information on breastfeeding while attending a prenatal visit with their spouse. Other participants noted that they had received this information via brochures in a doctor’s office or Lamaze class. One important finding is that some men thought it was not their place to make the decision for infant feeding (breastfeeding) unless it was stated by the physician that there was a “medical need” for breastfeeding:

The only time I would have given my opinion is if it was related to medical issue (Participant LM from Focus Group Session 2, January 31, 2015)

The participants agreed that the involvement of physicians or health care workers in the breastfeeding decision –making process was very limited. Physicians and health care workers may not discuss this topic with men because not all men are involved in the prenatal visit and the topic is traditionally associated with women.

Additionally, a man's work environment may also influence his opinions about breastfeeding, but only as it relates to female co-workers who choose to breastfeed.

During FG session 3, one participant stated that the culture of his work environment did not promote a positive environment where women could breastfeed or pump milk:

I work for a public utility and I'm gonna go as far to say not that it's not promoted, it's not even thought about (Participant RK from Focus Group Session 3, March 7, 2015).

We live in a male, predominately male workforce. [umm] Now we do have females there, but majority of our females in higher positions are not of childbearing age or children are the last things on their mind (Participant RK from Focus Group Session 3, March 7, 2015).

So we don't have a [nursing] room, we don't have any of those things. That being said, with all companies we'll be sensitive to it if something happens, but you know [umm] I'm a manager and I manage a lot of people. I've never had...I've talked about a lot of things, never about how to deal with a females nursing, what you can't do legally, what you can allow them to do. I know some of the stuff, you got allow her to break to pump milk and all that stuff, but its never been discussed at my work place, even a topic of conversation (Participant RK from Focus Group Session 3, March 7, 2015).

Evidence of Trustworthiness

In this study, there were no risks to the participants. As stated earlier, the online portion of the study was fully anonymous and only I was aware of the names of the 17 men who participated in the focus group sessions. Their information was de-identified in the focus group transcripts. I provided information about the study to all participants and included this information in email message and flyers used for recruitment and in the informed consent forms provided for both the online survey and focus groups. Once participants volunteered to participate in the study, they could decline continuation in the study by (a) exiting the online survey, (b) deleting the link for the survey, or (c) walking

out of the focus group session after the informed consent was reviewed. Since I was approved to provide a \$5.00 Subway gift card to the participants of the focus group, I reiterated at the beginning of each session that participants would not be penalized if they decided not be a part of the focus group following the explanation of the informed consent and they could still receive the \$5.00 Subway gift card.

Summary

In this chapter, information was presented on the results from both the qualitative and quantitative phases of the study. It included (a) multiple regression analysis for the IIFAS and MRNS, and (b) analysis of themes using NVivo. Key findings revealed a negative relationship between IIFAS and MRNS, specifically higher IIFAS scores (more positive attitude toward breastfeeding) were associated with lower MRNS scores (non - traditional masculinity ideology). Analysis of the three focus group transcripts revealed that although men are knowledgeable about some aspects of breastfeeding (such as the benefits and nutritional value), more education is needed to ensure they have correct information on the entire breastfeeding process including (a) pumping and storing of breast milk, (b) breastfeeding timeframe (length of time a child/infant should be breastfed), and (c) breastfeeding in public.

Focus group results also reflected a disparity in gender equity in relation to who has “voice” in making health decisions for infant and children. Because the breast are a part of a woman’s body, men may feel out of place getting into a discussion about breastfeeding since they have no “ownership” over the woman’s breast and what she chooses to do with her body. Although the topic of breastfeeding could be discussed with men as a health decision that affects the infant and his (her) development, this concept is

not always apparent to health care providers or others in constant contact with new or parenting men. Given that breast milk is produced by the woman's breast, the thought is that she has ownership over her body and determines what is done with or to it.

The lived experiences of the men in the focus group, specifically their family structures, were similar in that both parents were present and many of the men in the focus groups were breastfed as a child. Additionally, they spoke about other women in their family that breastfed. Those who grew up in a home where the father was present actually mimicked the behavior of their fathers (household duties) and actually transferred these behaviors to their relationships, specifically their marriages. Their father's behaviors (and mothers for that matter) shaped their ideas of what they believed men and women should do in the home (household responsibilities).

Issues related to gender inequality in health decisions for infants and children also related to inequality experienced by men (fathers) in other areas as well. While society believes that men matter, they are often excluded from discussions concerning (a) the health of their children (medical appointments), (b) the health of their wives or significant others, or (c) the educational system. The issues of gender inequality also related to larger issue of whether men have a place in conversations on maternal and child issues that have traditionally been seen as "woman specific" issues not up for discussion by men. This issue of gender inequality diminishes the place of men in the conversation of family issues and brings to the surface the question of their value and whether they really do matter. In Chapter 5, I will discuss the following: (a) interpretations of the findings, (b) limitations of the study, (c) implications for social change, (d) recommendations for action, (e) recommendations for future studies, and (f) conclusions from the study.

Chapter 5: Discussion

The purpose of this chapter is to interpret the findings from Chapter 4. The interpretation of the findings includes the scores from the Iowa Infant Feeding Attitude Scale (IIFAS) and the Male Role Norms Scale (MRNS). The responses received during the three focus groups sessions held between the months of October 2014 and March 2015 is also examined. The IIFAS was used to measure participants' attitudes toward breastfeeding, while the MRNS was used to determine the participants' masculinity ideology. The combination of the two scales helped me ascertain whether having a positive attitude toward breastfeeding was associated with men who also scored as having a less traditional masculinity ideology. The socioecological model provided the framework for exploring individual, sociocultural and community level factors that impacted male perceptions. The most prominent themes from that analysis are discussed in this chapter. I also describe the implications for social change and interpret findings based on triangulation of the literature, quantitative data, and qualitative data. In addition, I recommend actions, identify limitations of the study, and make recommendations for future study. Finally, I describe in detail my personal experience with breastfeeding and present a conclusion for the study.

Interpretation of Findings

The purpose of this study was to examine the attitudes of AA males on breastfeeding and whether factors such as ideas of masculinity, cultural beliefs, and exposure to media influence their acceptance of this practice. I used a mixed method concurrent design. The data from both quantitative and qualitative phases were collected

and analyzed simultaneously. Quantitative and qualitative data were given equal priority, and only through analysis of the data and merging of findings could I determine the overall outcome of the study.

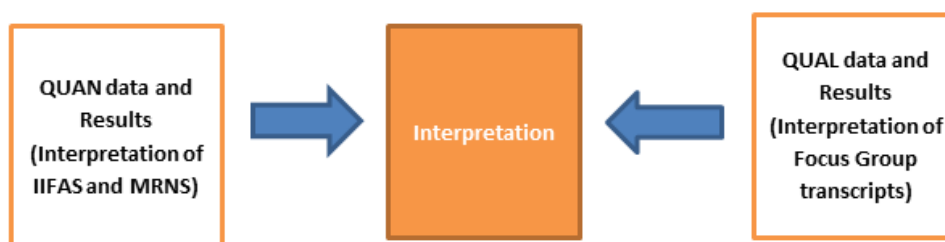


Figure 4. Concurrent Mixed Method Designs: Triangulation Design (Creswell & Plano Clark, 2007)

As part of the design, I used a triangulation model in which quantitative and qualitative data were analyzed to identify male perspectives and attitudes toward breastfeeding as well as outside influences that may contribute to these viewpoints. The triangulation method allowed me to look at the attitudes on breastfeeding and masculinity ideology using IIFAS and MRNS survey data. I was also able to identify diverse perspectives through the interpretation of findings from the focus group sessions. This information allowed me to analyze the larger issue and determine what influences AA men's attitudes toward breastfeeding.

Triangulation of Findings

Infant Feeding Attitude and Masculinity Ideology. Results of this study showed that as a man's attitude toward breastfeeding became more positive (noted by higher IIFAS score); he also had a less traditional masculinity ideology (noted by lower MRNS score). I interpreted this as saying that AA men who have a more favorable

attitude toward breastfeeding also do not adhere to traditional or hegemonic masculinity that promotes the dominant position of men in society and the subordinate position of women. Men with higher MRNS scores and lower IIFAS scores ascribed to a more traditional concept of masculinity and less positive attitude toward breastfeeding. Findings from this study partially support the findings of Courtenay (2002) and McKelley and Rochlen (2010) who noted that masculinity ideologies have been associated with poor health outcomes for men, including rejection of health promotion behaviors (e.g., asking questions in health settings) and involvement in more health-undermining behaviors.

A traditional masculinity ideology could cause men to reject positive health behaviors that could impact the health of their child (e.g., breastfeeding) or prevent them from engaging in conversations with the health care provider about decisions affecting the family. More research is needed to see whether nonpromotion of or having a less positive attitude toward breastfeeding can be categorized as a health-undermining behavior in men, given that previous studies have shown the effect that men have on their partner's decision to breastfeed.

Results from the online survey also revealed differences among the MRNS subscales in Status, (striving toward competition, success and power); Toughness (being tough and aggressive); and Antifemininity (rejection of anything stereotypically feminine).

Although correlations between the IIFAS score and scores on the Status and Toughness subscales were shown to be insignificant, this was not true for the Anti-femininity subscale. The data revealed that as the IIFAS score increased, the Antifemininity score decreased showing that a positive attitude toward breastfeeding was endorsement of less

anti-feminine norms (those that embrace masculine traits and reject feminine characteristics). Because breastfeeding is viewed as a more feminine behavior and one associated with a woman's transition into motherhood, interventions must be structured to promote breastfeeding as a family health decision and one that involves the input of both parents.

Theoretical Framework Context. The socio-ecological model (SEM) was used as a framework for interpreting the findings of the data gathered through the focus group sessions and deciphering which level held the largest influence in relation to participant's attitudes toward breastfeeding. The SEM was also important in synthesizing the results of the quantitative and qualitative phases of the study.

Level 1: Individual. Level 1 involved many factors associated with an individual's biological and personal history that may influence attitudes toward breastfeeding. Male gender stereotypes were mentioned including the father as "provider, protector and head of household" (Participant EW from FG session 1, October 18, 2014). Rempel and Rempel (2011) noted that when knowledge of the benefits of breastfeeding is lacking, it can be a hindrance to the breastfeeding process. Breastfeeding interventions focused on men need to include education on the benefits of breastfeeding for mother and child as well as the family.

Focus group participants (specifically FG session 1 and 3) recognized that the new generation of men promote shared responsibilities in the household (both pay the bills, both are the breadwinners or the household, and both as disciplinarians); however, this equality is not shared in all aspects of family health (e.g., breastfeeding decisions), even though men do weigh in on decisions regarding reproductive health (e.g., birth

control method). Results from this study confirmed findings from Rempel and Rempel (2011) who noted that the mothering and breastfeeding process are combined and viewed as part of the mother's nurturing responsibilities. All individuals in the current study valued their partner's decision to choose the type of infant feeding method that was most beneficial to her and the baby and chose not to question the decision once it had been made. Men stated that women had a larger say in the discussion because [sic] "they were her breast" and she would be the one most involved in the process.

Throughout the focus group sessions men were able to state some of the benefits of breastfeeding. Individuals in Focus Group Session 3 stated these benefits with some reservations. Men argued about the truth behind the science associated with the importance of breastfeeding and its "superiority" to formula. Some participants also found that the breastfeeding process held negative consequences for both the mother and cited that it was inhibitive to the couple's relationship. Rempel and Rempel's (2011) participants also noted that breastfeeding could potentially "limit the energy available for the couple's relationship" (p. 118).

Another factor that was seen as influential for Level 1 was an individual's concept of what it is to be a man. This particular concept is associated with how men view masculinity and is connected to an individual's knowledge of self. Participants from Focus Group Session 3 reported specific characteristics they felt were associated with "being a man" including one who is present (actively involved), sacrifices for others, is supportive, and is committed and unselfish. In reviewing the survey questions on the MRNS, I found that the characteristics expressed by the focus group participants were not reflective of those concepts associated with the three subscales (Status, Toughness, and

Anti-femininity). Additionally, these characteristics and the opinions discussed in relation to household duties may be a better fit for individuals who associate with a more egalitarian view of gender norms in which men and women share responsibilities rather than split them according to socialized gender roles. This is at least true for participants in Focus Group 3 who also noted that household responsibilities were shared as well.

Level 2: Relationship. Level 2 involved relationships and factors within the individual's closest relationships (friends and relatives) that influence perceptions and attitudes toward breastfeeding. Parents were more influential than peers. Parents' influences could be negative or positive. The ideas that the participants shared were based on how they were raised (modeling) or information parents provided to them about what to expect in future relationships. Breastfeeding was usually a conversation that mothers had with their daughters and seemed inappropriate for them to discuss with their sons. Additionally, fathers did not discuss "feminine" issues with their sons because that was seen as taboo.

Level 3: Community. Level 3 involved factors at the community level, such as relationships with health care providers, which may influence a man's attitude or perception toward breastfeeding. What was most interesting about this level is that only one focus group (FG 2) provided specific information about community factors such as discussions with physicians and other health care professionals about breastfeeding. For men whose wives determined the infant feeding method, they also stated that they would not weigh in on the discussion unless there was a medical issue and the physician stated that breastfeeding was necessary for the health of the infant. Some participants alluded to having read about breastfeeding in pamphlets from Lamaze class, but most did not report

that a physician had much influence over the breastfeeding decision.

Only in Focus Group 3 did a participant note that his wife's gynecologist, who was a proponent of breastfeeding, suggested this as the feeding method of choice and provided breastfeeding education via videotape and classes. The limited acknowledgement of the involvement of the health care provider in the breastfeeding decision process not only provides opportunity for increased health promotion in this area, but more importantly increased education of physicians and others who interact with men about how to discuss this topic with this population. Another community factor that may negatively influence a male's attitude toward breastfeeding is the work environment. Participants in Focus Group 1 stated that women may choose to wean early because of their return to work and inability to continue breastfeeding (or produce milk), and participants in Focus Group 3 noted that there was limited recognition of breastfeeding policies in their place of employment. One participant stated that although there were women of child-bearing age working in his office, if one mentioned her desire to breastfeed no accommodations would be made for her because this was not a topic discussed in that environment.

A second participant who worked for a health organization acknowledged that his agency made appropriate accommodations for women (e.g., providing a lactation room), understood the laws surrounding woman and breastfeeding, and was inclusive of fathers in discussions on this and other family health issues. Although both participants agreed that women should be provided proper work facilities to continue breastfeeding, this was not something that was promoted at their respective agencies. Policies related to breastfeeding and overall work-life balance at nonhealth agencies should be reviewed and

discussed with management and other employees to ensure that women are getting the support needed to continue breastfeeding and to increase social acceptance of this process.

Level 4: Societal. Level 4 involved social and cultural norms that create an environment that positively or negatively influence perceptions and attitudes toward breastfeeding. Gender norms, which are a subset of social norms, influence individual behavior in that nonadherence to these norms, can result in exclusion from a specific group (Fleming, Lee, & Dworkin, 2014). In the study, men stated that women who did not choose to breastfeed were often ostracized by women who did breastfeed. The political climate surrounding breastfeeding and women's rights also causes discomfort among AA men, especially those who have some concern about women breastfeeding uncovered in public. Both men and women experience some level of social exclusion depending on what position they choose in the debate on public breastfeeding. Similar to findings by Mitchell-Box and Braun (2012), participants felt that it was inappropriate for strangers to breastfeed around them, especially when not using a cover.

Participants showed some ambivalence toward breastfeeding in public, especially because there was a lack of public awareness and education on this issue. These opinions were not surprising given that the participants in the study also felt there was a lack of media attention and education on breastfeeding for the general public and not just for men. Unlike the findings by Johnston-Robledo et al. (2007), the men who participated in the focus group sessions did not report that breasts had been sexualized by the media. These findings were also not in agreement with research by Henderson et al. (2011), who observed that media messages were thought to promote breastfeeding for middle class

women. Instead, focus group participants felt that the media provided limited information about breast- and formula feeding. This may be a result of most breastfeeding advertisements being geared toward female consumers.

Gender-transformative beliefs were seen in responses related to household decisions but not health decisions. Participants stated that there were no gender differences in responsibilities and decisions related to the home (e.g., household duties), yet they reported differences in responsibility for specific health decisions. For example, when looking at decisions focused on children's health (e.g., doctor appointments) or contraception (e.g., selection of birth control method), participants agreed that this was a joint responsibility. However, the infant feeding decision was not seen as either a family or reproductive health choice, but rather an individual choice to be determined by the woman. Men noted that because it was "her breasts," a woman had the ultimate say in how they were to be used and for what purpose. These findings are consistent with results from a study by Okon (2004) in which men stated that breastfeeding was a "gender-defined role" (p. 389). The findings suggest that the current promotion of breastfeeding may benefit from a feminine perspective by building upon women's rights (e.g., women have control over their own body, make their own money, negotiate use of contraceptives, etc.) and social constructions of gender, thereby inhibiting involvement of men in the discussion of this and other types of maternal and child health topics. While empowering women is seen as positive for society, it can often cause discord within the family as women begin to move away from traditional constructs of femininity. This suggests that a gender-transformative approach is needed to promote equality in the

decision-making process for breastfeeding as well as other maternal and child health issues.

Overall Findings

My review of the focus groups sessions revealed that both Level 1 (Individual - Knowledge) and Level 4 (Societal – Gender Norms) were the highest coded themes across all focus group sessions. Specifically, knowledge and societal norms have the greatest influence on a man’s attitudes and perceptions about breastfeeding. Interestingly enough, men’s ideas about masculinity and their role in the family are influenced by Level 2 (Relationships), specifically connections with parents and what they have taught them about these two subjects. Based on this information, I viewed Level 1 and 2 as being overlapping and highly connected, and Level 4 as the overarching level that encompasses both Level 1 and 2. Level 3 (Community) had limited information, making it a prime area for research. Future studies should examine what we teach medical students, physicians, and other health care professionals about engaging men in maternal and child health topics traditionally seen as women focused, but that fall under the purview of family health.

Study Limitations

In Chapter 1, I stated several limitations to the study that relate to study design, recruitment of participants, and generalizability of findings. Information on these limitations and whether they affected the outcome of the study are stated below.

Study Design

As stated earlier, I chose a concurrent mixed method design for the study. While some studies choose to have participants involved in both the quantitative and qualitative

phases of a study whereby information is collected from the same participants to strengthen the ability for the data to be “more easily compared” (Driscoll, Appiah-Yeboah, Salib, & Rupert, 2007, p. 20), I did not make this a mandatory requirement for individuals participating in my study. Instead participants could choose to volunteer for one or both segments of the study. This prevented me from associating the scores from the online survey with the comments of participants who participated in the focus group sessions. The use of a concurrent design not only precluded the use of data from the online survey to develop questions for the focus groups, but also did not allow time for me to follow up on comments requiring extra information. This issue was stated by Driscoll et al. (2007, p. 21) who noted that a concurrent design may prevent the researcher from deciphering or interpreting “interesting or confusing responses” (Driscoll et al., 2007, p. 21). Furthermore using a concurrent design did not allow for the information learned from one phase of the study to influence the next phase. This would have been possible had a sequential design been used instead. Future research should entertain the possibility of using a sequential embedded design, where the qualitative data (focus groups) are given a higher weight than the quantitative data (online survey) and responses from both phases can be easily correlated with one another.

Generalizability

Only AA males participated in the study. Originally, these participants were to be recruited from the Washington (D.C), Maryland, and Virginia areas. Using this method, it was anticipated that the results of the study would be generalizable to AA males living in urban or suburban areas. However, given the difficulty in recruiting participants for the study, I received permission from the Walden University IRB to complete recruitment

for the online survey portion of the study using a survey company (Cint Inc.). A discussion with Cint representatives noted that only “24 completes” could be received if I only targeted the Washington metropolitan area. Limiting the participants to this region would not have yielded the required sample size. Since 125 completes were needed, I and my Chair agreed it was best to expand eligibility and include AA men across the U.S. While expanding the target area potentially increased generalizability to more than AA males living in suburban and urban areas, it also limited my ability to look at infant feeding attitudes and perceptions for males just residing in the Washington metropolitan area. All of the focus group participants are residents of this area.

Originally, I thought that a large proportion of the study population would be drawn from professional organizations making the results generalizable to men with higher education and SES. Since demographic information was collected as part of the study, I was able to stratify the results to compare data based on SES and educational background of the participants. Only 4% of participants came from the six organizations I originally partnered with to do recruitment for the study. All of these organizations were considered community - based organizations. Even after receiving permission from Walden IRB to recruit additional partner organizations, it was difficult for me to find any who wanted to be a part of the study. Although I was unable to determine whether association with a professional organization affected generalizability, expanding the eligibility criteria to include male participants from across the U.S. made the study results more generalizable to AA overall.

Recruitment

The inclusion criterion for the study was men 18 and older so as not to limit who could participate in the study. Additionally, participants possessed different demographic characteristics including varying socioeconomic status, education level, age, relationship status, and child status. The child status was specifically used to denote whether a participant had already transitioned into the role of being a father. Gordon et al. (2013) noted that fatherhood related to an important transition period in the lives of young men, especially since they are establishing what their masculinity may be. Additionally, while information was collected on the breastfeeding status of partner or significant other, a man's inability to answer this question would not have excluded him from the study,

Attempts were made to recruit male participants in a variety of ways including through (a) flyers (partner organizations, community centers, libraries), (b) church bulletin inserts (partner organizations only), (c) recruitment in parks and neighborhood "hangouts", (d) social media (i.e., Twitter and Facebook), (e) listservs, (f) direct solicitation (partner organizations), and (g) through the Walden Participant Pool. This occurred over a period of four months (July 2014 – October 2014) and only yielded about 33% ($n = 60$) of the participants needed for the quantitative portion of the study. There was also some difficulty recruiting men for the focus groups. Even though approval was received by Walden to provide \$5 Subway gift cards to participants, it still took another six months (October 2014 – March 2015) to complete the qualitative phase of the study. The idea of partnering with community – organizations was sound given that these organizations had a readily available population of men; however this was not the case. One major issue is the topic. Since breastfeeding is not a male focused issue, it may have

been hard for men to understand the relevance of the study to their daily lives. Future studies should use less conventional methods of recruiting men, such as partnering with barbershops or local gyms, and potentially offer other incentives to get participants for their study.

Implications for Social Change

The study is important to social change in that it can assist policy-makers, public health practitioners, health care providers, and others in the community in changing perceptions about gender norms that may hinder a man from being fully connected or engaged in the decisions that affect his child's health and development. We must adopt a new way to discuss the issue of breastfeeding with men and women using a gender-transformative approach. According to Rottach, Schuler, and Hardee (2009, p. 4) a gender-transformative approach allows one to “examine, question, and change rigid gender norms and imbalance of power as a means of reaching health as well as gender equity objectives.” This approach allows men to challenge socially constructed concepts of manhood and deconstruct “social norms about gender roles and expectations” (Rottach, Schuler, & Hardee 2009, p. 4). Men are then able to identify ideals that promote poor health and take action to change such norms. Using a gender-transformative approach, health practitioners can begin to promote breastfeeding decision making as a shared responsibility, and one where both parents have equal say (Jolly, Pagels, Woodfin, Silver, Kindratt, & Gimpel, 2013).

The gender-transformative approach can also be used to shape policies and procedures that allow organizations serving the family to be more inclusive of men, especially fathers, in discussions about reproductive and family health topics not just

those normally associated with women. This process would constitute a paradigm shift where maternal and child health topics normally associated with the mother now incorporate the father and a male perspective.

Additionally, the information contained in this study contributes to social change by identifying the need to develop breastfeeding interventions that include men, and increase partner support. Understanding how societal norms about masculinity and lack of breastfeeding knowledge influence male attitudes and perceptions toward breastfeeding can assist health educators in strengthening interventions and public awareness campaigns. This will in turn help dispel myths and negative opinions about breastfeeding in public and educate men on how to be an active member of the “breastfeeding team”.

Recommendation for Action

There are many programs in the U.S. that promote responsible fatherhood; however it is unclear how many of these programs deconstruct the traditional view of masculinity and try to redefine this concept in order to increase male involvement in all aspects of the family, including infant health. The findings of this study support the need to move from a feminist empowerment model of promoting breastfeeding to a gender-transformative model that challenges prescribed male gender norms and supports egalitarian and progressive gender norms (Greene & Levack, 2010). Participants in Focus Group Sessions 2 and 3 promoted a more egalitarian view of gender norms, especially as it related to household chores. Participants in these sessions discussed shared responsibilities of household duties and decisions related to family planning (e.g., selection of birth control). Participants in Focus Session Group 3 specifically noted that

men were previously viewed as the providers of the household, but this view is changing with the new generation. Women are becoming more independent, the current generation is becoming more “blended”, and more equality is being seen in the home.

Responsibilities that previously viewed as male- or female-dominate no longer have a gender assignment.

With the changing landscape of the family and household, it is important to create maternal and child health programs that have a place for both men and women. Such programs will play an integral role in expanding the conversation on maternal and child health issues, but especially breastfeeding so that we move from supporting the breastfeeding dyad (mother-child) (Mitchell-Box & Braun, 2012) to building and promoting the breastfeeding triad (Mother-Infant-Father) (see Figure 5).

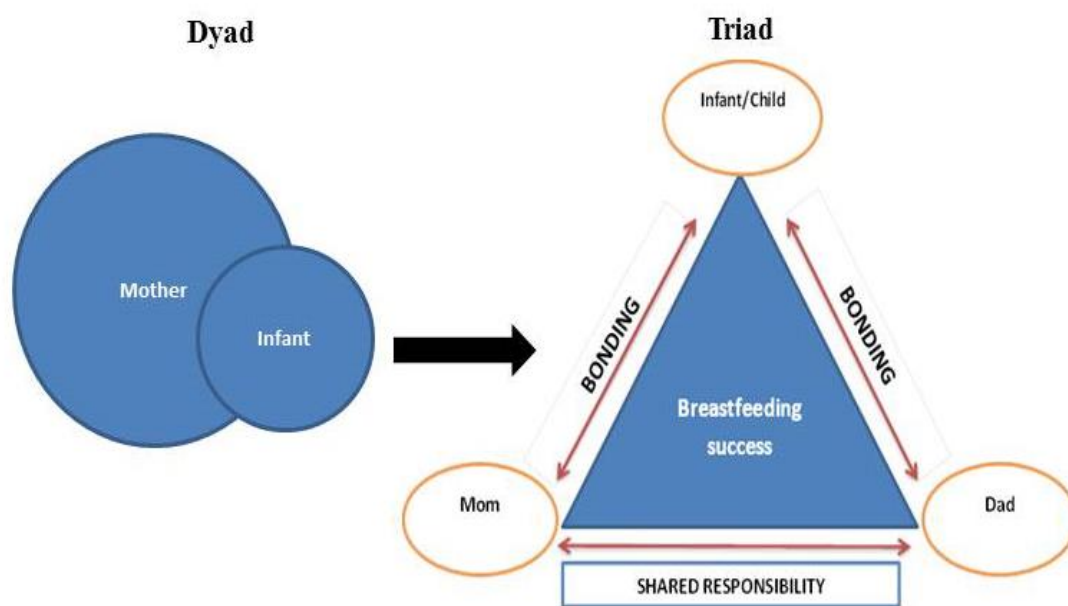


Figure 5. Transitioning from Breastfeeding Dyad to Breastfeeding Triad

These programs would also foster gender equality by dispelling the myths on what is viewed as inherently feminine versus inherently masculine roles and responsibilities within the family. Deconstructing harmful social and cultural ideas about masculinity can assist men in understanding how they fit in the larger conversation of maternal and child health, and assist public health practitioners in constructing interventions that increase male involvement in the prenatal and postnatal period (Gordon et al., 2013). Using a gender-transformative model we can look at the various levels of the SEM that influences male attitudes and perceptions toward breastfeeding and begin to formulate interventions needed to address each of the dominant themes (see Figure 6).

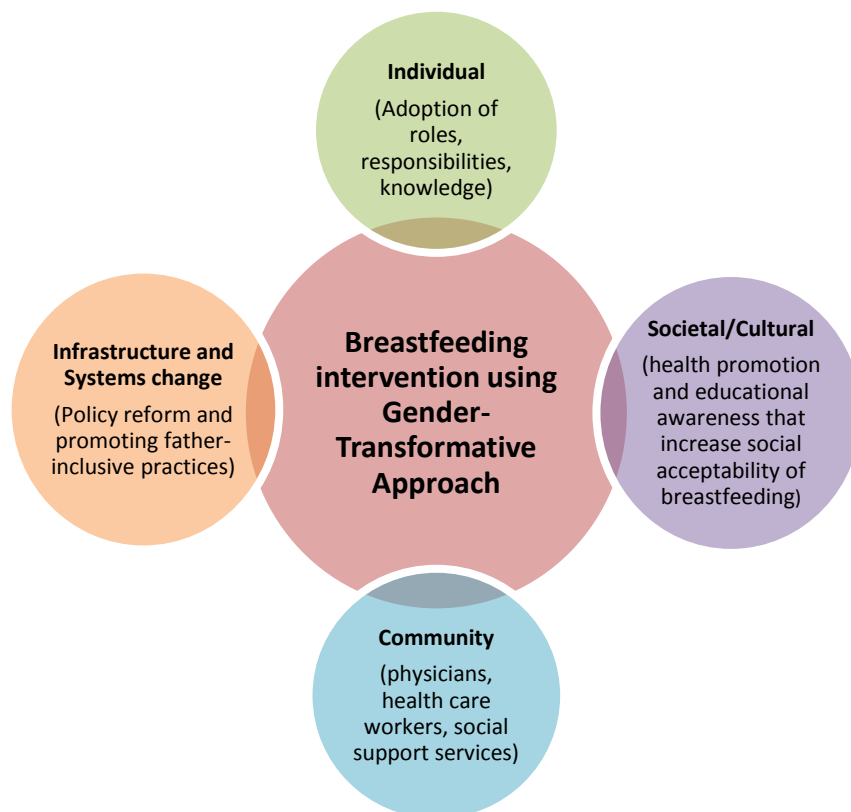


Figure 6. Using the Gender-Transformation Approach to Effect Environmental Influences of Male Perceptions toward Breastfeeding

More education is needed to strengthen basic knowledge on the benefits of breastfeeding and improve acceptance of breastfeeding in public (Jolly et al., 2013). Additionally, increased education could potentially correct myths and misinformation about breastfeeding that may have been passed down through generations. A specific focus of health education should be centered on helping fathers determine their unique roles in the breastfeeding family (Rempel & Rempel, 2011) including their involvement in helping their partner decide on a specific infant feeding method. Interventions involving men should empower fathers to be advocates for breastfeeding and catalysts for change in the broader conversation of gender norms and family health.

Recommendation for Future Study

There is a need for more studies that examine what factors of a man's environment (a) influence his perceptions about breastfeeding, (b) inform his ideas about gender norms and masculinity, and (c) allow him to be an integral part of the breastfeeding family. A future study should examine the gender norms (masculinity ideology) of men transitioning into fatherhood (new/expectant fathers) with those of men who are considered experienced fathers in order to see what differences exist between the two groups at these different stages of life. In this study, the participants completing the online survey were not necessarily the individuals who participated in the focus group session. This prevented me from doing a true comparison of the findings from the surveys with that of the findings from the focus group sessions. In the future, researchers should consider using an embedded mixed method design, where focus groups (the qualitative phase) is the central point of the study, and the IIFAS and MRNS surveys only provided to participants involved in the focus groups. In this way, a researcher

would be able to capture and compare the results of the IIFAS and MRNS directly with the masculinity ideology and breastfeeding perspectives of the men in the focus groups. This would make for a cleaner and tighter association between the qualitative and quantitative data collected in the study.

Recruitment for this study proved to be difficult as well with me having to provide gift cards to focus group participants and use a private company to recruit African American men to complete the online survey. Partnering with faith-based and community-organizations to recruit participants (convenience sampling) proved to be unsuccessful for this study. Partnerships with nontraditional settings (i.e., barbershops) to recruit male participants should be utilized in future research. It was difficult to show a connection between the breastfeeding attitudes of new fathers as opposed to those that were experienced fathers given that the participants were not asked whether they were first-time (new) or experienced (having one or more children) fathers. Such status could have affected their attitudes toward breastfeeding since men who have children and have a partner who has breastfed may have breastfeeding attitudes that have already been affected by personal experiences. This may have also affected their MRNS score as well since transition into fatherhood is also a time when young men's masculinity is changing in that it may lean more heavily toward traditional masculine behaviors (Gordon et al., 2013). Future research should look at comparing new and experienced fathers within a certain age group, as well as men of a particular education level and marital status to see whether differences exist in their masculinity ideology and breastfeeding attitudes.

Conclusion

In this study findings were presented from a concurrent mixed method study that examined AA male participants and their attitudes and perceptions toward infant feeding practices with a particular emphasis on breastfeeding. Results from the analysis of the online survey data revealed that men who have a more positive attitude toward breastfeeding (denoted by a higher score on the IIFAS) also have a less traditional masculinity ideology (denoted by a lower MRNS score). Analysis of the focus groups transcripts revealed 10 core themes that were associated with the four levels of the socio-ecological model; however based on the percentage of coding the following themes were found to be the most prevalent throughout the three focus group session: (a) Individual – Knowledge, (b) Relationships - Parents), (c) Community – Physicians, and (d) Societal – Gender norms. Level 1 (Knowledge) and Level 4 (Societal) proved to have the highest influence over male perceptions and attitudes toward breastfeeding. During the discussions, participants repeated the thought that women have the ultimate say in choice of feeding method for their child. Men also noted their feelings toward breastfeeding in public, definition of “what it means to be a man”, and thoughts behind shared and individualized responsibilities in the household. Overall, I found that ideas of masculinity were the result of thoughts and opinions taught to them by their parents (primarily the dad) and passed down through the generations.

Participants in the study undervalued their place in the breastfeeding conversation, and debated whether it was related to them. Specifically, men questioned their role in encouraging their significant other to choose breastfeeding and their role in the decision making process. Participants also found that nurturing as well as choosing

the infant feeding method was primarily the mother's responsibility. Most health awareness initiatives promote breastfeeding as a maternal and child health issue with primary benefits to both the mother and infant. Helping men conceptualize what it is to be a man as they transition into their role as fathers and their role in family health decisions could be a conversation that physicians and other health professionals began to have with males during the preconception phase. This is especially important if we want men to be supportive of women during the prenatal, pregnant, and postnatal periods. Gordon et al. (2013, p. 7) notes that teaching health behaviors in a masculine consistent framework can assist young men in providing support to their pregnant partners in their efforts to be healthy for their unborn child. To support this idea, health care practitioners and others working with men must strive to promote the breastfeeding triad (Mother-Infant- Father) instead of the commonly used breastfeeding dyad (see Figure 3).

The results of this study support the use of a gender-transformative approach as a framework for creating health education campaigns and breastfeeding interventions targeting men. More importantly this framework should be used to assist public health practitioners in creating the paradigm shift needed to encourage male involvement in the breastfeeding discussion as well as other maternal and child health topics. A process for promoting the active involvement of men should be adopted to challenge preconceived notions on gender-specific behavior related to this area. Although public health tries to promote breastfeeding through social marketing campaigns there are very little evidence of this fact for the men in the study. Current breastfeeding, public health interventions may promote feminine messages (i.e., mother-child dyad and bonding) while discouraging male involvement. Breastfeeding should be a shared experience between a

man and woman and a shared public health issue; however limited knowledge on breastfeeding leads to public shaming of those who do not breastfeed and also a less supportive attitude by others who do not agree with public breastfeeding (Fleming et al., 2014).

The participants noted a lack of breastfeeding awareness in the workplace even for female workers; these issues highlight the need for infrastructure change and policy reform. Additionally, the assumed “medicalization” of breast milk and distrust for scientific research on formula (studies that claim similar nutritional benefits as breast milk), many men will not recommend breastfeeding for their wife or partner unless agreed to or promoted by a physician (McInnes & Chambers, 2008). Physicians and other health care providers should help father’s recognize their role as part of the breastfeeding team and assist fathers in learning not only about breastfeeding, but also ways to provide breastfeeding support to the mother and child (Rempel & Rempel, 2011). Breastfeeding should be promoted before, during, and after pregnancy and may be most appropriate during the preconception phase of family planning, especially for men who anticipate a future pregnancy (Mitchell-Box & Braun, 2012).

Finally, results of the study add to the research on male knowledge, attitudes, and beliefs about breastfeeding and masculinity. The results shed light on who in the individual’s environment influences these ideas. In order to effectively engage fathers in the breastfeeding decision-making process we must begin to adopt strategies that challenge socially constructed gender norms and hinder the health and well-being of the family.

References

- Abreu, J. M., Goodyear, R. K., Campos, A., & Newcomb, M. D. (2000). Ethnic belonging and traditional masculinity ideology among African Americans, European Americans, and Latinos. *Psychology of Men & Masculinity, 1*(2), 75-86. doi:10.1037/1524-9220.1.2.75
- Acker, M. (2009). Breast is best...but not everywhere: Ambivalent sexism and attitudes toward private and public breastfeeding. *Sex Roles, 61*(7/8), 476-490. doi:10.1007/s11199-009-9655-
- Ahluwalia, I. B., Tessaro, I., Grummer-Strawn, L. M., MacGowan, C., & Benton-Davis, S. (2000). Georgia's breastfeeding promotion program for low-income women. *Pediatrics, 105*(5), 1-6. doi:10.1542/peds.105.6.e85
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes, 50*(2), 179-211. doi:10.1016/0749-5978(91)90020-T
- Ajzen, I. (2006). Behavioral interventions based on the theory of planned behavior [Brief Description of the Theory of Planned Behavior]. Retrieved from <http://people.umass.edu/aizen/pdf/tpb.intervention.pdf>
- Alio, A. P., Richman, A. R., Clayton, H. B., Jeffers, D. F., Wathington, D. J. & Salihu, H.M. (2009). An ecological approach to understanding Black-White disparities in perinatal mortality. *Maternal and Child Health Journal, 14*(4), 557-566. doi:10.1007/s10995-009-0495-9

- American Academy of Pediatrics (AAP) Workgroup on Breastfeeding. (1997). *Policy Statement on Breastfeeding and the Use of Human Milk. Pediatrics, 100*, 1035 - 1039. doi:10.1542/peds.100.6.1035.
- American Academy of Pediatrics (AAP) Workgroup on Breastfeeding (2012). *Policy Statement on Breastfeeding and the Use of Human Milk. Pediatrics, 129*(3), e827 -e841. doi:10.1542/peds.2011-3552.
- American Public Health Association (APHA). (2012). Community Health Workers [Internet]. Washington, DC: American Public Health Association. Retrieved from <http://www.apha.org/membergroups/sections/aphasections/chw>
- American SIDS Institute (2012). What is SIDS/SUID [Internet]. Retrieved from <http://sids.org/what-is-sidssuid/>
- Arlotti, J. P., Cottrell, B. H., Lee, S. H., & Curtin, J. J. (1998). Breastfeeding among low-income woman with and without peer support. *Journal of Community Health Nursing, 15*(3), 163-178. doi:10.1207/s15327655jchn1503_4
- Arora, S., McJunkin, C., Wehrer, J., & Kuhn, P. (2000). Major factors influencing breastfeeding rates: Mother's perception of father's attitude and milk supply. *Pediatrics, 106*(5), 1-5. Retrieved from <http://pediatrics.aappublications.org>
- Bahl, R., Frost, C., Kirkwood, B. R., Edmond, K., Martines, J., Bhandari, N., & Arthur, P. (2005). Infant feeding patterns and risks of death and hospitalization in the first half of infancy: Multicentre cohort study. *Bulletin of the World Health Organization, 83*(6), 418-426. doi:/S0042-96862005000600009
- Balaluka, G. B., Nabugobe, P. S., Mitangala, P. N., Cobohwa, N. B., Schirvel, C., Dramaix, M. W., & Donnen, P. (2012). Community volunteers can improve

- breastfeeding among children under six months of age in the Democratic Republic of Congo crisis. *International Breastfeeding Journal*, 7(2), 1-8. doi:10.1186/1746-4358-7-2
- Bandura, A. (2002). Social cognitive theory in cultural context. *Applied Psychology: An International Review*, 51(2), 269-290. doi:10.1111/1464-0597.00092
- Batrack, M., & Reinhold, A. (2010). The burden of suboptimal breastfeeding in the United States: A pediatric cost analysis. *Pediatrics*, 125(5), e1048-56. doi:10.1542/peds.2009-1616
- Bartowski, J. P. (2000). Breaking walls, raising fences: Masculinity, intimacy, and accountability among Promise Keeper. *Sociology of Religion*, 61(1), 33-53. doi:10.2307/3712089
- Beal, A. C., Kuhlthau, K., & Perrin, J. M. (2003). Breastfeeding advice given to African American and White women by physicians and WIC counselors. *Public Health Report*, 118, 368-376. Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1497560/>
- Bentley, M. E., Dee, D. L., & Jensen, J. L. (2003). Breastfeeding among low income, African American women: Power, beliefs, and decision making. *The Journal of Nutrition*, 133(1), 305S-309S. Retrieved from <http://jn.nutrition.org/content/133/1/305S.long>
- Blee, K. M., & Tickmayer, A. R. (1995). Racial differences in men's attitudes about women's gender roles. *Journal of Marriage and the Family*, 57, 21-30. Retrieved from <https://www.ncfr.org/jmf>

- Bronfenbrenner, U. (1994). Ecological models of human development. In *International encyclopedia of education* (Vol. 3, 2nd ed., pp. 1643-1647). Oxford, England: Elsevier.
- Brown, J. D., & Peuchaud, S. R. (2008). Media and breastfeeding: Friend or foe? *International Breastfeeding Journal*, 3, 15. Retrieved from <http://doi.org/10.1186/1746-4358-3-15>
- Burkholder, G. (2009). Sample size analysis for quantitative studies. Retrieved from <http://sylvan.live.college.com/>
- Celi, A. C., Rich-Edwards, J. W., Richardson, M. K., Kleinman, K. P., & Gillman, M. W. (2005). Immigration, race/ethnicity, and social and economic factors as predictors of breastfeeding initiation. *Archives of Pediatric and Adolescent Medicine*, 159, 255-260. doi:10.1001/archpedi.159.3.255
- Centers for Disease Control and Prevention (CDC) (2010). Racial and ethnic differences in breastfeeding initiation and duration, by state---National Immunization Survey, United States, 2004-2008. *Morbidity and Mortality Weekly Report (MMWR)*, 59(11), 327-334. Retrieved from <http://www.cdc.gov>
- Centers for Disease Control and Prevention (CDC) (2011). Breastfeeding among U.S. children born 2000 – 2008, CDC National Immunization Survey. Retrieved from http://www.cdc.gov/breastfeeding/data/NIS_data/
- Centers for Disease Control and Prevention (CDC) (2012). *Breastfeeding Report Card—United States, 2012*. Retrieved from <http://www.cdc.gov/breastfeeding/data/reportcard/reportcard2012.htm>

- Centers for Disease Control and Prevention (CDC), Division of Nutrition and Physical Activity (DONPA) (2007). *Research to Practice Series No. 4: Does Breastfeeding Reduce the Risk of Pediatric Overweight?* Atlanta, GA: Centers for Disease Control and Prevention.
- Chen, A., & Rogan, W. J. (2004). Breastfeeding and the risk of post-neonatal death in the United States. *Pediatrics*, *113*(5), e435-e439. Retrieved from <http://pediatrics.aappublications.org/content/113/5/e435.full>
- Chen, Y. C., Wu, Y. C., & Chie, W. C. (2006). Effects of work-related factors on the breastfeeding behavior of working mothers in a Taiwanese semiconductor manufacturer: A cross-sectional survey. *BMC Public Health*, *6*, 160. Retrieved from <http://www.biomedcentral.com>
- Christi, M. J., Salam, M. A., Smith, J. H., Ahmed, T., Ashraf, H., Bardhan, P. K., & Pietroni, M. A. (2011). Impact of lack of breast feeding during neonatal age on the development of clinical signs of pneumonia and hypoxemia in young infants with diarrhea. *PLoS ONE*, *6*(10), 1-5. doi:10.1371/journal.pone.0025817.
- Clifford, J., & McIntyre, E. (2008). Who supports breastfeeding? *Breastfeeding Review*, *16*(2), 9-19. Retrieved from <https://www.breastfeeding.asn.au/bfreview>
- Connell, R. W., & Messerschmidt, J. W. (2005). Hegemonic masculinity: Rethinking the concept. *Gender & Society*, *19*(6), 829-859. doi:10.1177/0891243205278639
- Courtenay, W. H. (2000). Constructions of masculinity and their influence on men's well-being: A Theory of gender and health. *Social Science & Medicine*, *50*(10) 1385-1401. doi:10.1016/S0277-9536(99)00390-1

- Courtenay, W.H. (2002). A global perspective on the field of men's health: An editorial. *International Journal of Men's Health*, 1,1-13. Retrieved from <http://www.mensstudies.info/OJS/index.php/IJMH/>
- Creighton, G., & Oliffe, J. (2010). Theorising masculinities and men's health: A brief history with a view to practice. *Health Sociology Review*, 19(4), 409-418. doi:10.5172/hesr.2010.19.4.409
- Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed method approaches* (3rd ed.). Thousand Oaks, CA: SAGE Publications, Inc.
- De la Mora, A., Russell, D. W., Dungy, C. I., Losch, M., & Dusdieker, L. (in press) (1999). The Iowa Infant Feeding Attitude Scale: Analysis of reliability and validity. *Journal of Applied Social Psychology*, 29(11), 2362-2380. doi:10.1111/j.1559-1816.1999.tb00115.x
- Dennis, C. (2010). Breastfeeding self-efficacy [Internet]. Retrieved from <http://www.cindyleedennis.ca>
- DePadilla, L., Windle, M., Wingood, G., Cooper, H., & DiClemente, R. (2011). Condom use among young women: Modeling the theory of gender and power. *Health and Psychology*, 30(3), 310–319. doi:10.1037/a002287
- Department of Health and Human Services. (2000). Chapter 16: Maternal, Infant and Child Death. *Healthy People 2010: Objectives for Improving Health*. Retrieved from http://www.cdc.gov/nchs/data/hpdata2010/hp2010_final_review_focus_area_16.pdf

- Department of Health and Human Services (2000b). HHS Blueprint for Action on Breastfeeding. Retrieved from <https://www.womenshealth.gov/archive/breastfeeding/programs/blueprints/bluprntbk2.pdf>
- Driscoll, D. L., Appiah-Yeboah, A., Salib, P., & Rupert, D. J. (2007). Merging qualitative and quantitative data in mixed methods research: How to and why not. *Ecological and Environmental Anthropology (University of Georgia)*. Paper 18. Retrieved from <http://digitalcommons.unl.edu/icwdmeeaa/18>
- Earle, S. (2002). Factors affecting the initiation of breastfeeding: Implications for breastfeeding promotion. *Health Promotion International*, 17(3), 205-214. doi:10.1093/heapro/17.3.205
- Egger, G., & Swinburn, B. (1997). An “ecological” approach to the obesity pandemic. *British Medical Journal*, 315, 477-480. doi:10.1136/bmj.315.7106.477
- Fazio, R. (2007). Attitudes as object-evaluation associations of varying degrees. *Social Cognition*, 25(5), 603–637. doi:10.1521/soco.2007.25.5.603
- Fischer, A. R., Tokar, D. M., Good, G. E., & Snell, A. F. (1998). More on the structure of male role norms: Exploratory and multiple sample confirmatory analyses. *Psychology of Women Quarterly*, 22(2), 135-155. doi:10.1111/j.1471-6402.1998.tb00147.x
- Fleming, P. J., Lee, J. G. L., & Dworkin, L. S. (2014). “Real Men Don’t”: Constructions of masculinity and inadvertent harm in public health interventions. *American Journal of Public Health*, 104(6), 1029-1035. doi:10.2105/AJPH.2013.301820.

- Fryar, C. D., Carroll, M. D., & Ogden, C. L. (2012). *NCHS Health E-Stat: Prevalence of Obesity Among Children and Adolescents: United States, Trends 1963–1965 Through 2009–2010*. Retrieved from http://www.cdc.gov/nchs/data/hestat/obesity_child_09_10/obesity_child_09_10.htm
- Garcia, C. R., Mullany, L. C., Rahmathullah, L., Katz, J., Thulasiraj, R. D., Sheeladevi, S., Tielsch, J. M. (2011). Breast-feeding initiation time and neonatal mortality risk among newborns in South India. *Journal of Perinatology*, *31*(6), 397-403. doi:10.1038/jp.2010.138
- Gordon, D. M., Hawes, S. W., Reid, A. E., Callands, T. A., Magriples, U., Divney, A. ... Kershaw, T. (2013, September). The many faces of manhood: Examining masculine norms and health behavior of young fathers across race. *American Journal of Men's Health*, *7*(5), 394-401. doi:10.1177/1557988313476540.
- Gorman-Murray, A. (2008). Masculinity and the home: A critical review and conceptual framework. *Australian Geographer*, *39*(3), 367-379. doi:10.1080/00049180802270556
- Grady, W. R., Tanfer, K., Billy, J. O. G., & Lincoln-Hanson, J. (1996). Men's perceptions of their role and responsibilities regarding sex, contraception and childrearing. *Family Planning Perceptions*, *28*(5), 221-226. Retrieved from <https://www.guttmacher.org/pubs/journals/2822196.pdf>
- Grassley, J., & Eschiti, V. (2008). Grandmother breastfeeding support: What do mothers need and want? *Birth*, *35*(4), 329-35. doi:10.1111/j.1523-536X.2008.00260.x
- Greene, M. E., & Levack, A. (2010). *Synchronizing gender strategies: A cooperative model for improving reproductive health and transforming gender relations:*

- Washington, D.C., Population Reference Bureau [PRB], 2010. [40] p. (USAID Agreement No. GPO-A-00-03-00004-00; USAID Agreement No. GPO-A-000-08-00007-00). Retrieved from <http://www.ponline.org/node/214576>
- Hector, D., King, L., Webb, K., & Heywood, P. (2005). Factors affecting breastfeeding practices: Applying a conceptual framework. *NSW Public Health Bulletin*, 16(3-4), 52-55. doi:10.1071/NB05013
- Henderson, L., McMillan, B., Green, J. M., & Renfrew, M. J. (2011). Men and infant feeding: Perceptions of embarrassment, sexuality, and social conduct in white low-income British men. *Birth*, 38(1), 61-70. doi:10.1111/j.1523-536X.2010.00442.x
- Humphreys, A. S., Thompson, N. J., & Miner, K. R. (1998). Intention to breastfeed in low-income pregnant women: the role of social support and previous experience. *Birth (Berkeley, Calif.)*, 25(3), 169-74. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/9767219>
- Institute of Medicine (IOM). 2011. *Early Childhood Obesity Prevention Policies*. Washington, DC: The National Academies Press. Retrieved from <http://www.iom.edu/Reports/2011/Early-Childhood-Obesity-Prevention-Policies.aspx>
- Ip, S., Chung, M., Raman, G., Chew, P., Magula, N., Devine, D., & Lau, J. (2007). Breastfeeding and maternal and infant health outcomes in developed countries. *Evidence /Report Technology Assessment*, 53(153), 1–186. doi:10.1542/gr.18-2-15)
- Jolly, L., Pagels, P., Woodfin, G., Silver, M., Kindratt, T., & Gimpel, N. (2013). Knowledge and attitudes toward breastfeeding in an African American male population. *Journal of Obstetrics, Gynecologic & Neonatal Nursing*, 42(6), 664-671. doi:10.1111/1552-6909.12258

- Johnston-Robledo, I., Wares, S., Fricker, J., & Pasek, L. (2007). Indecent exposure: self-objectification and young women's attitudes toward breastfeeding. *Sex Roles, 56*(7):429–437. doi:10.1007/s11199-007-9194-4
- Kass, R. A. & Tinsley, H. E. A. (1979). Factor analysis. *Journal of Leisure Research, 11*, 120-138.
- Kogan, M. D., Singh, G. K., Dee, D. L., Belanoff, C., & Grummer-Strawn, L.M. (2008). Multivariate analysis of state variation in breastfeeding rates in the United States. *American Journal of Public Health, 98*(10), 1872-1880. doi: 10.2105/AJPH.2007.127118
- Lewallen, L. P. & Street, D. J. (2010). Initiating and sustaining breastfeeding in African American women. *Journal of Obstetric, Gynecologic, and Neonatal Nursing, 39*(6), 667-674. doi:10.1111/j.1552-6909.2010.01196x
- Li, R., Fein, S. B., Chen, J., & Grummer-Strawn, L. M. (2008). Why mothers stop breastfeeding: Mothers' self-reported reasons for stopping during the first year [Supplemental]. *Pediatrics, 122*(2), 69S-76S. doi:10.1542/peds.2008-1315i
- Li, R., & Grummer-Strawn, L. (2002). Racial and ethnic disparities in breastfeeding among United States infants: Third National Health and Nutrition Examination Survey, 1988–1994. *BIRTH, 29*(4), 251-257. doi:10.1046/j.1523-536X.2002.00199.x
- MacDorman, M. F., & Matthews, T. J. (2010). Infant mortality statistics from the 2006 Period Linked Birth/Infant Death Data Set. *National Vital Statistics Report, 58*(17), 1-32. Retrieved from http://www.cdc.gov/nchs/data/nvsr/nvsr58/nvsr58_17.pdf

- Marshall, N. M. (1996). Sampling for qualitative research. *Family Practice* (Oxford University Press), *13*(6), 522-525. doi:10.1093/fampra/13.6.522
- McDowell, M. A., Wang, C-Y., & Kennedy-Stephenson, J. (2008). *Breastfeeding in the United States: Findings from the National Health and Nutrition Examination Surveys 1999-2006* [NCHS Data Brief No. 5]. Hyattsville, MD: National Center for Health Statistics.
- McInnes, R.J. & Chambers, J.A. (2008). Supporting breastfeeding mothers: Qualitative synthesis. *Journal of Advanced Nursing*, *62*(4), 407-27. doi: 10.1111/j.1365-2648.2008.04618.x
- McKelley, R.A. & Rochlen A.B. (2010). Conformity to masculine role norms and preferences for therapy or executive coaching. *Psychology of Men & Masculinity*. *11*(1), 1–14. Retrieved from <http://dx.doi.org/10.1037/a0017224>
- McLaughlin, M., Fraser, J., Young, J. & Keogh, S. (2011). Paediatric nurses' knowledge and attitudes related to breastfeeding and the hospitalised infant. *Breastfeeding Review*, *19*(3), 13-24. Retrieved from <http://search.informit.com.au/documentSummary;dn=880626782563273;res=IELHEA>
- McMillan, B., Conner, M., Woolridge, M., Dyson, L., Green, J., Renfrew, M., & Clarke, G. (2008). Predicting breastfeeding in women living in areas of economic hardship: Explanatory role of the theory of planned behaviour. *Psychology and Health*, *23*(7), 767-788. doi: 10.1080/08870440701615260

- Mickens, A. D., Modesto, N., Montgomery, A., & Taylor, M. (2009). Peer support and breastfeeding intentions among Black WIC participants. *Journal of Human Lactation*, 25(157), 157-162. doi: 10.1177/0890334409332438
- Millennium Development Goals (2012). Goal 4: Reduce Child Mortality [Fact Sheet]. Retrieved from <http://www.un.org>
- Mitchell-Box, K. and Braun, K.L. (2012). Fathers' thoughts on breastfeeding and implications for a theory-based intervention. *Journal of Obstetrics, Gynecologic & Neonatal Nursing*. 41(6), E41-E50. doi:10.1111/j.1552-6909.2012.01399.x
- Moller, M. (2007). Exploiting patterns: A critique of hegemonic masculinity. *Journal of Gender Studies*, 16(3), 263-276. doi:10.1080/09589230701562970
- Morse, J. (2000). Determining sample size. *Qualitative Health Research*, 10(1), 3-5.
- National Center for Health Statistics (2001). *Healthy People 2000 Final Review*. Hyattsville, MD: Public Health Service.
- National Center for Health Statistics (2011). *Healthy People 2010 Final Review*. Hyattsville, MD: Public Health Service.
- Neal, R. (2011). Engaging Abrahamic masculinity: Race, religion, and the measure of manhood. *Cross Currents*, 61(4), 557-564. doi:10.1111/j.1939-3881.2011.00204.x
- Ogbuanu, C., Probst, J., Laditka, S., Liu, J., Bael, J., & Glover, S. (2009). Reasons why women do not initiate breastfeeding. *Women's Health*, 19(4), 268-278. doi:10.1016/j.whi.2009.03.005.
- Okon, M. (2004). Health promotion: Partner's perceptions of breastfeeding. *British Journal of Midwifery*, 12(6), 387-393. doi:<http://dx.doi.org/10.12968/bjom.2004.12.6.13141>

- Patton, M. Q. (2001). *Qualitative research and evaluation methods* (3rd ed.). Thousand Oaks, CA: SAGE Publications, Inc.
- Pisacane, A., Constinisio, G.I., Aldinucci, M., D'Amora, S., & Constinisio, P. (2005). A controlled trial of the father's role in breastfeeding promotion. *Pediatrics*, *116*(4), e494-e498. doi:10.1542/peds.2005-0479.
- Pollard, D., Guill, M., Hanover, N., & Medical, R. (n.d.). The relationship between baseline self-efficacy and breastfeeding duration. *Southern Online Journal of Nursing Research*, *9*(4), 1-15. Retrieved from <http://www.snrs.org/>
- QSR International (2011). NVivo 10 getting started guide. Retrieved from <http://download.qsrinternational.com/Document/NVivo9/NVivo9-Getting-Started-Guide.pdf>
- Rempel, L. A., & Rempel, J. K. (2004). Partner influence on health behavior decision-making: Increasing breastfeeding duration. *Journal of Social and Personal Relationships*, *21*(1), 92–111. doi:10.1177/0265407504039841
- Rempel, L.A. and Rempel, J.K. (2011). The breastfeeding team: The role of involved fathers in the breastfeeding family. *Journal of Human Lactation*. *27*(2): 115-121. doi:10.1177/0890334410390045
- Satcher, D. (2010). Include a social determinants of health approach to reduce health inequities (Commentary). *Public Health Reports*, *125*(Supplement 4), 6-7. Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2882968/>
- Schiavo, R. (2007). *Health communication: From theory to practice*. San Francisco, CA: Jossey-Bass.

- Scott, J.A., Landers, M.C.G., Hughes, R.M. & Binns, C.W. (2001). Factors associated with breastfeeding at discharge and duration of breastfeeding. *Journal of Paediatrics and Child Health*, 37(3), 254-261. doi:10.1046/j.1440-1754.2001.00646.x
- Shaker, I., Scott, J. A., & Reid, M. (2003). Infant feeding attitudes of expectant parents; Breastfeeding and formula feeding. *Journal of Advanced Nursing*, 45(3), 260–268. doi:10.1046/j.1365-2648.2003.02887
- Sherriff, N., Hall, V., & Pickin, M. (2009). Father's perspectives on breastfeeding: Ideas for intervention. *British Journal of Midwifery*, 14(4), 223-27. doi:10.12968/bjom.2009.17.4.41670
- Singleton, R. A. & Straits, B. C. (1999). *Approaches to social research* (3rd ed.). New York, NY: Oxford University Press.
- Swanson, V., & Power, K. G. (2005). Initiation and continuation of breastfeeding: Theory of planned behaviour. *Journal of Advanced Nursing*, 50(3), 272-82. doi:10.1111/j.1365-2648.2005.03390.x
- Susin, L. R., & Guigliani, E. R. (2008). Inclusion of fathers in an intervention to promote breastfeeding: Impact on breastfeeding rates. *Journal of Human Lactation*, 2, 386-392. doi:10.1177/0890334408323545.
- Thompson, E. H., Pleck, J. H., & Ferrera, D. L. (1992). Men and masculinities: Scales for masculinity ideology and masculinity-related constructs. *Sex Roles*, 27(11), 573-607. doi:10.1007/BF02651094
- Tiedje, L. B., Schiffman, R., Omar, M., Wright, J., Buzzita, C., McCann, A., & Metzger, S. (2002). An ecological approach to breastfeeding. *The American Journal of Maternal/Child Nursing*, 27(3), 154-161.

- Tohotoa, J., Maycock, B., Hauck, Y. L., Howatt, P., Burns, S., & Binns, C. W. (2009). Dads make a difference: An exploratory study of paternal support for breastfeeding in Perth, Western Australia. *International Breastfeeding Journal*, 4(15). Retrieved from <http://www.internationalbreastfeedingjournal.com/content/4/1/15>
- Institute for Digital Research and Education (IDRE), University of California Los Angeles (UCLA) (2015). Introduction to SAS. UCLA: Statistical Consulting Group. Retrieved from <http://www.ats.ucla.edu/stat/sas/notes2/> (accessed May 13, 2015).
- United Nations Children's Fund. (UNICEF) (2005). *Innocenti Declaration on the Protection, Promotion and Support of Breastfeeding* [Internet]. Retrieved from http://www.unicef.org/nutrition/index_24807.html
- U.S. Department of Health and Human Services. (2011). *The Surgeon General's Call to Action to Support Breastfeeding*. Washington, DC: U.S. Department of Health and Human Services, Office of the Surgeon General.
- U.S. Department of Labor, Wage and Hour Division. (2010). Fact sheet #73: Break time for nursing mothers under the FLSA [Internet]. Retrieved from: <http://www.dol.gov/whd/regs/compliance/whdfs73.pdf>
- Vaaler, M. L., Castrucci, B. C., Parks, S. E., Clark, J., Stagg, J., & Erickson, T. (2011). Men's attitudes toward breastfeeding: Findings from the 2007 Texas Behavioral Risk Factor Surveillance System. *Maternal Child Health Journal*, 15(2), 148-157. doi:10.1007/s10995-010-0605-8
- Vincent, W., Parrott, D., & Peterson, J. (2011). Effects of traditional gender role norms and religious fundamentalism on self-identified heterosexual men's attitudes, anger,

- and aggression toward gay men and lesbians. *Psychology of Men & Masculinity*, 12(4), 383 – 400. doi:10.1037/a0023807
- Wade, J. (2008). Masculinity ideology, male reference group identity dependence, and African American men's health-related attitudes and behaviors. *Psychology of Men & Masculinity*, 9(1), 5-16. doi:10.1037/1524-9220.9.1.5
- Wallace, L. E., & Chason, H. (2007). Infant feeding in the modern world: Medicalization and the maternal body. *Health (San Francisco)*, 27(4), 405-438. doi:10.1080/02732170701335046
- Walker, D. F., Tokar, D. M., & Fischer, A. R. (2000). What are eight popular masculinity-related instruments measuring? Underlying dimensions and their relations to sociosexuality. *Psychology of Men & Masculinity*, 1(2), 98 – 108. doi:10.1037//1524-9220.1.2.98
- Ward, L. M., Merriweather, A. & Caruthers, A. (2006). Breasts are for men: Media, masculinity ideologies, and men's beliefs about women's bodies. *Sex Roles*, 55(9-10), 703-714. doi:10.1007/s11199-006-9125-9.
- Wedgwood, N. (2009). Connell's theory of masculinity – its origins and influences on the study of gender1. *Journal of Gender Studies*, 18(4), 329-339. doi:10.1080/09589230903260001
- Wilcox, L. & Marks, J. S. (Eds.) (1994). From data to action: CDC's public health surveillance for women, infants, and children. Atlanta: Centers for Disease Control and Prevention. Retrieved from <http://stacks.cdc.gov/view/cdc/11354/>
- Wingood, G., & DiClemente, R. (2000). Application of the theory of gender and power to examine HIV-Related exposures, risk factors, and effective interventions for

- women. *Health Education & Behavior*, 27(5), 539-565.
- doi: 10.1177/109019810002700502
- Wolf, J. H. (2003). Low breastfeeding rates and public health in the United States. *American Journal of Public Health*, 93(12), 2000- 2010.
- World Health Organization (WHO) (2012). 10 Facts on Breastfeeding [Internet]. Retrieved from <http://www.who.int/features/factfiles/breastfeeding/facts/en/>
- World Health Organization (WHO), United Nations Children's Fund (UNICEF) (2009). Baby-friendly hospital initiative: Revised, updated and expanded for integrated care, Section 1: Background and implementation. Geneva, Switzerland: Wellstart International. Retrieved from http://www.who.int/nutrition/publications/infantfeeding/bfhi_trainingcourse_s1/en/
- Lehmann, U. & Sanders, D. (2007). Community health workers: What do we know about them? [Policy Brief]. Geneva, Switzerland: World Health Organization (WHO), Evidence and Information for Policy, Department of Human Resources for Health.
- Young, J., Watson, K., Ellis, L. & Raven, L. (2012). Responding to evidence: Breastfeeding baby if you can – the sixth public health recommendation to reduce the risk of sudden and unexpected death in infancy. *Breastfeeding Review*, 20(1), 7-15. Retrieved from <http://search.informit.com.au/documentSummary;dn=359214662120590;res=IELHEA>

Appendix A: Recruitment Letter/Email Message for Partner Organizations

Dear XXX:

My name is Makeva Rhoden and I am a doctoral student attending Walden University. My Ph.D. will be in the field of Public Health with a focus on community health promotion and education.

My interests is in maternal and child health, but specifically on how men can add to this conversation by influencing behaviors that can lead to improved perinatal outcomes.

I am currently developing my dissertation proposal, which will look at the interplay of masculine ideology on attitudes toward infant feeding practices. The main research question I intend to answer is whether an African American male's masculine ideology (concept of gender roles) contributes to or determines his attitude toward specific infant feeding practices (i.e., breastfeeding). My secondary questions are 1) what factors contribute to an African American male's idea of masculinity (i.e., socio-cultural factors, media, etc.) and 2) how does this influence his perceptions on breastfeeding. This proposed study will use a mixed methods approach to include the use of an instrument on infant feeding practices and one on gender norms.

Additionally, I will be conducting a series of focus group sessions to collect qualitative data on factors affecting perceptions of gender roles and thoughts on breastfeeding.

I am writing you today to inquire about the possibly of partnering with your organization to do the following:

1. Gather potential participants for the study via your membership listserv – specifically, I am asking whether it would be possible to send a link of my online survey to your members.
2. Facilitate a focus group session with members of your organization – the focus group would be a minimum of an hour and used to gather additional information on socio-cultural factors affecting breastfeeding attitudes.

If you are interested in partnering with me on this academic endeavor, please respond to this email. If additional information is needed before you can make a final decision, I will be more than happy to have an extended conversation with you about the particulars of my research. Please note that any results obtained from this study will be shared with you as well.

Thank you for your time and consideration.

Sincerely,

Makeva Rhoden

Doctoral Student

Walden University

Appendix B: Revised Recruitment Letter/Email Message for Organizations

Good Morning/Afternoon/Evening,

My name is Makeva Rhoden and I am a doctoral student attending Walden University, working toward a Ph.D. in Public Health. I am currently developing my dissertation proposal, which will look at the interplay of gender role norms (masculinity ideology) on African American males' attitudes and perceptions towards breastfeeding. I am writing you today to inquire about the possibility of recruiting potential study participants through your organization.

If you are interested in learning more about my study and the specific requirements of your organizations, please send an email to makeva.rhoden@waldenu.edu. I can also be reached by phone at (301) 580-8320. I would be happy to have an extended conversation with you about the particulars of my research.

Thank you for your consideration of this academic endeavor. I know that time is a valuable commodity and I appreciate yours.

Sincerely,

Makeva Rhoden

Appendix C: Letter of Cooperation for Participation in Pilot Study and Full Study
(SOCBC)



Spirit of Christ Missionary Baptist Church
8005 Cryden Way
Forestville, Maryland 20747
Reverend John N. Robinson Jr., Pastor

Quinton Corbin
Chairman of Trustee Ministry
Ministry

Charles George
Chairman of Deacon

Ardella Lewis
Church Clerk

Makeva Rhoden
Executive Assistant to the Pastor

Pastor John Robinson Jr.
Spirit of Christ Baptist Church
8005 Cryden Way
Forestville, MD 20747

May 5, 2014

Dear Ms. Rhoden,

Based on my review of your research proposal, I give you permission to conduct your research study entitled *Spheres of Influence: Understanding African American Males' Perceptions and Attitudes Toward Infant Feeding Practices* within Spirit of Christ Baptist Church. This letter also provides permission for you to conduct the initial pilot study to test the online questionnaire that will be used as part of this study as well.

We understand that you will be undertaking a Walden University student researcher role that is separate from your administrative roles at our church as Executive Assistant to the Pastor and Superintendent of Sunday School. In your student researcher role, I authorize you to partner with our organization to: 1) distribute an invitation to participate in the pilot study and 2) distribute invitation to participate in the full study and follow-up focus group via our members' listserv. **An individuals' participation in the pilot and full study will be voluntary and at their own discretion.**

We understand that you will allow participants to volunteer and decline confidentially in order to minimize conflicts of interest and other potential ethical problems.

We understand that our organization's responsibilities include:

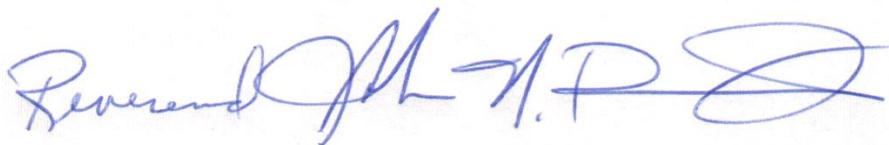
- Disseminating pilot study invitation, which will allow you to test the online questionnaire.
- Disseminating study invitations for the full study to include the online questionnaire and focus group.

We reserve the right to withdraw from both the pilot study and full study at any time if our circumstances change.

I confirm that I am authorized to approve research in this setting.

I understand that the data collected will remain entirely confidential and may not be provided to anyone outside of the research team without permission from the Walden University Institutional Review Board (IRB).

Sincerely,

A handwritten signature in blue ink, appearing to read "Reverend John N. Robinson". The signature is stylized and cursive, with the word "Reverend" written in a smaller, more legible font at the beginning.

Rev. John N. Robinson
Pastor
Spirit of Christ Baptist Church
Eula17@verizon.net
socbc@verizon.net

Appendix D: Letters of Cooperation for Full Study



**THE EAST OF THE RIVER
CLERGY POLICE COMMUNITY PARTNERSHIP, INC.**

4405 First Street, S.E. • Washington, D.C. 20032 • (202) 373-5767 Office • (202) 373-5769 Fax • www.ecocpp.org

March 27, 2014

Makeva Rhoden
4613 Bean Legacy Circle
Bowie, Md. 20720

Dear Ms. Rhoden:

Based on my review of your research proposal, I give permission for you to conduct the study entitled *Spheres of Influence: Understanding African American Males' Perceptions and Attitudes Toward Infant Feeding Practices* within East of the River Clergy, Police Community Partnership. As part of this study, I authorize you to partner with our organization to distribute an invitation to participate in your online questionnaire and follow-up focus group via our members' listserv. **An individual's participation in your study will be voluntary and at their own discretion.**

We understand that our organization's responsibilities include:


- Disseminating study invitations for both the online questionnaire and focus group.

We reserve the right to withdraw from the study at any time if our circumstances change.

I confirm that I am authorized to approve research in this setting.

I understand that the data collected will remain entirely confidential and may not be provided to anyone outside of the research team without permission from the Walden University Institutional Review Board (IRB).

Sincerely,


Rev. Donald Isaac
Executive Director
East of the River Clergy, Police, Community Partnership
disaac@ecocpp.org

Reclaiming a generation...One child at a time.

Reverend Henry Gaston
Pastor, African Methodist Episcopal Church

Mr. Lawrence Thomas
Lead Social Services

Ms. Angel Sany-Kimlin
JJC Case Administrator

Reverend Dr. Judy Talbert
Pastor, East Townside Baptist Church for All People

Ms. Aoi Russell
Director, Metropolitan Police Department
Training & Recruitment

Reverend Donald L. Isaac
Executive Director, East of the River Clergy
Police, Community Partnership, Inc.

Reverend Franklin Senger, III
Pastor, Calvary Church of the Holy Comforter

Rev. John B. Gaskin, Sr.
Sr. Pastor, First Wesleyan Holiness Baptist Church



Men Aiming Higher, Inc.

12158 Centra Avenue, Suite 107, Mitchellville, Maryland 20722 Tel: 301-358-0889 Fax: 301-278-5018 www.MenAimingHigher.org

Letter of Cooperation from Community Research Partner

Mr. Doyin Folarin
 Men Aiming Higher
 10201 Martin Luther King Jr., Hwy
 Suite 270
 Bowie, MD 20720

March 14, 2014

Dear Ms. Rhoden,

Based on my review of your research proposal, I give permission for you to conduct the study entitled *Spheres of Influence: Understanding African American Males' Perceptions and Attitudes Toward Infant Feeding Practices* within Men Aiming Higher. As part of this study, I authorize you to partner with our organization to distribute an invitation to participate in your online questionnaire and follow-up focus group via our members' listserv. **An individuals' participation in your study will be voluntary and at their own discretion.**

We understand that our organization's responsibilities include:

- Disseminating study invitations for both the online questionnaire and focus group.

We reserve the right to withdraw from the study at any time if our circumstances change.

I confirm that I am authorized to approve research in this setting.



Men Aiming Higher, Inc.

12138 Centre Avenue, Suite 157, Millersville, Maryland 20721 Tel: 301-358-3568 Fax: 301-218-0218 www.MenAimingHigher.org

I understand that the data collected will remain entirely confidential and may not be provided to anyone outside of the research team without permission from the Walden University Institutional Review Board (IRB).

Sincerely,

A handwritten signature in black ink, appearing to read 'Doyin Folarin', written over a horizontal line.

Doyin Folarin

efola@gmail.com



The New United Baptist Church

2233 Hunter Place S.E. Washington, D.C. 20020-4311
 202-340-6826 admin@nubc.org newunitedbaptistchurch.org
Nana Rudolph Stewart III, Pastor

Deacon Rod Fugroy,
 Chairperson

Trustee Cynthia Cunningham,
 Chairperson

Letter of Cooperation from Community Research Partner

March 26, 2014

Dear Ms. Rhoden,

Based on my review of your research proposal, I give permission for you to conduct the study entitled *Spheres of Influence: Understanding African American Males' Perceptions and Attitudes Toward Infant Feeding Practices* within New United Baptist Church. As part of this study, I authorize you to partner with our organization to distribute an invitation to participate in your online questionnaire and follow-up focus group via our members' listserv. **An individuals' participation in your study will be voluntary and at their own discretion.**

We understand that our organization's responsibilities include:

- Disseminating study invitations for both the online questionnaire and focus group.

We reserve the right to withdraw from the study at any time if our circumstances change.

I confirm that I am authorized to approve research in this setting.

I understand that the data collected will remain entirely confidential and may not be provided to anyone outside of the research team without permission from the Walden University Institutional Review Board (IRB).

Sincerely,

Nana Rudolph Stewart, III
 Pastor
 New United Baptist Church
admin@nubc.org



Letter of Cooperation from Community Research Partner

Courtenay Lamumba Miller, Pastor
 Norbeck Community Church
 2631 Norbeck Road
 Silver Spring, Maryland 20906
 3019245393 office
 3019246886 fax

March 24, 2014

Dear Ms. Rhoden,

Based on my review of your research proposal, I give permission for you to conduct the study entitled *Spheres of Influence: Understanding African American Males' Perceptions and Attitudes Toward Infant Feeding Practices* within Norbeck Community Church. As part of this study, I authorize you to partner with our organization to distribute an invitation to participate in your online questionnaire and follow up focus group via our members' listserv. **An individuals' participation in your study will be voluntary and at their own discretion.**

We understand that our organization's responsibilities include:


- Disseminating study invitations for both the online questionnaire and focus group.

We reserve the right to withdraw from the study at any time if our circumstances change.

I confirm that I am authorized to approve research in this setting.

I understand that the data collected will remain entirely confidential and may not be provided to anyone outside of the research team without permission from the Walden University Institutional Review Board (IRB).

Sincerely,


 Courtenay Lamumba Miller, Pastor
 Norbeck Community Church
pastor@norbeckchurch.org
www.norbeckchurch.org

Norbeck Community Church
 Reverend Courtenay L. Miller, Senior Pastor
 2631 Norbeck Road, Silver Spring, MD 20906
 301-924-5393 office 301-924-6886 fax
 Email: admin@norbeckchurch.org Web: www.norbeckchurch.org

COMMUNITY BIBLE BAPTIST CHURCH

7309 Riverdale Rd., Lanham, MD 20786

Phone: 301-306-6363 Fax: 301-306-0220

Website: www.communitybiblebaptistchurch.org

Rev. Dr. Clevester O. Wimbish, Pastor

Debrae Vernon L. Barberhoff
Chairman Deacon Ministry

Truman Norma D. Jenkins
Chairwoman Trustee Ministry

Tracie Marie Q. Parker
Church Treasurer

Dinah B. Travers
Church Secretary

Beverly M. Al-Mustafa
Church Clerk

Brenda B. Crawford
Financial Secretary

Bethinda H. Bailey
Financial Secretary

Pastor Clevester O. Wimbish
Community Bible Baptist Church
7309 Riverdale Road
Lanham, MD 20706

March 22, 2014

Dear Ms. Rhoden,

Based on my review of your research proposal, I give permission for you to conduct the study entitled *Spheres of Influence: Understanding African American Males' Perceptions and Attitudes Toward Infant Feeding Practices* within Community Bible Baptist Church. As part of this study, I authorize you to partner with our organization to distribute an invitation to participate in your online questionnaire and follow-up focus group via our members' listserv. **An individuals' participation in your study will be voluntary and at their own discretion.**

We understand that our organization's responsibilities include:

- Disseminating study invitations for both the online questionnaire and focus group.

We reserve the right to withdraw from the study at any time if our circumstances change.

I confirm that I am authorized to approve research in this setting.

I understand that the data collected will remain entirely confidential and may not be provided to anyone outside of the research team without permission from the Walden University Institutional Review Board (IRB).

Sincerely,

Clevester O. Wimbish
Pastor
drclewimbish@msn.com

"Loving the Unity in Community"

Appendix E: Invitation to Participate in Pilot Study
(revised: 6/13/2014)

Hello,

My name is Makeva Rhoden and I am a student of Walden University School of Health Sciences. I am working on my dissertation study which looks at the interplay of gender norms (i.e., masculinity ideology) on African American male perceptions toward breastfeeding. My study will be based on feedback from African American men living in the Washington, DC metropolitan area.

The African American community experiences higher rates of infant mortality and childhood obesity. Breastfeeding is one of many strategies used to reduce infant mortality and combat childhood obesity. Recognizing that there continues to be a disparity in the percentage of African American women who breastfeed and that partner support may be a strategy for increasing these rates, the overall goal of this assessment is to better understand male attitudes toward breastfeeding and how their understanding of gender role norms influence their perceptions toward this practice (behavior). The intent of this research is to gather information that might, across all age groups, tell the researcher something about what is needed to create interventions that involve fathers in breastfeeding promotion, provide insight on strengthening partner support to increase breastfeeding initiation and duration, and promote healthy masculinity.

You are invited to participate in a pilot study of the online questionnaire that will be used for this study under the direction of Dr. JaMuir Robinson in the Public Health Program at the Walden University (WU) School of Health Sciences. **Taking part of this pilot study is entirely voluntary.**

In order to participate in the pilot study, you must be an African American male, at least 18 years old. If you choose to take part in this pilot study, you will answer questions on your infant feeding attitudes and male gender norms. It will take approximately 30 minutes to complete this survey. **Prior to accessing the survey, you will be asked to complete an informed consent form stating your understanding and agreement to participate in this study.**

The consent form to access the online survey is: <http://www.surveymoz.com/s3/1639977/Informed-Consent-Form-for-African-American-Male-Perspectives-and-Attitudes-Toward-Infant-Feeding-Methods-Survey-Pilot-Study-April-30-2014>. Individuals participating in this survey may also forward this link to other males they think meet the study criteria (i.e., African American males, at least 18 years of age).

If you have any questions, please contact me at makeva.rhoden@waldenu.edu.

Thank you,

Makeva Rhoden, MPH, CHES

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Makeva Rhoden

PhD Student 2014

Community Health Promotion and Education

Public Health Program - School of Health Sciences

Walden University

Appendix F: Informed Consent Form for African American Male Perspectives and Attitudes Toward Infant Feeding Methods Survey (Pilot Study- May 17, 2014)

Online Questionnaire/Survey

You are being invited to take part in a pilot study to validate an online questionnaire that will be used as part of a research study entitled Spheres of Influence: Understanding African American Males' Perceptions and Attitudes Toward Infant Feeding Practices. To be eligible to participate in the pilot study, you must be an African American male, age 18 or older, attending the Spirit of Christ Baptist Church. This form is part of a process called "informed consent" to allow you to understand this study before deciding whether to take part.

Page One

This study is being conducted by a researcher named Makeva Rhoden, who is a doctoral student at Walden University. Makeva is the primary investigator, and will collect all data during this study. As part of this study, Makeva will be undertaking a Walden University student researcher role that is separate from her administrative roles as Executive Assistant to the Pastor and Superintendent of Sunday School at the Spirit of Christ Baptist Church. As part of this study, you will be allowed to volunteer and decline confidentially in order to minimize conflicts of interest and other potential ethical problems.

Background Information

This pilot study is designed to improve and validate an online, electronic survey, specifically the timeframe needed to complete the survey and clarity of the questions included in the survey. The purpose of this study is to determine if any relationship exists between infant feeding attitudes and masculinity ideology or concept of male gender norms in African American males. The researcher seeks to determine whether a correlation exists between how a participant scores on a questionnaire on infant feeding attitudes and one on gender roles. The survey includes questions from two tools that have been used in previous studies: Male Role Norms Scale (MRNS) and the Iowa Infant Feeding Attitudes Scale (IIFAS).

Participant Procedures:

If you agree to be in this study, you will be asked to:

- Complete an online survey that includes questions on infant feeding attitudes and gender roles. Additionally, the survey will ask demographic questions to include some on race and ethnicity, income, education level, and marital status. The questionnaire should take approximately 30 - 45 minutes to complete.
- Provide detailed feedback identifying any questions or areas of the online survey which may be confusing, upsetting, or raise concern. You will be able to provide any feedback which you feel would improve the online survey process.
- This feedback may be positive, negative, or both. It is important to share honest feedback in order to ensure the online survey and process are valid for conducting this study. Specifically, it is important that the online survey and process is clear,

understandable, non-offensive, and completed within a suitable timeframe. All information collected during the pilot study will be strictly confidential and any identification information will be destroyed upon completion of the survey. You will not need to give specific answers to the research questions themselves and none of the information you provide will be added to the research compilation.

Voluntary Nature of Study

This study is voluntary. The researcher will respect your decision of whether or not you choose to be in the study. No one at within your organization will treat you differently if you decide not to be in the study. If you decide to join the study now, you can still change your mind later. You may stop at any time.

Risks and Benefits of Being in the Pilot Study

Being in this study would not pose risk to your safety or well-being. Participants may become more aware of their own personal feelings and beliefs by answering questions on infant feeding and masculinity ideology. The anticipated benefit of this research to individual participants is the potential to learn about breastfeeding and how they can support their partner in making infant feeding choices. Additionally, the knowledge gained from this study may contribute to understanding factors that can help engage African-American men in the promotion of breastfeeding practices and in providing support to their partners when and if they choose to breastfeed. All individual research results will be kept confidential. Results will only be reported as aggregated data. The researcher will provide an executive summary of the results to the partner organizations during a stakeholder debriefing session following final approval of the dissertation.

Payment

There is no payment for your participation in this study.

Privacy

Any information you provide in the survey will be kept confidential. As the primary researcher, Makeva Rhoden, will be the only individual to view and maintain the data collected from the surveys. The researcher will not collect any identifying information, therefore there is no way for me to connect you to any of the responses you provide. As soon as the pilot study is completed, all feedback will be assigned a unique number and any identifying information connected to the online questionnaire will be destroyed immediately. The information collected through this survey will not be used for any purposes outside of this research project. Data will be kept secure through the following procedures: 1. Usage of a secure password to access data from the online survey. The password will be created by the researcher and will not be made available to anyone not affiliated with the study. 2. Backing up all data and storing backups in a location separate from the original. 3. Password protecting all documents and transcripts related to this

study. The researcher will place a "lock" on all documents related to data analysis to prevent individuals from seeing participant information or changing any data. 4. Where necessary, de-identifying all information related to the participant. Data will be kept for a period of at least 5 years, as required by the university. Data will be stored on the researcher's personal computer and password protected to deny access by any individual not affiliated with the research study.

Contacts and Questions

You may ask any questions you have now. Or if you have questions later, you may contact the researcher via phone at (301) 580-8320 or email at makeva.rhoden@waldenu.edu. If you want to talk privately about your rights as a participant, you can call Dr. Leilani Endicott. She is the Walden University representative who can discuss this with you. Her phone number is 1-612-312-1210 or email irb@walden.edu. Walden University's approval number for this study is IRB will enter approval number here and it expires on IRB will enter expiration date.

Print Copy of Informed Consent Form

Please print or save this consent form for your records.

Action: Review: Copy of informed consent form.

Statement of Consent

Page exit logic: Page LogicIF: Question "Do you understand the information presented to you in the previous pages?" #1 contains any ("No") THEN: Jump to page 13 - Thank You!

I have read the above information and I feel I understand the study well enough to make a decision about my involvement. By clicking the link below, I understand that I am agreeing to the terms described above.

1) Do you understand the information presented to you in the previous pages?*

Yes

No

Final Consent

Page exit logic: New Page Logic ActionIF: Question "Do you consent to participating in this study?" #2 = ("Yes") THEN: Redirect to: edu.surveymoz.com/s3/1639978/African-American-Male-Perceptions-and-Attitudes-Toward-Infant-Feeding-Methods-Survey-Pilot-Study-April-30-2014

2) Do you consent to participating in this study?*

Yes

No

Thank You!

Thank you for taking my survey. Your response is very important to me.

Appendix G: Copy of Online Survey for Pilot Study

African American Male Perceptions and Attitudes Toward Infant Feeding Methods Survey (Pilot Study – May 17, 2014)

Page One

The following survey is part of a research study on the perceptions and attitudes of African American males towards breastfeeding feeding. The survey includes questions from the Infant Feeding Attitudes Scale and Male Role Norms Scale. At the end of the survey, you will also be asked a set of demographic questions. Please complete all sections.

Iowa Infant Feeding Attitudes Scale (IIFAS)

The following section involves questions from the Iowa Infant Feeding Attitudes Scale (IIFAS), a test used to measure an individual's attitude toward specific infant feeding practices. The test is comprised of 17-items. For each of the following statements, please indicate how much you agree or disagree by checking the circle beneath the statement that most closely corresponds to your opinion.

- 1) The nutritional benefits of breast milk last only until the baby is weaned from breast milk.*
 Strong disagreement Disagreement Neutral Agreement Strong agreement

- 2) Formula-feeding is more convenient than breast-feeding.**
 Strong disagreement Disagreement Neutral Agreement Strong agreement

- 3) Breast-feeding increases mother-infant bonding.*
 Strong disagreement Disagreement Neutral Agreement Strong agreement

- 4) Breast milk is lacking in iron.**
 Strong disagreement Disagreement Neutral Agreement Strong agreement

- 5) Formula-fed babies are more likely to be overfed than are breast-fed babies.*
 Strong disagreement Disagreement Neutral Agreement Strong agreement

- 6) Formula-feeding is the better choice if a mother plans to work outside the home.*
() Strong disagreement () Disagreement () Neutral () Agreement () Strong agreement
- 7) Mothers who formula-fed are miss out one of the great joys of motherhood.*
() Strong disagreement () Disagreement () Neutral () Agreement () Strong agreement
- 8) Mothers should not breast-feed in public places such as restaurants.**
() Strong disagreement () Disagreement () Neutral () Agreement () Strong agreement
- 9) Babies fed breast milk are healthier than babies who are fed formula.*
() Strong disagreement () Disagreement () Neutral () Agreement () Strong agreement
- 10) Breast-fed babies are more likely to be overfed than are formula-fed babies.**
() Strong disagreement () Disagreement () Neutral () Agreement () Strong agreement
- 11) Fathers feel left-out if a mother breast- feeds.**
() Strong disagreement () Disagreement () Neutral () Agreement () Strong agreement
- 12) Breast milk is the ideal food for babies.*
() Strong disagreement () Disagreement () Neutral () Agreement () Strong agreement
- 13) Breast milk is more easily digested than formula.*
() Strong disagreement () Disagreement () Neutral () Agreement () Strong agreement
- 14) Formula is as healthy for an infant as breast milk.**
() Strong disagreement () Disagreement () Neutral () Agreement () Strong agreement
- 15) Breast-feeding is more convenient than formula feeding.
() Strong disagreement () Disagreement () Neutral () Agreement () Strong agreement
- 16) Breast milk is less expensive than formula.*

Strong disagreement Disagreement Neutral Agreement Strong agreement

17) A mother who occasionally drinks alcohol, should not breast-feed her baby.**

Strong disagreement Disagreement Neutral Agreement Strong agreement

Comments on Iowa Infant Feeding Attitude Scale Questions

18) Did you find any of the questions listed difficult to answer?*

Yes

No

19) If yes to the question above, please explain what specifically you found difficult about the questions.

Male Role Norms Scale - Section 1: Status Norm

The following sections involve questions from the Male Role Norms Scale (MRNS), a test used to measure male gender norms (or masculinity ideology). The test is comprised of 26-items. For each of the following statements, please indicate how much you agree or disagree by checking the circle beneath the statement that most closely corresponds to your opinion.

20) Success in his work has to be man's central goal in this life.*

Very strongly disagree Strongly disagree Disagree Neutral
Agree Strongly agree Very strongly agree

21) The best way for a young man to get the respect of other people is to get a job, take it seriously, and do it well.*

Very strongly disagree Strongly disagree Disagree Neutral
Agree Strongly agree Very strongly agree

22) A man owes it to his family to work at the best-paying job he can get.*

Very strongly disagree Strongly disagree Disagree Neutral
Agree Strongly agree Very strongly agree

23) A man should generally work overtime to make more money whenever he has the chance.*

Very strongly disagree Strongly disagree Disagree Neutral
 Agree Strongly agree Very strongly agree

24) A man always deserves the respect of his wife and children.*

Very strongly disagree Strongly disagree Disagree Neutral
 Agree Strongly agree Very strongly agree

25) It is essential for a man to always have the respect and admiration of everyone who knows him.*

Very strongly disagree Strongly disagree Disagree Neutral
 Agree Strongly agree Very strongly agree

26) A man should never back down in the face of trouble.*

Very strongly disagree Strongly disagree Disagree Neutral
 Agree Strongly agree Very strongly agree

27) A man should always think everything out coolly and logically, and have rational reasons for everything he does. *

Very strongly disagree Strongly disagree Disagree Neutral
 Agree Strongly agree Very strongly agree

28) A man should always try to project an air of confidence even if he really doesn't feel confident inside. *

Very strongly disagree Strongly disagree Disagree Neutral
 Agree Strongly agree Very strongly agree

29) A man must stand on his own two feet and never depend on other people to help him do things*

Very strongly disagree Strongly disagree Disagree Neutral
 Agree Strongly agree Very strongly agree

Male Role Norms Scale - Section 2: Toughness Norm

30) When a man is feeling a little pain he should try not to let it show very much.*

Very strongly disagree Strongly disagree Disagree Neutral
 Agree Strongly agree Very strongly agree

31) Nobody respects a man very much who frequently talks about his worries, fears, and problems*

Very strongly disagree Strongly disagree Disagree Neutral Agree
 Strongly agree Very strongly agree

32) A good motto for a man would be "When the going gets tough, the tough get going."*

Very strongly disagree Strongly disagree Disagree Neutral Agree
 Strongly agree Very strongly agree

33) I think a young man should try to become physically tough, even if he's not big.*

Very strongly disagree Strongly disagree Disagree Neutral Agree
 Strongly agree Very strongly agree

34) Fists are sometimes the only way to get out of a bad situation.*

Very strongly disagree Strongly disagree Disagree Neutral Agree
 Strongly agree Very strongly agree

35) A real man enjoys a bit of danger now and then.*

Very strongly disagree Strongly disagree Disagree Neutral Agree
 Strongly agree Very strongly agree

36) In some kinds of situations a man should be ready to use his fists, even if his wife or his girlfriend would object*

Very strongly disagree Strongly disagree Disagree Neutral Agree
 Strongly agree Very strongly agree

37) A man should always refuse to get into a fight, even if there seems to be no way to avoid it.**

Very strongly disagree Strongly disagree Disagree Neutral Agree
 Strongly agree Very strongly agree

Male Role Norms Scale - Section 3: Anti-femininity Norm

38) It bothers me when a man does something that I consider "feminine."*

Very strongly disagree Strongly disagree Disagree Neutral Agree
 Strongly agree Very strongly agree

39) A man whose hobbies are cooking, sewing, and going to the ballet probably wouldn't appeal to me.*

Very strongly disagree Strongly disagree Disagree Neutral
 Agree Strongly agree Very strongly agree

40) It is a bit embarrassing for a man to have a job that is usually filled by a woman.*

Very strongly disagree Strongly disagree Disagree Neutral
 Agree Strongly agree Very strongly agree

41) Unless he was really desperate, I would probably advise a man to keep looking rather than accept a job as a secretary.*

Very strongly disagree Strongly disagree Disagree Neutral
 Agree Strongly agree Very strongly agree

42) If I heard about a man who was a hairdresser and a gourmet cook, I might wonder how masculine he was.*

Very strongly disagree Strongly disagree Disagree Neutral
 Agree Strongly agree Very strongly agree

43) I think it's extremely good for a boy to be taught to cook, sew, clean the house, and take care of younger children.**

Very strongly disagree Strongly disagree Disagree Neutral
 Agree Strongly agree Very strongly agree

44) I might find it a little silly or embarrassing if a male friend of mine cried over a sad love scene in a movie.*

Very strongly disagree Strongly disagree Disagree Neutral
 Agree Strongly agree Very strongly agree

Comments on Male Role Norms Scale Questions

45) Did you find any of the questions listed in the previous sections (i.e., status, toughness, anti-femininity) difficult to answer?*

Yes

No

46) If yes to the question above, please explain what specifically you found difficult about the questions.

Participant Demographics

47) Based on the information provided, please select an answer below that best represents your age.*

- under 18
- 18-24
- 25-34
- 35-54
- 55+

48) Indicate the highest level of education you have completed.*

- 12th grade or less
- Graduated high school or equivalent
- Some college, no degree
- Associate degree
- Bachelor's degree
- Post-graduate degree

49) Indicate your estimated annual household income.*

- Less than \$25,000
- \$25,000 to \$34,999
- \$35,000 to \$49,999
- \$50,000 to \$74,999
- \$75,000 to \$99,999
- \$100,000 to \$124,999
- \$125,000 to \$149,999
- \$150,000 or more

50) Indicate your relationship status*

- Single, Never married
- Married
- Not Married, but Living with Intimate Partner
- Divorced
- Separated

51) Do you have any children?*

- Yes
- No

52) Did your spouse or significant other breastfeed?*

Yes

No

53) Indicate how you heard about this survey.*

Men Aiming Higher

Spirit of Christ Baptist Church

East of the River Clergy Police Community Partnership

The New United Baptist Church

Community Bible Baptist Church

Norbeck Community Church

Other

Comments on Participant Demographics Questions

54) Did you find any of the questions listed in the previous section difficult to answer?*

Yes

No

55) If yes to the question above, please explain what specifically you found difficult about the questions.

Additional Participant Comments about this Survey

Thank You!

Thank you for taking my survey. Your response is very important to me.

Appendix H: Invitation to Participate in Full Study
(revised 6/13/2014)

Hello,

My name is Makeva Rhoden and I am a student of Walden University School of Health Sciences. I am working on my dissertation study which looks at the interplay of gender norms (i.e., masculinity ideology) on African American male perceptions toward breastfeeding. My study will be based on feedback from African American men living in the Washington, DC metropolitan area. My study will be conducted in two parts and include 1) an online survey and 2) two follow-up focus groups.

The African American community experiences higher rates of infant mortality and childhood obesity. Breastfeeding is one of many strategies used to reduce infant mortality and combat childhood obesity. Recognizing that there continues to be a disparity in the percentage of African American women who breastfeed and that partner support may be a strategy for increasing these rates, the overall goal of this assessment is to better understand male attitudes toward breastfeeding and how their understanding of gender role norms influence their perceptions toward this practice (behavior).

The intent of this research is to gather information that might, across all age groups, tell the researcher something about what is needed to create interventions that involves fathers in breastfeeding promotion, provide insight on strengthening partner support to increase breastfeeding initiation and duration, and promote healthy masculinity.

You are invited to participate in both an anonymous survey and a confidential follow-up focus group under the direction of Dr. JaMuir Robinson in the Public Health Program at the Walden University (WU) School of Health Sciences. **Taking part of this research is entirely voluntary.**

In order to participate in the study, you must be an African American male and at least 18 years old. If you choose to take part in this study, you will answer questions on your infant feeding attitudes and male gender norms. **It will take approximately 30 minutes to complete the online survey.** A second invitation email will be sent to you, requesting your participation in the follow-up focus group. **The focus group will take approximately 1 hour to complete.**

Prior to accessing the survey, you will be asked to complete an informed consent form stating your understanding and agreement to participate in this study. **The consent form to access the online survey is: <http://edu.surveymzmo.com/s3/1573923/Informed-Consent-Form-for-African-American-Male-Perspectives-and-Attitudes-Toward-Infant-Feeding-Methods-Survey>.** Individuals volunteering to participate in this survey may also forward this link to other males they think meet the study criteria (i.e., African American males, at least 18 years of age).

If you have any questions, please contact me at *makeva.rhoden@waldenu.edu*.

Thank you,

Makeva Rhoden, MPH, CHES

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Makeva Rhoden

PhD Student 2014

Community Health Promotion and Education

Public Health Program - School of Health Sciences

Walden University

Appendix I: Informed Consent Form for Full Study (Online Survey)
(revised 5/17/2014)

You are invited to take part in a research study on the perceptions and attitudes of African American males towards breastfeeding feeding. The researcher is inviting African American males age 18 and older, who reside in the Greater Washington Metropolitan area (including the District of Columbia, Maryland and Virginia) to be in the study. This form is part of a process called “informed consent” to allow you to understand this study before deciding whether to take part.

This study is being conducted by a researcher named Makeva Rhoden, who is a doctoral student at Walden University. Makeva is the primary investigator, and will collect all data during this study.

As part of this study, Makeva will be undertaking a Walden University student researcher role that is separate from her administrative roles as Executive Assistant to the Pastor and Superintendent of Sunday School at the Spirit of Christ Baptist Church.

As part of this study, you will be allowed to volunteer and decline confidentially in order to minimize conflicts of interest and other potential ethical problems.

Background Information:

The purpose of this study is to determine if any relationship exists between infant feeding attitudes and masculinity ideology or the concept of male gender norms in African American males. The researcher seeks to determine whether a correlation exists between how a participant scores on a questionnaire on infant feeding attitudes and one on gender roles.

Participant Procedures:

If you agree to be in this study, you will be asked to:

- Complete an online survey that includes questions on infant feeding attitudes and gender roles. Additionally, the survey will ask demographic questions to include some on race and ethnicity, income, education level, and marital status. **The questionnaire should take approximately 30 minutes to complete.**

Voluntary Nature of the Study:

This study is voluntary. The researcher will respect your decision of whether or not you choose to be in the study. No one at or within your organization will treat you differently if you decide not to be in the study. If you decide to join the study now, you can still change your mind later. You may stop at any time.

Risks and Benefits of Being in the Study:

Being in this study would not pose risk to your safety or well-being. Participants may become more aware of their own personal feelings and beliefs by answering questions on infant feeding and masculinity ideology.

The anticipated benefit of this research to individual participants is the potential to learn about breastfeeding and how they can support their partner in making infant feeding choices. Additionally, the knowledge gained from this study may contribute to understanding factors

that can help engage African-American men in the promotion of breastfeeding practices and in providing support to their partners when and if they choose to breastfeed.

All individual research results will be kept confidential. Results will only be reported as aggregated data. The researcher will provide an executive summary of the results to the partner organizations during a stakeholder debriefing session following final approval of the dissertation.

Payment:

There is no payment for your participation in this study.

Privacy:

This survey is fully anonymous. The researcher will not collect any identifying information, therefore there is no way for me to connect you to any of the responses you provide. The information collected through this survey will not be used for any purposes outside of this research project. Data will be kept secure through the following procedures:

1. Usage of a secure password to access data from the online survey. The password will be created by the researcher and will not be made available to anyone not affiliated with the study.
2. Backing up all data and storing backups in a location separate from the original.
3. Password protecting all documents and transcripts related to this study. The researcher will place a “lock” on all documents related to data analysis to prevent individuals from see participant information or changing any data.
4. Where necessary, de-identifying all information related to the participant.

Data will be kept for a period of at least 5 years, as required by the university. Data will be stored on the researcher’s personal computer and password protected to deny access by any individual not affiliated with the research study.

Contacts and Questions:

You may ask any questions you have now. Or if you have questions later, you may contact the researcher via phone at (301) 580-8320 or email at makeva.rhoden@waldenu.edu. If you want to talk privately about your rights as a participant, you can call Dr. Leilani Endicott. She is the Walden University representative who can discuss this with you. Her phone number is 1-612-312-1210 or email irb@walden.edu. Walden University’s approval number for this study is **IRB will enter approval number here** and it expires on **IRB will enter expiration date.**

Please print or save this consent form for your records.

Statement of Consent:

I have read the above information and I feel I understand the study well enough to make a decision about my involvement. By clicking the link below, I understand that I am agreeing to the terms described above.

1. Do you understand the information presented to you in the previous pages? *

Yes

No

2. Do you consent to participating in this study? *

Yes

No

Thank You!

Thank you for taking my survey. Your response is very important to me.

Appendix J: Invitation to Participate in Follow-up Focus Group
(Revised 8/10/14)

Hello,

My name is Makeva Rhoden and I am a doctoral student at Walden University's School of Health Sciences. You recently received an email from your organization requesting your assistance and participation in my online survey, which looks at the effect of gender norms (i.e., masculinity ideology) on African American male perceptions and attitudes toward breastfeeding. Thank you to those who have already taken the survey.

I am now seeking your assistance in the second part of my dissertation study, which will involve two focus groups (i.e., facilitated group discussion) to gather additional information on factors that influence male gender roles and perceptions toward breastfeeding. The information learned in the focus groups will help me better understand issues related to breastfeeding support in order to inform future public health messages.

The focus groups sessions will be facilitated by me and conducted for approximately one hour. The sessions will involve about 8-10 participants (including you) who will provide feedback on a series of questions designed to help me better understand African American male perceptions and attitudes towards breastfeeding. I am interested in your honest impression of the topic. Please be assured that nothing you say will be shared with your organization and even your participation in the focus group will remain confidential. To be eligible for the study you must be an African American male, age 18 and older. **Individuals who volunteer for the study will be given an incentive in the form of a \$5.00 Subway gift card for their participation in one of the two focus groups.**

If you are interested in participating in one of the focus group sessions, please send an email to Makeva.rhoden@waldenu.edu. I thank you in advance for your consideration.

Sincerely,

Makeva Rhoden, MPH, CHES

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Makeva Rhoden
PhD Student 2014
Community Health Promotion and Education
Public Health Program - School of Health Sciences
Walden University

Appendix K: Informed Consent for Follow-up Focus Group (Revised 8/10/14)

You have been asked to participate in a focus group being conducted by a researcher named Makeva Rhoden, who is doctoral student at Walden University. The purpose of the focus group is to better understand what factors influence male gender roles and perspectives toward breastfeeding. The information learned in the focus groups will be used to inform the design of public health messages on breastfeeding.

This study is being conducted by a researcher named Makeva Rhoden, who is a doctoral student at Walden University. Makeva is the primary investigator, and will collect all data during this study. Makeva Rhoden is a Program Management Officer and serves as Lieutenant Commander (LCDR) with the United States Public Health Service Commissioned Corp.

As part of this study, Makeva will be undertaking a Walden University student researcher role that is separate from her administrative roles as Executive Assistant to the Pastor and Superintendent of Sunday School at the Spirit of Christ Baptist Church .

As part of this study, you will be allowed to volunteer and decline anonymously in order to minimize conflicts of interest and other potential ethical problems.

Participant Procedures

There is no right or wrong answer to the focus group questions. The researcher want to hear many different viewpoints and would like to hear from everyone. The researcher hopes you can be honest even when your responses may not be in agreement with the rest of the group. In respect for each other, the researcher asks that only one individual speak at a time in the group and that responses made by all participants be kept confidential.

If you agree to participate in this study, you will be asked to:

- Participate in a taped, interactive, facilitated focus group session to provide answers to open ended questions on male attitudes and perceptions on infant feeding practices, specifically breastfeeding in a face-to-face setting.
- Share your honest and open thoughts with the researcher on this topic.
- **The focus group is expected to take an hour to complete.**

Voluntary Nature of Study

Your participation in the focus group is voluntary. This means that the researcher will respect your decision of whether or not to participate in the focus group. No one will treat you any differently if you decide not to be in the study. If you decide to join the study now, you can still change your mind during the focus group session.

Risks and Benefits of Being in the Study

Being in this study would not pose risk to your safety or well-being. Participants may become more aware of their own personal feelings and beliefs by answering questions on infant feeding and masculinity ideology.

The anticipated benefit of this research to individual participants is the potential to learn about breastfeeding and how they can support their partner in making infant feeding choices. Additionally, the knowledge gained from this study may contribute to understanding factors that can help engage African-American men in the promotion of breastfeeding practices and in providing support to their partners when and if they choose to breastfeed.

All individual research results will be kept confidential. Results will only be reported as aggregated data. The researcher will provide an executive summary of the results to the partner organizations during a stakeholder debriefing session following final approval of the dissertation.

Payment

Individuals who volunteer for this study will be given an incentive in the form of a \$5.00 Subway gift card as compensation for their participation in one of the two focus groups.

Privacy

The information obtained from this focus group will be kept strictly confidential. As the primary researcher, Makeva Rhoden, will be the only individual to view and maintain your contact information. Although the focus group will be tape recorded, your responses will remain anonymous and no names will be mentioned in the report.

The information collected through the focus group will not be used for any purposes outside of this research project. Data will be kept secure through the following procedures:

1. Password protecting all documents and transcripts related to this study. The researcher will place a "lock" on all documents related to data analysis to prevent individuals from seeing recordings and other notes obtained from focus groups or changing any data.
2. The password will be created by the researcher and will not be made available to anyone not affiliated with the study.
3. Backing up all data and storing backups in a location separate from the original.
4. Where necessary, de-identifying all information related to the participant.

Data will be kept for a period of at least 5 years, as required by the university. Data will be stored on the researcher's personal computer and password protected to deny access by any individual not affiliated with the research study.

Contacts and Questions:

You may ask any questions you have now. Or if you have questions later, you may contact the researcher via phone at (301) 580-8320 or email at makeva.rhoden@waldenu.edu. If you want to talk privately about your rights as a participant, you can call Dr. Leilani Endicott. She is the Walden University representative who can discuss this with you. Her phone number is 1-612-312-1210 or email irb@walden.edu. Walden University's approval number for this study is **05-22-14-0078608** and it expires on **May 21, 2015**.

Please print or save this consent form for your records.

Statement of Consent

I have read the above information and I feel I understand the study well enough to make a decision about my involvement. By signing below, I am agreeing to the terms described above.

Participant's Signature: _____

Date of consent: _____

Appendix L: Iowa Infant Feeding Attitudes Scale (survey)

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Appendix

The Iowa Infant Feeding Attitude Scale

For each of the following statements, please indicate how much you agree or disagree by circling the number

	SD	D	N	A	SA
*1. The nutritional benefits of breast milk last only until the baby is weaned from breast milk.	1	2	3	4	5
*2. Formula-feeding is more convenient than breast-feeding.	1	2	3	4	5
3. Breast-feeding increases mother-infant bonding.	1	2	3	4	5
*4. Breast milk is lacking in iron.	1	2	3	4	5
5. Formula-fed babies are more likely to be overfed than are breast-fed babies.	1	2	3	4	5
*6. Formula-feeding is the better choice if a mother plans to work outside the home	1	2	3	4	5
7. Mothers who formula-feed miss one of the great joys of motherhood.	1	2	3	4	5
*8. Women should not breast-feed in public places such as restaurants.	1	2	3	4	5
9. Babies fed breast milk are healthier than babies who are fed formula.	1	2	3	4	5
* 10. Breast-fed babies are more likely to be overfed than formula-fed babies.	1	2	3	4	5
* 11. Fathers feel left out if a mother breast-feeds.	1	2	3	4	5
12. Breast milk is the ideal food for babies.	1	2	3	4	5
13. Breast milk is more easily digested than formula.	1	2	3	4	5
* 14. Formula is as healthy for an infant as breast milk.	1	2	3	4	5
15. Breast-feeding is more convenient than formula feeding.	1	2	3	4	5
16. Breast milk is less expensive than formula.	1	2	3	4	5
* 17. A mother who occasionally drinks alcohol should not breast-feed her baby.	1	2	3	4	5

that most closely corresponds to your opinion (1 = *strong disagreement* [SD], 2 = *disagreement* [D], 3 = *neutral* [N], 4 = *agreement* [A], 5 = *strong agreement* [SA]). You may choose any number from 1 to 5.

Note. Items marked with asterisks are reverse-scored and the scores for each item are then summed. Higher scores indicate more positive attitudes toward breastfeeding.

Appendix M: Male Role Norms Scale (survey)
(see next page)



Male Role Norms Scale

PsycTESTS Citation:

Thompson, E. H., Jr., & Pleck, J. H. (1986). Male Role Norms Scale [Database record]. Retrieved from PsycTESTS. doi: 10.1037/t08406-000

Test Shown: Full

Test Format:

Twenty-six items are rated on a 7-point Likert scale ranging from "very strongly disagree" to "very strongly agree".

Source:

Supplied by author.

Permissions:

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Male Role Norms Scale

Items

Status Norm Scale

1. Success in his work has to be man's central goal in this life.
2. The best way for a young man to get the respect of other people is to get a job, take it seriously, and do it well.
3. A man owes it to his family to work at the best-paying job he can get.
4. A man should generally work overtime to make more money whenever he has the chance.
5. A man always deserves the respect of his wife and children.
6. It is essential for a man to always have the respect and admiration of everyone who knows him.
7. A man should never back down in the face of trouble.
8. I always like a man who's totally sure of himself.
9. A man should always think everything out coolly and logically, and have rational reasons for everything he does.
10. A man should always try to project an air of confidence even if he really doesn't feel confident inside.
11. A man must stand on his own two feet and never depend on other people to help him do things.

Toughness Norm Scale

1. When a man is feeling a little pain he should try not to let it show very much.
2. Nobody respects a man very much who frequently talks about his worries, fears, and problems.
3. A good motto for a man would be "When the going gets tough, the tough get going."
4. I think a young man should try to become physically tough, even if he's not big.
5. Fists are sometimes the only way to get out of a bad situation.
6. A real man enjoys a bit of danger now and then.
7. In some kinds of situations a man should be ready to use his fists, even if his wife or his girlfriend would object.
8. A man should always refuse to get into a fight, even if there seems to be no way to avoid it.*

Anti-femininity Norm Scale

1. It bothers me when a man does something that I consider "feminine."
2. A man whose hobbies are cooking, sewing, and going to the ballet probably wouldn't appeal to me.
3. It is a bit embarrassing for a man to have a job that is usually filled by a woman.
4. Unless he was really desperate, I would probably advise a man to keep looking rather than accept a job as a secretary.
5. If I heard about a man who was a hairdresser and a gourmet cook, I might wonder how masculine he was.
6. I think it's extremely good for a boy to be taught to cook, sew, clean the house, and take care of younger children.*
7. I might find it a little silly or embarrassing if a male friend of mine cried over a sad love scene in a movie.

NOTE. Items and the norm scale are 7-point Likert scales anchored at 7 with "very strongly agree."

*These items were reversed scored.

PsycTESTS™ is a database of the American Psychological Association

Appendix N: Focus Group Questions

Focus Group Discussion Guide

The focus group will be semi structured around a list of topics related to infant feeding attitudes and masculine ideology or male gender norms. A sample list of questions is stated below.

Focus Group Questions

Questions on Infant feeding Practices

1. What do you know about breastfeeding or other infant feeding practices?
 - a. What are your feelings toward breastfeeding?
2. *If married or have spouse/partner breastfed:* How were you involved in the selection of the infant feeding method for your child?
 - a. What caused you to select that infant feeding method?

Questions on Sociocultural influences

3. Where did you get your information on infant feeding practices (breastfeeding)? (i.e., family, friends, health professional, etc.)
4. Who in particular would you say has influenced your thoughts about infant feeding practices? About breastfeeding?
5. Is there anyone in your family that breastfeeds or breastfed their child? (i.e., mother, in-laws, friends, siblings, etc.)?
6. Is there anyone in your social network who breastfeeds? (or Is there anyone in your circle of friends whose partner/spouse breastfeeds?)

Questions on Media

7. What types of images in the media have you seen related to infant feeding practices?
8. What are your thoughts on images in the media of women breastfeeding?
 - b. Do you find them offensive? Appropriate? Or you have no opinion?

Questions on Masculine Ideology and Gender Norms

9. Can you talk a little about your thoughts on gender role norms?
 - d. What do you think are male specific tasks?
 - e. What are female specific tasks?
 - f. What are gender neutral tasks?
10. What were/are some common practices in your household?
11. Where would you place the topic of infant feeding choice it in relation to gender norms?

Exit Questions

1. Did I capture all of your thoughts on the topic areas listed on the flip chart?
2. Is there anything else you want to say?

Appendix O: Permission to use Survey

Printable Format


https://my.campuscruiser.com/printable_area.html?02080316

Subject : FW: Request to Use Iowa Infant Feeding Attitudes Scale (IIFAS) for Dissertation Research

Date : Mon, Feb 04, 2013 11:30 AM CST

From : "Delamora, Arlene [SOE]" <adelamor@iastate.edu>

To : Makeva Rhoden <makeva.rhoden@waldenu.edu>

Attachment :  [IIFAS.pdf](#)

1. Is the IIFAS appropriate to use to survey only men about infant feeding attitudes?
 - a. The IIFAS can be used to survey men about infant feeding attitudes, it is not specific to women.
2. Has this tool been used in an online (non-paper based) format?
 - a. I have collected IIFAS data online. It really depends on the participants and how comfortable they are using computers and such. The one thing I would request here is that if you do decide to collect data online that you only make it available only to participants. I am trying to control how the survey is being used and ask that you not publish it in its entirety for anyone to download or make copies.
3. What is the process for receiving permission to duplicate the tool?
 - a. You have our permission to use the tool in your research. As in #2, I do ask that you not publish the scale in its entirety in any publication (including posters) or the internet.
4. Is there a fee for using the tool?
 - a. There is no fee for the tool.

I have attached a copy of our paper that describes the psychometric properties. Let me know if you have any questions about the paper or the scale.

Arlene de la Mora, Ph.D.
 Research Scientist
 Psychology in Education Research Lab
 Iowa State University
 E006 Lagomarcino Hall
 Ames, IA 50011

Voice: 515.294.6919
 Fax: 515.294.6206
 Email: adelamor@iastate.edu

From: Russell, Daniel W [HD FS]
Sent: Saturday, February 02, 2013 9:59 AM
To: Delamora, Arlene [SOE]
Subject: FW: Request to Use Iowa Infant Feeding Attitudes Scale (IIFAS) for Dissertation Research

Daniel W. Russell, Ph.D.

Subject : RE: Request to Use Male Role Norms Scale for Dissertation Research

Date : Thu, Feb 07, 2013 08:00 AM CST

From : "Pleck, Joseph" <jhpleck@illinois.edu>

To : [Makeva Rhoden <makeva.rhoden@waldenu.edu>](mailto:makeva.rhoden@waldenu.edu)

Attachment :  [Measures_of_male_role_attitudes.doc](#)

Dear Makeva Rhoden,

Thanks for your email. I respond interline to your questions. I am also attaching a document with information.

Best wishes,

Joseph Pleck

From: Makeva Rhoden [makeva.rhoden@waldenu.edu]

Sent: Saturday, February 02, 2013 12:50 AM

To: Pleck, Joseph

Subject: Request to Use Male Role Norms Scale for Dissertation Research

February 2, 2013

Dear Dr. Joseph Pleck:

My name is Makeva Rhoden and I am a doctoral student attending Walden University. My PhD will be in the field of Public Health with a focus on community health promotion and education. My interests are in maternal and child health, but specifically on how men can add to this conversation by influencing behaviors that can lead to improved perinatal outcomes.

I am currently developing my dissertation proposal, which will look at the interplay of masculine ideology on attitudes toward infant feeding practices. The main research question I intend to answer is whether an African American male's masculine ideology (concept of gender roles) contributes to or determines his attitude toward specific infant feeding practices (i.e., breastfeeding). My secondary questions are 1) what factors contribute to an African American male's idea of masculinity (i.e., socio-cultural factors, media, etc.) and 2) how does this influence his perceptions on breastfeeding. This proposed study will use a mixed methods approach to include the use of an instrument on infant feeding practices and one on gender norms. Additionally, I will be conducting a series of focus group sessions to collect qualitative data on factors affecting perceptions of gender roles and thoughts on breastfeeding.

I am writing you today to inquire about the possibility of using the Male Role Norms Scale (MRNS) as part of my research. In particular, I wanted to know the following:

1. Has this tool been used in an online (non-paper based) format?

NOT TO MY KNOWLEDGE

2. What is the process for receiving permission to duplicate the tool?