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ABSTRACT

AMERICAN FATHER PERSPECTIVES OF BREASTFEEDING AND HOW IT AFFECTS BREASTFEEDING RATES

by

LES'SHON IRBY

DECEMBER 2016

INTRODUCTION: Father support has recently been associated with increasing breastfeeding rates, but there is limited research on how the American father's perspective of breastfeeding rates affect those rates.

AIM: The aim of this study was to investigate the perspective American fathers have on breastfeeding and understand if it contributed to mothers' decisions to initiate and continue exclusive breastfeeding for at least six months.

METHODS: This study analyzed 10 semi-structured in-depth interviews conducted with both fathers and mothers of ever-breastfeed infants at least six months of age. Interviews were transcribed verbatim and openly coded to identify common themes, and then analyzed using principles of grounded theory.

RESULTS: Results suggested that mothers were often the lead decision makers in the decision to breastfeed based on her prepartum knowledge of breastfeeding and its benefits. Many fathers had no prepartum perspective of breastfeeding, though they were not opposed to it. Those fathers who had prepartum opinions about breastfeeding traced their beliefs about breastfeeding to their families' cultures or traditions.

DISCUSSION: Data suggested that among this population of 30 – 44 year old educated, heterosexual married couples breastfeeding was common, but the recent increasing rates may not necessarily be influenced by the American father's perspective of breastfeeding.

Keywords: breastfeeding, exclusive breastfeeding, father, support

Running Head: AMERICAN FATHER PERSPECTIVE OF BREASTFEEDING AND HOW IT AFFECTS
BREASTFEEDING RATES

AMERICAN FATHER PERSPECTIVES OF BREASTFEEDING AND HOW IT AFFECTS BREASTFEEDING
RATES

by

LES'SHON IRBY

GEORGIA STATE UNIVERSITY

A Thesis Submitted to the Graduate Faculty
of Georgia State University in Partial Fulfillment
of the
Requirements for the Degree

MASTER OF PUBLIC HEALTH

ATLANTA, GEORGIA
30303

APPROVAL PAGE

AMERICAN FATHER PERSPECTIVES OF BREASTFEEDING AND HOW IT AFFECTS BREASTFEEDING
RATES

By

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Besides my committee, I would like to express my profound gratitude to my family: my partner, my daughter, my parents, my sister, and my grandparents for providing me with their unfailing encouragement and support, both physically and spiritually, throughout the duration of this study and life in general. This accomplishment would not have been possible without them.

AUTHOR'S STATEMENT PAGE

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POSITIONALITY STATEMENT

I am a 26-year-old African American mother of a 14-month-old. My family has one the greatest influences on my values, but being a first-generation college graduate, and soon to be master's degree recipient, education also plays a significant role in my values, decisions, and health behaviors.

Though I myself was not breastfed, I became interested in breastfeeding at the very beginning of my pregnancy. My partner, who is also a non-breastfed first generation college graduate, and I discussed feeding options early in the pregnancy and decided that we would breastfeed our daughter. This decision was solely based on the benefits that we both knew breast milk would provide our daughter. Our initial goal was set to nurse for six months.

At the beginning of our nursing journey, I encountered ongoing pain and I was ready to throw in the towel. However, the continuous support and encouragement from my loving partner helped me to overcome this barrier and persevere. Fortunate to take a four-month maternity leave, my place of employment set up a lactation room for the use of the facility. Surrounded by two other nursing mothers I was provided with tips on workplace expression of milk. However, once we reached the 5 month mark I began to encounter insufficient milk volume issues in which we had to begin supplementing with formula. I instantly became discouraged in the fact that as a mother I was unable to exclusively breastfeed my daughter. My partner came to my rescue, and continuously reminded me how much of a great mother I was, helped to research ways to naturally increase my milk supply volume, and to this very day we are 14 months strong and counting with his continuous support.

My personal experience helped to shaped the research questions of this study and helped to shape the interview guide though it did not have a role in the way the data was interpreted.

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Introduction

Breastfeeding rates around the world are slowly on the rise (Cai, Wardlaw, and Brown, 2012). Up by 16.7% since 1995, about 39% of infants worldwide were exclusively breastfed for at least six months of age in 2010 (Cai et al, 2012). The World Health Organization (WHO) and United Nation Children's Fund (UNICEF, 2015) recommends "initiation of breastfeeding within the first hour after the birth; exclusive breastfeeding for the first six months; and continued breastfeeding for two years or more, together with safe, nutritionally adequate, age appropriate, responsive complementary feeding starting in the sixth month." (UNICEF, 2015; WHO, 2011)

Compared to the United States (U.S.), many countries, including those that are developing and non-industrialized, display higher breastfeeding rates. For example, in Rwanda despite the fact that 51% Rwandan women are diagnosed with HIV, 90% of mothers manage to exclusively breastfeed for at least six months. This is followed by Sri Lanka at 76%, Cambodia, Solomon Islands, and Nepal at 74%, Malawi at 72%, and Peru at 71% (Abano, 2014). Across the world, an average of 38% exclusively breastfeed for up to six months (WHO, 2014), yet as of 2014 the Centers for Disease Control and Prevention (CDC, 2014) reports that in the U.S. only 18.8% of infants are exclusively breastfed for up to six months (CDC, 2014). This percentage is slowly rising in the US. The increase in breastfeeding rates has come with the discovery of the many health benefits of breastfeeding, both infant and maternal.

Infant Health Benefits

Breast milk has been seen to have a positive impact on infant mortality rates, nutrition, development, and overall health (UNICEF, 2015). Breast milk without supplementation provides all of the nutrients, vitamins and minerals needed for infant growth up to one year of age (AAP, 2015), though solids are commonly introduced at six months of age. Breastfeeding may lower the risk of otitis media, upper and lower respiratory tract infection, sudden infant death syndrome (SIDS), RSV bronchiolitis, ear infection, atopic dermatitis and inflammatory bowel disease (AAP, 2015). Lastly breastfeeding may reduce the risks of various chronic conditions that can take place later in life, such as obesity, high cholesterol, high blood pressure, type 1 and type 2 diabetes, childhood asthma and leukemia (UNICEF, 2015).

Maternal Health Benefits

Infants are not the only ones who benefit from breastfeeding; breast milk carries antibodies from the mother that help her to combat disease. Mothers who initiate breastfeeding immediately after the delivery have been seen to have a reduction in the risk of post-partum hemorrhage, and with continuation the act delays the return of fertility, quick return of pre-pregnancy weight, reduces the risk of post-partum depression, type 2 diabetes, and breast, uterine and ovarian cancer (AAP, 2015; UNICEF, 2015).

Breastfeeding in the United States

Despite the many health benefits, the U.S. still poses some of the lowest rates of breastfeeding the use of breast milk. Breastfeeding and human milk have become the standard recommendation for infant feeding and nutrition and the AAP reaffirms its recommendation of “exclusive breastfeeding for about six months, followed by continued breastfeeding as complementary foods are introduced, with continuation of breastfeeding for 1 year or longer as

mutually desired by mother and infant” (AAP, 2015). Though rates are on the rise, despite recommendations, education, and support the U.S. has a national “ever breastfed rate” of 79.2% that decreases as infant age increases. The CDC describes “ever breastfed” infants as those who had ever received breast milk (CDC, 2008). The 2014 Breastfeeding Report Card informs that by the age of three months 40.7% of infants are exclusively breastfed, and as previously mentioned by six months of age only 18.8% are being breastfed with the supplementation of formula (CDC, 2014). Research has examined the cultural barriers that may exist to continuing exclusive breastfeeding in the US.

In the U.S. bottle-feeding is viewed as the normal way to feed infants and studies of immigrants have showed that with each generation that migrates to the U.S. the breastfeeding rate continues to decrease (Office of the Surgeon General, 2011). Other studies have shown that this may be a result of the widespread of human milk substitutions, increasing amount of advertising for those substitutions in the U.S., and/or the fact that breast are often sexualized in the U.S. (Office of the Surgeon General, 2011)

Reasons for Breastfeeding Cessation

Breastfeeding cessation takes place for many reasons at various stages during infancy, or during the child’s first year of life (Li, Fein, Chen, Grummer-Strawn, 2008). Research has shown that lack of knowledge, lactation problems, nutrition concerns, poor family and social support, embarrassment, employment and childcare are some of the most common reasons for breastfeeding cessation (Ahluwalia, Morrow, and Hsia, (2005),; Li et al, 2008,; Office of the Surgeon General, 2011). Even more commonly reported as the reason for breastfeeding cessation was the perception that the infant was not being satisfied by the amount of milk that

he or she was receiving from the breast (Ahluwalia et al, 2005 ; Li et al, 2008). Additionally, a national study reported that 50% of nursing mothers cite insufficient milk supply to be their reason for breastfeeding cessation (Office of the Surgeon General, 2011). These reasons for breastfeeding cessation were seen at various levels of infancy; approximately 32% of mothers did not initiate breastfeeding within one hour of delivery, 4% ceased within one week, 13% within one month, and 51% continued beyond four weeks' post-partum (Ahluwalia et al, 2005). Conclusively these results suggested a need to provide extensive post-partum breastfeeding support to address breastfeeding issues (Ahluwalia et al, 2005).

In contrast to the above studies, a study conducted by Ertem, Votto, and Levnthal (2001) showed that early breastfeeding cessation was not associated with any problems of lactation or that mothers perceived that their infant was not satisfied with the breast milk alone, but the fact that mothers lacked confidence, self-efficacy, and believed that the infant actually preferred formula (Ertem et al, 2001).

Factors that Support Breastfeeding

Just as there are many reasons for the cessation of breastfeeding, there are many factors that influence breastfeeding decisions whether by breast or bottle. It was determined that infant health benefits, naturalness, and emotional bonding were the top influences in the decision to breastfeed (Arora, Wehrer, and Kuhn, 2000). Results of the study by Arora and colleagues (2000) showed that though there was a breastfeeding initiation rate of 44.3%, by six months only 13% of infants were still being breastfed. Even more specifically, the study showed that the mother's perception of the father's attitude toward breastfeeding and length of

maternity leave duration was associated with the decision to transfer breast milk by bottle or breast (Arora et al, 2000).

Focusing specifically on family support, research has shown that there was an association found between longer durations of exclusive breastfeeding and positive maternal attitudes toward breastfeeding and adequate family support (Cernadas, Noceda, Barrera, Martinez, and Garsd (2003). That adequate family support was even more associated with a strong approval for the mother to breastfeed by the infant's father when compared to those fathers who did not have a stance and/or opinion (Littman, Medendorp, and Goldfarb, 1994).

Breastfeeding Support

Several studies have been conducted identifying family and partner support influence, both pre- and post-partum, on a mother's decision to breastfeed. Though mothers' attitudes and beliefs can have a major influence, the support of the partner has been determined to play a major role in the decision to initiate and continue breastfeeding (Sharma and Petosa, 1997). A study conducted by Kessler, Gielen, Diener-West, and Paige (1995) indicated that a mother's intention to breastfeed was positively affected by the partners' preference (Kessler et al, 1995). In contrast, another study that was conducted by Freed, Fraley, and Schanler (1993) determined that a lack of support was negatively associated with a mother's intention to breastfeed (Freed et al, 1993). More recently Wolberg, Michels, Shields, O'Campo, Bronner, and Bienstock (2004) studied the effectiveness of an educational intervention encouraging expectant fathers to advocate breastfeeding and assist if partner decides to breastfeed. Results of the study demonstrated that there was an 80.4% increase in breastfeeding initiation, concluding that expectant fathers can serve as significant breastfeeding advocates and have a

major influence on their partners' decision to breastfeed (Wolberg et al, 2004). Similar results were seen in a study conducted in Brazil by Falceto, Giugliani, and Fernandes (2004) to determine if couple relationships were associated with cessation of breastfeeding. The study determined that the quality of a couple's relationship was not associated with the interruption of breastfeeding before four months postpartum. However, a good couple relationship was associated with more paternal breastfeeding support (Falceto, 2004).

Focusing on father's attitudes on breastfeeding, Taspinar, Coban, Kucuk, Sirin (2013) conducted a study in Turkey demonstrating that 92.1% of fathers desired to have their infants breastfed, but only 58.6% discussed with partner (Taspinar, Coban, Kucuk, Sirin, 2013). Uniformly a study conducted by Freed, Fraley, and Schanler also examined fathers' attitudes on breastfeeding in which the study determined that those fathers who reported that their partner would exclusively breastfeed actually wanted their partner to breastfeed, believed that breastfeeding was better for the baby than formula feeding, and believed breastfeeding protected infants for diseases (Freed, Fraey, and Schanler, 1992). In contrast those fathers who reported that their partner would formula feed had negative attitudes towards breastfeeding specifically that the act of breastfeeding negatively altered the physical aspect of breast and it interfered with sex. Both groups, however reported that breastfeeding in public was not acceptable (Freed, et. al, 1992). Similarly, a cross-sectional questionnaire-based study conducted by Karande and Perkar (2012) concluded that overall the attitude of fathers' support breastfeeding, but it also found that their attitudes do not influence the time duration of exclusive breastfeeding (Karande and Perkar, 2012).

More recently, Rempel and Rempel (2011) interviewed 21 involved fathers regarding their roles related to breastfeeding. Results suggested that the fathers' main roles included becoming knowledgeable about breastfeeding to encourage and assist breastfeeding mother by valuing her, sharing housework, and childcare, concluding that father support is vital for the mother to breastfeed (Rempel, 2011). Consistent with those findings, a randomized control trial study conducted by Wolfberg, Michels, Shields, O'Campo, Bronner, and Bienstock (2004) found that a two-hour instruction to fathers on how to be supportive was found to have an initiation rate of 74% compared to only 14% of controls (Wolfberg, Shields, O'Campo, Bronner, and Bienstock, 2011). Pisacane, Continisio, Aldinucci, D'Amora, and Continisio (2005) found that 25% of women whose partner participated in a program on how to prevent or address lactation problems were still breastfeeding at six months compared to only 15% whose partner was only informed on breastfeeding benefits (Pisacane, Continisio, Aldinucci, D'Amora, and Continisio, 2005).

Research on the father's role in the decision to breastfeed up to six months is limited. Though studies have shown that the support of fathers may be associated with increased length of breastfeeding, the research does not show how the father's view of breastfeeding can affect that decision to breastfeed. Therefore, the aim of this study is to investigate the perspective American fathers have on breastfeeding and determine if it contributes to a mother's decision to initiate and continue exclusive breastfeeding for at least six months.

Theoretical Rationale

The theory of reasoned action (TRA) will serve as the health behavior theoretical framework for this exploratory study. The TRA is a widely-used behavior prediction theory

created by Fishbein in 1967. This theory was developed to explain health behavior and all volitional behaviors (McKenzie, 2009). Constructs of this theory include 1) attitude, 2) belief, 3) intention and 4) behavior (McKenzie, 2009). This theory will be used because it is believed that one's intention to engage in a given behavior is determined not only by their attitude, but also subjective norms/social pressures. Therefore, if breastfeeding attitudes can be positively reinforced by a mother's partner there may be an increase in breastfeeding rates.

The first research question was developed to learn what views American fathers have toward breastfeeding. This perspective includes breastfeeding of their own child pre- and post-partum, and public breastfeeding. The second research question was developed to assess whether the way American fathers felt about breastfeeding, negatively or positively, played a role in or was associated with a mother's decision to initiate breastfeeding and continue exclusively for at least six months of age. This research question also assessed whether the mother felt that her partners' breastfeeding perspective had an impact on her decision to breastfeed. The third research question was to determine what helped shape the views that American fathers felt about breastfeeding.

Research Questions

1. What are the perceptions American fathers have about breastfeeding?
2. Does American father breastfeeding perceptions have a direct impact on the mother's decision to initiate and continue breastfeeding?
3. What has influenced the father's perception(s) about breastfeeding?

Method

Approved by GSU's Institutional Review Board (IRB), this qualitative study was guided by principles of grounded theory, which was used to allow themes to emerge from semi-structured in-depth interviews (IDIs). IDIs are one-on-one interviews used to gain knowledge and/or explore perspective about a topic. For this study IDIs allowed researchers to explore participant perspectives about various aspects of breastfeeding pre- and post-partum and determine how their perspectives influenced breastfeeding continuation.

Participants

Participants were recruited via recruitment flyers (see Appendix B) posted at recruitment sites of a large urban university in the southeastern region of the United States and a 501(c) 3 non-profit organization that provides lactation and nutrition support. To broaden recruitment efforts recruitment flyers were also sent via email to encompass personal and professional contacts. Recruitment took place from April 2016 to July 2016. Inclusion criteria were: 1) being a heterosexual couple of a child at least six months of age, 2) having a child that was EVER breastfed, 3) mother and father at least 18 years of age, and 4) both parents being available to interview separately. A total of 11 couples contacted the research team of which eight couples were eligible. Of the eight eligible couples, five couples successfully completed the study. Interviewees ranged in age from 30 to 44 years of age (Table 1). Majority of the participants were African American, with others being identified as Caucasian, Filipino, and Hispanic (Table 1). Seven of the participants identified having an associate's degree or higher (Table 1). All participants reported being married (Table 1).

Table 1
Participant Demographics (N = 10)

Characteristic	Fathers N=5	Mothers N=5
Age Group		
30 – 34	1	2
35 – 39	2	3
40 – 44	2	
Race		
African American	2	3
Caucasian	1	1
Filipino	1	1
Hispanic	1	
Education		
High School Graduate	2	
1+ yr. of college, No Degree		1
Associate Degree	1	
Bachelor's Degree		3
Master's Degree	2	
Doctorate Degree		1
Marital Status		
Married	5	5
Divorced		
Widowed		
Separated		
Single		

Notes: 1+ - abbreviation for one or more year

In-depth Interviews and Interview Guide

Interviews were conducted at locations that were most convenient to both the participant and the researcher. These locations included private study room on the campus of a large urban university in southeast United States, private study room of public library, board room of hotel, and inside of a private room belonging to the participants. Each IDI varied in length, though

were no longer that 60 minutes total. On the day of the scheduled interview participants read and signed 2 copies of the informed consent form (see Appendix E), and completed a demographic questionnaire (see Appendix F).

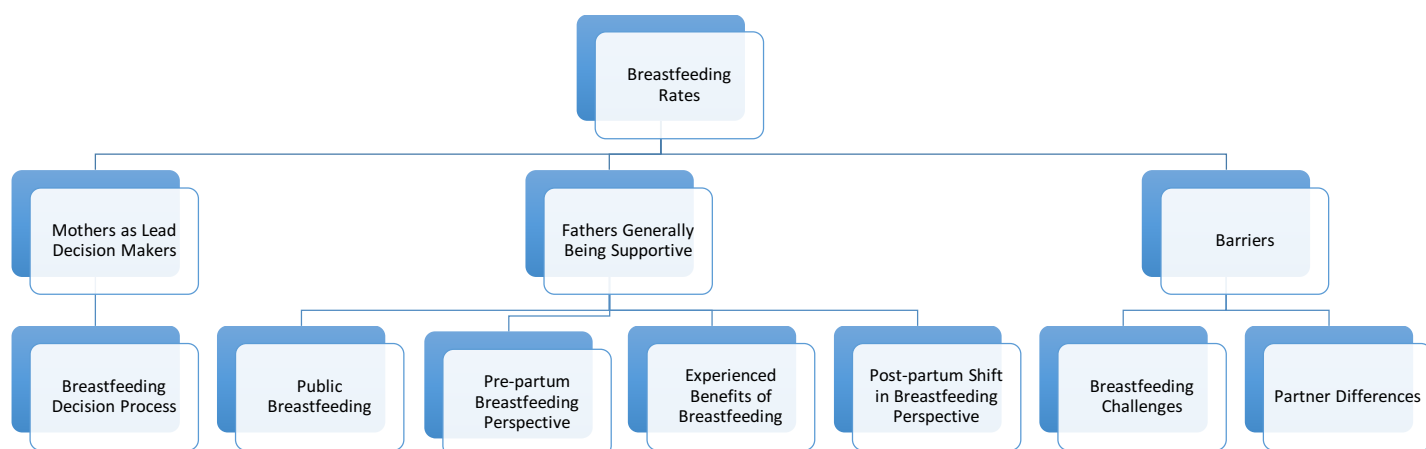
Data Analysis

In-depth interviews were audio recorded and transcribed verbatim. NVivo 9 was used for content analysis. Beginning with the research questions and guided by principles of grounded theory, data were reviewed as common themes became apparent (Strauss and Corbin, 1990). Specifically, data was analyzed using the process of open coding, axial coding, and selective coding. During open coding the researcher read the transcripts line by line identifying similar categories throughout each interview. These categories were then brought together forming concepts during the process of axial coding. Lastly, during selective coding the themes for both fathers and mothers were then used to develop coding manuals. The coding manuals consisted of code name, definition, sub-codes, and examples. These manuals were developed separate for fathers (Appendix I) and mothers (Appendix J) to answer each of the research questions. The coding manuals evolved as new themes emerged from the audio recorded in-depth interviews. Each transcript was analyzed and independently coded by the researcher.

Results

Data analyses revealed three primary sets of codes reported to affect breastfeeding rates and the American father perspective of breastfeeding (level 1): Mothers being the lead decision makers, Fathers being generally supportive, and breastfeeding barriers. Subcodes also emerged for each of the level 1 code. Below a summary is provided for each code along with

direct quotes from mothers and fathers to further show how each subcode aided in the increasing or decreasing of breastfeeding rate.



Mothers as Lead Decision Makers

Breastfeeding Decision Process.

For most couples, the decision to breastfeed or formula feed their child did not take place prepartum. Many mothers shared that they simply informed their partner that they wanted to breastfeed and he supported. One bachelor's degree recipient noted:

"... I did tell my husband, and I did plan to breastfeed... And of course, he supported it. He always wants me, and us to do what's best for our children. So, he was definitely on board...With it. Very supportive... He just said whatever I decide."

For those couples that did discuss whether they would breastfeed, the mother informed that their decision was based solely off what they felt would be best for their child(ren). A Filipino mother said,

"... my husband and I discussed it, um and you know we came to an agreement that I want to do, you know that I want to do breastfeeding...and then he agreed with that, and he respected what I wanted and I'm doing it not only for me, but of course for our son."

For some couples, it was shared that it was simply something that they just knew they would do. This was often associated with culture, tradition, or due to the known health benefits. For other couples the decision was not verbally discussed and the mother was the sole decision maker on the choice to breastfeed. One Filipino father recalled, "Honestly the decision was all on uh my wife...My, my job with the [sic] support, support whatever decision, whatever she was comfortable with doing."

Fathers as Generally Supportive

Fathers being generally supportive was identified as another variable that that influenced breastfeeding rates. Subcodes (level 2) included public breastfeeding, prepartum breastfeeding perspective, experience benefit of breastfeeding, and the postpartum shift in breastfeeding perspective.

Public Breastfeeding.

Public breastfeeding is defined as the feeding of breast milk to a child directly from the breast while in a public setting. Mothers often expressed that upon the beginning stages of her breastfeeding journey she was not comfortable doing so in public. In order to address her discomfort, she would nurse the baby in the car, ensure she covered herself and the baby when she nursed, and even asked those around her if they were comfortable with her nursing the baby. Mothers also shared that those dads that were supportive of her breastfeeding, they were often uncomfortable with her publically breastfeeding. In order to address this discomfort fathers would instinctively use their bodies as a shield to cover mother and baby from general public as this mother describes, "... I think he was a little uncomfortable... Um. He does try to, he tries to um kinda like, uh, on the train he was trying to butt up against.. so that people couldn't see." Overall fathers were initially uncomfortable with public breastfeeding. This discomfort was not due to seeing other mother breastfeed their children, but a result of others being present or in the vicinity while their partner was breastfeeding. Fathers automatically went in a protective mood when their partners breastfed in public and tried to shield or cover their partner and child. With time fathers expressed that they adjusted to this discomfort. One father said, "To me it was just a little different... it didn't bother me when it was someone else.... Um, but it was like it was my wife and that's yeah that's the little protectiveness of me coming out."

Prepartum Perspectives on Breastfeeding.

Prepartum perspectives on breastfeeding were defined as the perspective fathers had about breastfeeding prior to the delivery of their own child. When asked about their partners' perspective of breastfeeding prepartum, many mothers could not answer simply because they

did not know. It was shared that before the delivery of their child(ren) the conversation about breastfeeding never arose. A participant noted, " ... so I don't know if we had an actual discussion. I think it was just moreso understood that, you know, we were going to breastfeed." Many of the fathers had no prior experience with breastfeeding so prior to the delivery of their child they had developed no perspectives, but yet they remained neutral on the topic of breastfeeding and were not for nor against it. Those fathers whose families were not originally from the United States believed that the purpose of breast was to breastfeed due to their culture and what they had traditionally seen. A few other fathers believed that breast milk would be better than formula due to the chemical make-up of formula and the fact that breast milk provided nourishment to children. One father from Panama recalled,

"Well, when I was young living in [Name of Country], in [Name of City], it was common to see a mother on the bus or what have you, breastfeeding their child. It wasn't frowned upon, um you know that's the type of thing that few people have gotten a little over, over sensitive about it..."

Experienced Benefit of Breastfeeding.

Experienced benefit of breastfeeding was defined as the benefits that parents saw in their child or among their family as a result of breastfeeding. Fathers shared direct benefits they saw as a result of their child(ren) being breastfeed. These benefits included, but were not limited to it being healthy for the child, created a stronger bond between the mother and child, it saved the family money, the child enjoyed it, and received comfort from being at the breast. One high school graduate stated,

"He never once got sick. Never broke a fever, nothing; no colds, nothing... We think it's because she's giving him all his, her immune system to him, uh, through the breastfeeding. So that's why we're a little bit stronger on it now because we can see that it actually does help him."

Postpartum Shift in Breastfeeding Perspective.

It was shown that the fathers who initially had no prepartum perspective of breastfeeding experienced a shift. This shift was a result of the benefits that they seen firsthand with their child being breastfed. These benefits were associated with fathers becoming more open to breastfeeding or simply supportive of breastfeeding.

"I honestly think that I am stronger for breastfeeding... And the reason why is just because in the last six months, since, actually since January my wife, like I said before, she's been sick. She's been battling colds, sinus infections, you know everything, the whole gamnant and before she was even, before we even had him she was always healthy. Uh, it seems that ever since he started daycare, she's always been sick."

Influence of the Father

When posed if they felt that a mother's partner had a major impact or played a role in a woman's decision to breastfeed many mothers felt that a woman's partner did not play a major part. Many mothers felt that if a woman wanted to breastfeed that she would do so regardless of how anyone felt, including her partner. A master's degree candidate did go on to say that she believed it would actually help if the partner was supportive of the decision to breastfeed.

"...you gone breastfeed regardless cause that's something that as a mother, or as a women you want to do. So, but I think it's a, I think it benefits if your partner is supportive. I think that support makes a difference, but I don't think that's a determining factor..."

Barriers

Barriers were identified as the third variable that that affects breastfeeding rates. Subcodes (level 2) included public breastfeeding, prepartum breastfeeding perspective, experience benefit of breastfeeding, and the postpartum shift in breastfeeding perspective.

Though many couples were able to overcome some of their individual breastfeeding challenges, the overall the length of exclusive breastfeeding (Table 2) varied based upon when the mother returned to her workplace.

Table 2
Length of Exclusive Breastfeeding

Age Group	Children N=10
≤ 1 month	1
1 – 3 months	2
4 – 6 months	2
7 – 12 months ≥ 12 months	1
	4

Notes: N/A

Breastfeeding Challenges

The most common breastfeeding challenge that was shared from each participant, both mother and father, was low breast milk volume. Though common, the reasons for the low supply were due to various things like being placed on medication by a doctor, related to latching or attachment issues, biologically not being able to keep up with the demand of the child(ren), or returning to school and/or work. A mother who had received her doctoral degree mentioned,

"Well the decision was hard, um but the reason was because I wasn't making enough milk for 2 [babies]."

Partner Differences During Breastfeeding.

Though not something that came up often, couples at some point or another did have differences during breastfeeding. This was not so much of one parent wanting to breastfeed or formula feed over the other, but moreso the father wanting to provide his partner with a break from breastfeeding when she was ill or tired from everyday obligations like school or work.

One of the mothers remembered,

"...there were times when my husband was like you know let me, or, or you know if I, I was really exhausted, um, really sick my husband would be like you know let me, want you go take a nap and I will just go ahead and I will feed him formula, and I really didn't wanna feed him formula if I had the ability to feed him milk. So we kind of had some arguments, back and forth about that. He was all about it's fine I'm just gonna feed him formula, where I wanted to stick with the milk for eh uh as long as I could." `

Discussion and Conclusion

The purpose of this study was to investigate the perspective American fathers had on breastfeeding and to explore if it influenced a mother's decision to initiate and continue exclusive breastfeeding for at least six months. As previously stated this study was conducted to answer the following research questions:

- What are the perceptions American fathers have about breastfeeding?

- Does American father perceptions have a direct impact on the mother's decision to initiate breastfeeding and continue breastfeeding?
- What has influenced the father's perception about breastfeeding?

Researching the perceptions that fathers have on breastfeeding to determine how, if at all, it affects these rising breastfeeding rates. The data from this study contributed several unique findings to literature referencing fathers of ever breastfed children and overall breastfeeding rates. Freed and colleagues (1993) concluded that a lack of support was negatively associated with a mother's intention to breastfeed.

Findings from our data refute these assertions. In this study, mother reported that though having the father's support on breastfeeding made things easier for them, it was not the determining factor nor did it impact her decision to breastfeed.

Overall the results of this study showed that for this select population of 30 – 44 year old educated, heterosexual married couples breastfeeding is common and the reasons for supplementing or completely transitioning to formula are not associated with the father's perspective of breastfeeding.

To answer the first research question, data from this study show that fathers of this study population, whose families are from the United States, generally have no prepartum perspective of breastfeeding and are open to whatever decision that their partner makes as long as it is for the benefit of the child. Though many fathers did not have a prepartum perspective on breastfeeding, data showed that they often provided support to their partners by assisting with caretaking of the child as a team as a form of breastfeeding support. These data supported assertions made by Rempel and Rempel (2011) who suggested that the fathers'

main roles included becoming knowledgeable about breastfeeding to encourage and assist breastfeeding mother by valuing her, sharing housework, and childcare, concluding that father support is vital for the mother to breastfeed (Rempel, 2011). In this study, these tasks ranged from providing the child with expressed breast milk when the mother is tired or sick, awakening in the middle of the night just to be up with the mother, assisting with proper breastfeeding positions, coaching and encouraging mom when breastfeeding challenges arise, and assisting with preparation and cleanup of bottles and pump. With mothers usually returning to work and/or school shortly after the birth of the child, fathers are supportive in providing assistance with feedings and giving mothers as much rest as possible when the baby is not drinking directly from breast. When babies are drinking directly from breast fathers are being physically present to show their support, distancing themselves when they see they are a distraction for the child, providing fluids for mom when needed, and ensuring the mother's overall comfort.

When it comes to breastfeeding in public though mothers and fathers are comfortable when other mothers and families breastfeed in public and they do not see it as an issue. However, mother and fathers shares a discomfort when they began their breastfeeding journey and nursed in public. Fathers' protective instincts often arise when it comes to their partner feeding in public. This is an act that from the start fathers were uncomfortable with, but as time progressed they saw a shift in their perspective understanding that breast were there to provide nourishment for their child.

Overall fathers experienced a shift or transition in their overall perspective of breastfeeding as a direct result of the benefits that it provided to their child(ren) and their family. Fathers saw that their children did not get as sick while being breastfed, they witnessed a strong bond being

created between the mother and the child, the enjoyment and comfort that the child received from being at the breast and that it was cost effective as opposed to having to purchase formula.

To answer the second research question, the data showed that the father's perspective of breastfeeding does not have a direct impact or is a determining factor in a mother's decision to initiate and continue exclusive breastfeeding for six months. However, it was seen that this partner support can make a difference. Having the father's support assisted the mother in overcoming and dealing with breastfeeding challenges and everyday tasks taking care of the child(ren). One thing that was commonly seen throughout most interviews was the correlation between returning to school or work and the inability to supply breast milk to meet the demands of the child(ren) as he or she progressed in age.

To answer the third and final research question, for those fathers who actually possessed a prepartum breastfeeding perspective it was shaped by two things. The first was influence was culture. For those participants whose family was not originally from the United States, breastfeeding was something that was culturally expected and the norm in their family. Having seen breastfeeding on a regular basis in their homes, and within their family and community, their decision to breastfeed was natural. The second influence seen was by way of education. With many of the households possessing education of Bachelor's degree and above, breastfeeding knowledge was something that they had heard, and/or knew how to learn more about it.

Conclusion

This study found that those mothers of a higher education level were more inclined to breastfeed their infant due to the many health benefits. On the other hand many fathers either possessed no prepartum perception about breastfeeding, but were not against breastfeeding, or they were explicitly supportive of breastfeeding due to their family traditions and/or cultures. Mothers reported that though the fathers' support aided them during the breastfeeding process, his perception and/or opinion did not have an impact on her decision to breastfeed. The data from this study showed that though many of the fathers had no prepartum perception of breastfeeding, during the process of their child being breastfed they experienced a shift in perception due to the benefits both they and their child experienced. Overall, the results of this study showed that for this particular population of 30 – 40 year old, educated, married couples breastfeeding is common and reasons for supplementing or transitioning to formula is not associated with the father's perspective of breastfeeding, but related to maternity leave benefits.

Study Limitations and Future Research

There were a few limitations in the recruitment of this study. For example recruiting through the campus of a large urban university and a non-profit organization that provides lactation and nutrition support restricted the population to those of a higher education bracket and those who are interested in attempting to breastfeed or seeking support or assistance with their breastfeeding challenges. Also, in regards to recruitment, target sampling of personal and professional contacts narrowed the population to individuals who were associated the university, possessed an education of at least a Bachelor's degree and parents who conceived

their first child in their 30s or above. It is important to note that these initial results are not generalizable to any particular population due to the small sample size so they should be investigated on a larger scale. Future research may include broaden recruitment efforts and gaining recruitment support from more companies to ensure a wider population.

Theoretical implications of this study demonstrate that for this population, the findings of this study do not support the use of theory of reasoned action framework and a father positively reinforcing his support of breastfeeding for a mother to breastfed her child. However, the absence of negative reinforcement could be associated with an increase in breastfeeding rates.

In the future, the research team would like to gather data on what workplace barriers exist to contribute to breastfeeding cessation and why breasts are more sexualized in the United States despite their anatomical use.

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Appendix A

Outcome Letter

INSTITUTIONAL REVIEW BOARD

Mail: P.O. Box 3999
Atlanta, Georgia 30302-3999
Phone: 404/413-3500
Fax: 404/413-3504

In Person: Dahlberg Hall
30 Courtland St, Suite 217



March 24, 2016

Principal Investigator: Emily Graybill

Key Personnel: Crimmins, Daniel, Ph.D.; Graybill, Emily; Irby, Les'Shon; White, Cassandra

Study Department: School of Public Health

Study Title: American Father Perspectives of Breastfeeding and How it Affects Breastfeeding Rates

Review Type: Expedited 6, 7

IRB Number: H16429

Reference Number: 337763

Approval Date: 03/24/2016

Expiration Date: 03/23/2017

The Georgia State University Institutional Review Board (IRB) reviewed and approved the above referenced study in accordance with 45 CFR 46.111. The IRB has reviewed and approved the study and any informed consent forms, recruitment materials, and other research materials that are marked as approved in the application. The approval period is listed above. Research that has been approved by the IRB may be subject to further appropriate review and approval or disapproval by officials of the Institution.

Federal regulations require researchers to follow specific procedures in a timely manner. For the protection of all concerned, the IRB calls your attention to the following obligations that you have as Principal Investigator of this study.

1. For any changes to the study (except to protect the safety of participants), an Amendment Application must be submitted to the IRB. The Amendment Application must be reviewed and approved before any changes can take place.
2. Any unanticipated/adverse events or problems occurring as a result of participation in this study must be reported immediately to the IRB using the Unanticipated/Adverse Event Form.

Appendix B

Recruitment Flyer



Are you a parent?
Is your child at least 6 months of age?
Has your child EVER been breastfed?
If you are a mother/father, are you and your child's
father/mother at least 18 years of age?
Are you both available to take part in an interview?

If you answered yes to these questions,
researchers invite you to find out if you are
eligible to participate in a study about parent
perceptions of infant feeding options.
Researchers are looking to interview 30 parents.

Coupled mothers and fathers, who agree to be in
the study, will be individually interviewed and
asked about infant feeding views before and after
their baby was born.

Each interview will take up to 60 minutes and may
be completed at a location convenient to each
participant.

This study will be completed as partial fulfillment
of Master of Public Health degree requirements.

Being in the study is your choice, and you can
choose to drop out at any time.

If you have any questions about the study, please contact:

Emily Graybill, PhD
Principal Investigator
404-413-1424
egraybill1@gsu.edu

Cassandra White, PhD
Co-Investigator
404-413-5150
cwhite@gsu.edu

Lesshon Irby
Student Principle Investigator
liirby5@student.gsu.edu

Appendix C
Outcome Letter (Recruitment Amendment)

INSTITUTIONAL REVIEW BOARD

Mail: P.O. Box 3999
Atlanta, Georgia 30302-3999
Phone: 404/413-3500
Fax: 404/413-3504

In Person: Dahlberg Hall
30 Courtland St, Suite 217



May 18, 2016

Principal Investigator: Emily Graybill

Key Personnel: Crimmins, Daniel, Ph.D.; Graybill, Emily; Irby, Les'Shon; White, Cassandra

Study Department: School of Public Health

Study Title: American Father Perspectives of Breastfeeding and How it Affects Breastfeeding Rates

Review Type: Expedited Amendment

IRB Number: H16429, Reference Number: 339448

Approval Date: 03/24/2016

Expiration Date: 03/23/2017

Amendment Effective Date: 05/18/2016

The Georgia State University Institutional Review Board reviewed and **approved** the amendment to your above referenced Study.

This amendment is approved for the following modifications:

- I would like to amend to broaden recruitment efforts to include target email recruitment, including personal and professional contacts. For emailing purposes the previously approved recruitment flyer will be used.

The amendment does not alter the approval period which is listed above and the study must be renewed at least 30 days before the expiration date if research is to continue beyond that time frame. Any unanticipated/adverse events or problems resulting from this investigation must be reported immediately to the University Institutional Review Board.

For more information visit our website at www.gsu.edu/irb.

Sincerely,

A handwritten signature in black ink, appearing to read "Yan Ki Wai".

Yan Ki Wai, IRB Member

Federal Wide Assurance Number: 00000129

Appendix D

Recruitment Script

Recruitment Script
(to be used in email, phone, or face-to-face interactions)

Georgia State University researchers are conducting a research study that will be conducted as part of a master's thesis in partial fulfillment of Master of Public Health degree requirements. The purpose of the study is to investigate the perspective American fathers have on breastfeeding and determine if it has an effect on a mother's decision to initiate and continue exclusive breastfeeding for at least 6 months. We are recruiting parents of ever breastfed infants to participate in a 60 minute in-depth interview through which: 1) fathers will be asked questions about pre- and post-partum infant feeding views and 2) mothers will be asked questions about how their partner's views played a factor in their infant feeding decision. The in-depth interview will be conducted either on the campus of Georgia State University, Pea Pod Nutrition and Lactation Support, by telephone, or at a location that is convenient to you and the researchers. The in-depth interview will be conducted on a date that is convenient to you and the researcher. The in-depth interview will be conducted at a time that is convenient to you and the researcher. The in-depth interview will be conducted at a location that is convenient to you and the researcher. The in-depth interview will be audio-recorded.

If you are interested in learning more about this study, please contact Les'Shon Irby at lirby5@student.gsu.edu or Emily Graybill at 404.413.1424 and egraybill1@gsu.edu for more information.

Appendix E

Informed Consent Form

Participant **xxxxxx**

Georgia State University
School of Public Health
Informed Consent

Title: American Father Perspectives of Breastfeeding and How it Affects Breastfeeding Rates

Principal Investigator: Dr. Emily Graybill, PhD, NCSP

Co-Investigator: Dr. Cassandra White, PhD

Student Principal Investigator (Student PI): Les'Shon Irby, MPH Candidate

I. Purpose:

You are being asked to be part of a research study. The aim of the study is to learn about the views that American fathers have on breastfeeding and to see if they have an effect on a mother's choice to start and keep breastfeeding for at least 6 months. You are being asked to be in this study because you are a mother or father of infant child who has been breastfed. A maximum of 30 people will be asked to be in this study. Being in this study will take about 60 minutes of your time on one day.

II. Procedures:

If you choose to be in this study, you will take part in one 60 minute interview including a short demographic survey. Fathers will be asked about their views on breastfeeding before and after their babies were born. Mothers will be asked about how they feel their partner's attitudes played a role in their choice to breastfeed. The interview will take place on the campus of Georgia State University, one of the sites of Pea Pod Nutrition and Lactation Support, by telephone, or at a place that works for both you and the student PI. The interview will take place on a date and time that works for both you and the student PI. Your interview will be audio recorded.

III. Risks:

In this study, you will not have any more risks than you would in a normal day of life. If any questions make you sad or upset, you can choose not to answer them. You can also stop being in the interview at any time.

IV. Benefits:

Being in this study may not benefit you personally. Overall, we hope to learn more about attitudes that American fathers have on breastfeeding and whether they have an effect on a mother's choice to start and continue exclusive breastfeeding for at least 6 months.

V. Compensation:

If your interview takes place on the campus of Georgia State University, the student PI will prepay your parking cost. No other compensation will be given.

VI. Voluntary Participation and Withdrawal:

Being in this study is voluntary. You do not have to be in this study. If you choose to be in the study and change your mind, you have the right to drop out at any time. You may skip questions or stop being in the study at any time.

VII. Confidentiality:

We will keep your records private to the extent allowed by law. Dr. E. Graybill and research team will have access to the data you provide. Data may also be shared with those who make sure the study is done correctly (GSU Institutional Review Board, the Office for Human Research Protection (OHRP)). We will use a study number rather

than your name on study records. The data and audio-recordings you provide will be stored on a password protected computer and/or in a locked file cabinet in the student PI's locked office. The document that has both your name and study number will be kept separate from the data. The data and audio-recordings will be destroyed 10 years after the study is complete. Your name and other facts that might point to you will not be used when we present this study or publish its results. You will not be identified personally, however, it is possible that in publications that come from the study, things that you said in your interview could be recognized by your partner.

VIII. Contact Persons:

Contact Dr. Emily Graybill at 404.413.1424 or egraybill@gsu.edu if you have questions, concerns, or complaints about this study. You can also call if you think you have been harmed by the study. Call Susan Vogtner in the Georgia State University Office of Research Integrity at 404-413-3513 or svogtner1@gsu.edu if you want to talk to someone who is not part of the study team. You can talk about questions express concerns, give input, get information, or give suggestions about the study. You can also call Susan Vogtner if you have questions or concerns about your rights in this study.

IX. Copy of Consent Form to Participant:

We will give you a copy of this consent form to keep.

If you are willing to volunteer for this research and be audio-recorded, please sign below.

Participant

Date

Principal Investigator or Researcher Obtaining Consent

Date

Appendix F

Demographic Questionnaire

Participant **xxxxxx**

Directions: Please select the best answer to describe yourself.

1. Gender: What is your gender?
 - a. Female
 - b. Male
 - c. Other

2. Age: What is your current age? _____

3. Race: How do you describe yourself? (Please select all that apply)
 - a. White
 - b. Black or African American
 - c. American Indian or Alaska Native
 - d. Asian Indian
 - e. Chinese
 - f. Filipino
 - g. Japanese
 - h. Korean
 - i. Vietnamese
 - j. Native Hawaiian
 - k. Guamanian or Chamorro
 - l. Samoan
 - m. Other race _____

4. Education: What is the highest level of education you have completed?
 - a. No School completed
 - b. Preschool to 4th grade
 - c. 5th grade or 6th grade
 - d. 7th grade or 8th grade
 - e. 9th grade
 - f. 10th grade
 - g. 11th grade
 - h. 12th grade, No Diploma
 - i. High School Graduate (High School Diploma or the equivalent)
 - j. Some college credit, but less than 1 year
 - k. 1 or more years of college, no degree
 - l. Associate degree
 - m. Bachelor's degree
 - n. Master's degree
 - o. Professional degree
 - p. Doctorate degree

5. Marital Status: What is your current marital status?
 - a. Married
 - b. Divorced

- c. Widowed
- d. Separated
- e. Single

Appendix G

Interview Script (Fathers)

Participant xxxxxx

In-Depth Interview Protocol (Fathers)

Good afternoon. My name is Lesshon Irby and I am a student conducting a qualitative research project as part of a master's thesis in partial fulfillment of Master of Public Health degree requirements at Georgia State University. As part of the project, we are speaking with fathers and mothers of ever breastfed infants, like yourself. I want to let you know that your participation in this interview is completely voluntary and if you want to stop at any time please don't hesitate to let me know. If you do not feel comfortable answering a question or do not want to continue with our conversation, let me know. Also, the interview will be completely confidential and anything you say will not be linked to you personally. As it was mentioned in the consent form, I would like to tape-record our interview so that I do not miss or forget anything that we talk about. I know you already consented but I wanted to confirm it is okay for me to tape record our interview.

I am excited to speak with you. I have a list of topics I would like to discuss but I want this to be more like a conversation so please feel free to bring up any topics you feel are related.

Do you have any questions?

Let's get started.

First we are going to gather some information about your child(ren).

1. How many children do you have?
2. How old are they?
3. Was/Is your child(ren) breast or formula fed?
 - a. Breast
 - i. Tell me about your understanding of breast feeding
 - ii. Tell me about your experience breast feeding
 - iii. Are you and your partner supplementing breast milk with formula?
 1. Tell me about the decision to do that
 - b. Formula
 - i. Tell me about your understanding of formula feeding
 - ii. Tell me about your experience formula feeding
 - iii. Tell me about your understanding of breastfeeding
 - iv. Do you and your partner have any experience breastfeeding?
 - If so, how long did you and your partner breastfeed?
 - Why did you and your partner decide to stop breastfeeding?
 1. Did your partner breastfed at the hospital?

Now we are going to discuss pre-partum activities and discussions.

1. Did you and your partner discuss feeding options prior to delivery?
 - ☐ If so, tell me about those conversations?
2. Prior to delivery tell me about your views on infant feeding options?
3. Prior to delivery, tell me about your opinion about breastfeeding?

- ☐ Prior to delivery, what would you say had influenced your views on infant feeding options?
- ☐ Prior to delivery, did you and your partner take any prenatal classes that covered infant feeding? If so, tell me about those classes

Now I would like to ask a few questions your views on breastfeeding since the delivery of your child.

1. Since the delivery of your child, do you view breastfeeding differently than prior to delivery?
 - a. If so, how?
 - b. If not, why?
2. Describe your role in the infant feeding decision-making and process.

This is the last question before we conclude

Of everything we discussed today, what would be the 1-2 things you think would be important for first time parents to know about infant feeding options?

Do you have anything else you would like to share?

Thank you for your time.

Appendix H

Interview Script (Mothers)

Participant xxxxxx

In-Depth Interview Protocol (Mothers)

Good afternoon. My name is Lesshon Irby and I am a student conducting a qualitative research project as part of a master's thesis in partial fulfillment of Master of Public Health degree requirements at Georgia State University. As part of the project, we are speaking with fathers and mothers of ever breastfed infants, like yourself. I want to let you know that your participation in this interview is completely voluntary and if you want to stop at any time please don't hesitate to let me know. If you do not feel comfortable answering a question or do not want to continue with our conversation, let me know. Also, the interview will be completely confidential and anything you say will not be linked to you personally. As it was mentioned in the consent form, I would like to tape-record our interview so that I do not miss or forget anything that we talk about. I know you already consented but I wanted to confirm it is okay for me to tape record our interview.

I am excited to speak with you. I have a list of topics I would like to discuss but I want this to be more like a conversation so please feel free to bring up any topics you feel are related.

Do you have any questions?

Let's get started.

First we are going to gather some information about your child(ren).

2. How many children do you have?
3. How old are they?
4. Was/Is your child(ren) breast or formula fed?
 - a. Breast
 - i. Tell me about your understanding of breast feeding
 - ii. Tell me about your experience breast feeding
 - iii. Are you and your partner supplementing breast milk with formula?
 1. Tell me about the decision to do that
 - b. Formula
 - i. Tell me about your understanding of formula feeding
 - ii. Tell me about your experience formula feeding
 - iii. Tell me about your understanding of breastfeeding
 - iv. Do you and your partner have any experience breastfeeding?
 - If so, how long did you and your partner breastfeed?
 - Why did you and your partner decide to stop breastfeeding?
 1. Did you breastfeed at the hospital?
 2. Tell me how your partner felt about this experience.

Now we are going to discuss pre-partum activities and discussions.

4. Did you and your partner discuss feeding options prior to delivery?
☐ If so, tell me about those conversations?
5. Prior to delivery tell me about your views on infant feeding options?

6. Prior to delivery, tell me about your opinion about breastfeeding?
 - ☐ Prior to delivery, what would you say had influenced your views on infant feeding options?
 - ☐ Prior to delivery, did you and your partner take any prenatal classes that covered infant feeding? If so, tell me about those classes
7. Prior to delivery, do you feel that your partner's views influenced or impacted your feeding decision?

Now I would like to ask a few questions your views on breastfeeding since the delivery of your child.

2. Since the delivery of your child, do you view breastfeeding differently than prior to delivery?
 - a. If so, how?
 - b. If not, why?
3. Describe your partner's role in the infant feeding decision-making and process.

Now I would like to discuss your partner's role and feeding support in detail

1. Do you feel that a mother's partner has a major impact on their decision to breast/formula feed?
 - a. Explain.
2. Do you feel your partner is/was as supportive as possible of your decision to breastfeed/formula feed?
 - a. If so, explain.
 - b. If no, how do you feel your partner could have been more supportive?
3. Has your partner ever expressed how they felt about breastfeeding
 - a. If yes, was this before or after the delivery of your child?
 - b. If no, do you wish your partner would have had more of an opinion about breastfeeding?

This is the last question before we conclude

Of everything we discussed today, what would be the 1-2 things you think would be important for first time parents to know about infant feeding options?

What advice would you give fathers about supporting mothers and their decision to breast or formula feed

Do you have anything else you would like to share?

Thank you for your time.

Appendix I Coding Manual – Father

American Father Perspective of Breastfeeding and How it Affects Breastfeeding Rates. Qualitative Coding Manual. Fathers

Codes:	Definition:	Sub-Codes:	Example:
Prepartum Perspective of Breastfeeding	Participants shares their perspective of breastfeeding prior to delivery	<ol style="list-style-type: none"> 1. Breastmilk better than formula 2. Colostrum helpful to baby 3. No view 4. Nourishment 5. Natural 6. Healthy 7. Mother-Child bond 	<ol style="list-style-type: none"> 1. Participant believed that breastmilk would be better than formula 2. Participant believed the colostrum was helpful to the baby 3. Participant had no prior experience with breastfeeding and no developed view; neutral (P2). 4. Breastmilk provide nourishment for the baby 5. Participant believes the purpose of breast are to breastfeed. 6. Read it was healthy for mother and baby 7. Wife wanted to bond with the baby
Prepartum Influence breastfeeding views	Participant describes what help shaped their breastfeeding views prior to delivery	<ol style="list-style-type: none"> 1. Culture 	<ol style="list-style-type: none"> 1. Breastfeeding is traditional, commonplace, and normalized in many countries and is seen in public even as a child 2. Breastfeeding for 1 year is part of cultural tradition
Differences in culture	Participants explain the difference of breastfeeding in the United States compared to family's country	<ol style="list-style-type: none"> 1. U.S. over sensitive 	<ol style="list-style-type: none"> 1. The United States tends to be over sensitive to many topics like breastfeeding.
Breastfeeding Decision Process	Participant describes their prenatal decision making process for deciding to breastfeed.	<ol style="list-style-type: none"> 1. Did not discuss 2. Discussed 3. Mother sole decision-maker 	<ol style="list-style-type: none"> 1. Participants did not verbally discuss their decision to breastfeed, they just knew that's what they wanted to do. 2. Participants discussed why they felt they should breastfeed their child prior to delivery. 3. Mother made decision to breastfeed (P5; 71, 75)
Possible Doubts in Breastfeeding Decision	Participants share prenatal doubts in being able to breastfeed upon delivery	<ol style="list-style-type: none"> 1. Latch 2. Mother unsure if she can do it 3. Uncomfortable with latching 	<ol style="list-style-type: none"> 1. Some babies have a difficult time latching on to nipple. 2. Mother doubts her ability to breastfeed 3. Mother feeling uneasy with the thought of a baby being Latch onto her breast.
Breastfeeding Preparation	Participant describes the process of preparing to breastfeed prenatally.	<ol style="list-style-type: none"> 1. Prenatal/Lactation class 2. Self-taught 3. No prenatal preparation 	<ol style="list-style-type: none"> 1. Participants attended classes to gain breastfeeding education.

			<ol style="list-style-type: none"> 2. Participant conducted literature searches to gain breastfeeding knowledge. 3. No prenatal preparation, but saw lactation consultant/nurse in hospital post-delivery.
View of Prenatal Breastfeeding Education	Participant shares how they felt about the breastfeeding education received prior to delivery	<ol style="list-style-type: none"> 1. Worth it 2. Informative 3. In one ear out the other 	<ol style="list-style-type: none"> 1. Participants believed they learned and gained a lot of information for from lactation education. 2. Participant feels that breastfeeding education contained information on how to keep wife comfortable and did not really concern him; he heard, but did not retain the information.
Breastfeeding Goals	Participant shares mothers breastfeeding goal after breastfeeding success	<ol style="list-style-type: none"> 1. Breastfeed up to 1 year 	<ol style="list-style-type: none"> 1. Participant sets breastfeeding goal, after overcoming breastfeeding doubts.
General Support	Male participants share their role in providing mother with general support.	<ol style="list-style-type: none"> 1. Feed baby when mom is away from baby 2. Help with putting baby on schedule 3. Do everything mom does 4. Provide bath 5. Get up when baby gets up 6. Team player 7. Support whatever mom wanted to do 	
Breastfeeding Support	Male participants share their role in providing mother with breastfeeding support.	<ol style="list-style-type: none"> 1. Bottle-feed baby with breastmilk 2. Keep distance during breastfeeding sessions 3. Physical presence 4. Assist with expressed breastmilk 5. Helps gets babies attached 6. Provide mom with fluids 7. Ensure mom is taking prenatal vitamins 8. Adjusting attitude toward breastfeeding 9. Adjustment in intimacy 	<ol style="list-style-type: none"> 1. Provide mom with a break from feeding child. 2. Participant kept distance to keep baby from becoming distracted during feeding therefore not to prolong breastfeeding session. 3. Participant wanted mother to not feel alone when awaking to breastfeed baby in the middle of the night. 4. Participants assist with the collection and storage process of expressed breastmilk. 5. Participants assist with breastfeeding positions and correct latching. 6. Moms need lots of fluids when breastfeeding Prenatal vitamins help mom and baby
Breastfeeding Challenges for Mother	Male participants describe challenges that they witness mothers face with breastfeeding.	<ol style="list-style-type: none"> 1. Illness 2. Pain 3. Low milk supply 	<ol style="list-style-type: none"> 1. Father believed mother getting ill was a challenge because it caused her to not be able to breastfeed at times.

		<ol style="list-style-type: none"> 4. Low pumping volume 5. Sleeping 6. Latching/Attachment 7. Comfort (nap, sleep) 	<ol style="list-style-type: none"> 2. Father believes there are times in which breastfeeding can cause pain or nipple may scab over making breastfeeding difficult. 3. Most commonly reported challenge in breastfeeding caused by various reasons. 4. Being able to pump and provide breastmilk while away proved to be challenging upon mom returning to work. 5. Hard time sleeping because wife is nursing at night. 6. Baby had difficulty latching on to mom's breast for nursing.
Breastfeeding Challenges for Father	Male participants describe challenges that they themselves have faced during child breastfeeding.	<ol style="list-style-type: none"> 1. Baby looking for mother 	<ol style="list-style-type: none"> 1. Bottle-feeding with breastmilk can be hard for father because baby is always looking for mom.
Overcoming breastfeeding challenges	Participant shares how they overcame breastfeeding challenges	<ol style="list-style-type: none"> 1. Be persistent 	
Breastmilk Conservation Attempt	Participant identifies ways they attempted to produce more breastmilk	<ol style="list-style-type: none"> 1. Pumping around the hour 	<ol style="list-style-type: none"> 1. Attempted to increase breastmilk supply by attempting to increase perceived demand
Breastfeeding Breakthrough	Participant describes the ways breastfeeding challenges were overcome	<ol style="list-style-type: none"> 1. Latch 2. Pain 	<ol style="list-style-type: none"> 1. Baby had no latch issues after delivery 2. Sought out assistance Pain went away after initial breastfeeding pain.
Postpartum breastfeeding assistance opinion	Participants described their opinion of breastfeeding assistance received	<ol style="list-style-type: none"> 1. Beneficial 	<ol style="list-style-type: none"> 1. Participant gained knowledge and technique to aid in breastfeeding
Experienced Benefit of Breastfeeding/Reason for Current Breastfeeding Perspective	Participant describes the benefit they saw from breastfeeding	<ol style="list-style-type: none"> 1. Baby healthy 2. Mother-Child relationship 3. Saved money 4. Child enjoys 5. Child comfort of being attached 	<ol style="list-style-type: none"> 1. He never once got sick. Never broke a fever, nothing; no colds, nothing. (PA1; L228); We think it's because shes giving him all his, her immune system to him, uh, through the breastfeeding. So that's why we're a little bit stronger on it now because we can see that it actually does help him (PA1; L232-233) 2. Creates strong bond/closeness/connection between mother and child. 3. Breastfeeding child saves the family money 4. Child seemed to enjoy being breastfed 5. Child receives comfort from being at breast; breast needed to nap and sleep at night

Postpartum Shift in Breastfeeding Perspective	Participants describe a shift in the way they viewed breastfeeding before and after delivery	<ol style="list-style-type: none"> 1. Open to breastfeeding 2. None 	<ol style="list-style-type: none"> 1. Though participant did not have a breastfeeding perspective prior to delivery, now they are open to breastfeeding. 2. No shift in breastfeeding perspective, pro breastfeeding before delivery and after.
Public Breastfeeding Experience	Participant shares their experience or feeling during public breastfeeding	<ol style="list-style-type: none"> 1. Uncomfortable 2. Discreet 3. Adjustment 	<ol style="list-style-type: none"> 1. Participants initially uncomfortable with partner breastfeeding publically due to the presence of others 2. Participants detected their partner was discreet as possible while breastfeeding.
Public breastfeeding support	Male participants share their role in providing mother with breastfeeding support in public areas	<ol style="list-style-type: none"> 1. Make sure mom is covered up 	<ol style="list-style-type: none"> 1. Ensure mom is covered up so no one gets offended
Partner vs Other Moms	Participant shares how he feels about his partner breastfeeding as opposed to strangers	<ol style="list-style-type: none"> 1. Protective of Wife 	<ol style="list-style-type: none"> 1. It didn't bother me when it was someone else (PA1; L299) Um, bit it was like it was my wife and that's yeah that's the little protectiveness of me coming out (PA1; L303)
Shift in public breastfeeding perspective	Participants describe a shift in the way they viewed public breastfeeding before and after delivery	<ol style="list-style-type: none"> 1. Became mature 2. Began to see breastfeeding as something normal 3. Realized that breast is meant for baby 4. Shift shaped by breastfeeding experience 5. Long as covered 	Shift in public breastfeeding perspective
Feelings of Continued Breastfeeding	Participant shares the reason they are for continued breastfeeding up to 1 year	<ol style="list-style-type: none"> 1. Saves money 2. Better for baby 	<ol style="list-style-type: none"> 1. Formula is expensive
Exclusive Breastfeeding Length	Number of months fathers recall baby being breastfed or bottle-fed with breastmilk only.	<ol style="list-style-type: none"> 1. 6 months 2. 3 months 3. Over 12 months 4. 2 months 	
Reason for breastfeeding for 1 year	Participant shares how they were able to exclusively breastfeed for 1 year	<ol style="list-style-type: none"> 1. Stayed home from work 1 year 	<ol style="list-style-type: none"> 1. Not returning to work before 1 year played a major impact on successfully being able to exclusively breastfeed for 1 year.
Breastfeeding Experience	Male participant describes his view of the families' overall experience of breastfeeding.	<ol style="list-style-type: none"> 1. Fairly easy 2. Very good 3. Good 4. Learning experience 	

		<ol style="list-style-type: none"> 5. Easier with subsequent children 6. Child(ren) enjoyed 	
Reasons for Supplementing/transitioning to with Formula	Male participants provide reasons that they (parents) began supplementing or completely transitioned to formula.	<ol style="list-style-type: none"> 1. Illness 2. Mother-Baby separation 3. Latch/Attachment 	<ol style="list-style-type: none"> 1. Antibiotic use sometimes keeps a mom from being able to breastfeed a certain lengths of time. 2. Mother returning to work, may not be able to keep up with the volume of breastmilk that baby is demanding. 3. Baby experiencing latching issues and is unable to transfer sufficient milk
Formula Experience	Male participant describes his view of the families' overall experience of supplementing or transitioning with formula.	<ol style="list-style-type: none"> 1. Really good 2. Expensive 3. Fast weight gain 4. Good 5. Felt more involved 	<ol style="list-style-type: none"> 2. Formula allowed some fathers to help mom out more by actually feeding baby. 3. Aided in child weight gain 4. The cost of formula is expensive compared to breastmilk, especially when baby has certain allergies.
Formula Challenge	Participants describe challenges that occurred while supplementing or using formula	1. Lactose allergy	1. Child allergic to lactose so they had to find a formula that would not affect the baby's health. Special formula was even more expensive.
Formula feeding Support	Male participants share their role in providing mother with support with formula feeding.	1. Preparing bottles	1. Help out partner by preparing bottles
Perspective of formula	Participant shares their perspective of formula	1. Nothing wrong with formula	1. If for any reason you are unable to breastfeed, its okay to give baby formula
Future Children	Participants shares if they would breastfeed future children	Will breastfeed	
Any hypothetical changes	Participants share if they would change anything that took place during breastfeeding experience	<ol style="list-style-type: none"> 1. No regrets nothing different Produced more milk 	<ol style="list-style-type: none"> 1. Some participants felt they had done all they could to continue breastfeeding. Some participants wished they could have found ways to produce more breastmilk
Breastfeeding Advice/Recommendations	Participants provide breastfeeding advice, recommendations, and tips to expecting couples	<ol style="list-style-type: none"> 1. Attempt to try 2. Pain goes away 3. Seek professional help 4. Breastfeed as long as possible 5. Sacrifice 6. Breastfeed as much as possible 7. Be persistent 	<ol style="list-style-type: none"> 1. Participants advise at least attempting to breastfeed yourself, because one does not know how it will go until they try. 2. Participant shares that pain does subside so do not let the initial pain cause cessation in breastfeeding 3. Participants recommend seeking professional assistance after deciding to breastfeed even before baby is born so that you can gain all of the information you can to prepare you.

			4. Breastfeed as long as possible to reap as many benefits as possible 5. Even if the baby has a hard time, they will learn
Formula Advice/Recommendations	Participants provide formula advice, recommendations, and tips to expecting couples	1. If you breastfeed then go to formula	1. Everyone is different
Father Advice/Recommendations	Participants provide advice, recommendations, and tips to expecting fathers	1. Be physically present	1. Makes you closer to the baby and partner

Appendix J Coding Manual – Mother**American Father Perspective of Breastfeeding and How it Affects Breastfeeding Rates. Qualitative Coding Manual. Mothers**

Codes:	Definition:	Sub-Codes:	Example:
Prepartum Perspective of Breastfeeding	Participants shares their perspective of breastfeeding prior to delivery	<ol style="list-style-type: none"> 1. Unsure 2. Healthier 3. Brain development 4. Formula make up 	<ol style="list-style-type: none"> 1. Participant expressed that she was not always sure how she felt about breastfeeding 2. Participant felt that breastfeeding would be healthier for child as opposed to formula feeding 3. Retaining information 4. Formula diluted
Breastfeeding....	Mothers share the things they heard about breastfeeding prior to delivery	<ol style="list-style-type: none"> 1. Painful 2. Frustrating 3. Problems 	
Partners perspective of breastfeeding prepartum		<ol style="list-style-type: none"> 1. Not sure 2. He did not think I was going to be able to do it 	<ol style="list-style-type: none"> 1. Conversation never arose 2. He knows how private I am
Breastfeeding Decision Process	Participant describes their prenatal decision making process for deciding to breastfeed.	<ol style="list-style-type: none"> 1. Did not discuss 2. Discussed 3. Mother sole decision-maker 	<ol style="list-style-type: none"> 1. Participants did not verbally discuss their decision to breastfeed, they just knew that's what they wanted to do. 2. Participants discussed why they felt they should breastfeed their child prior to delivery. 3. Mother made decision to breastfeed
Pre-partum Breastfeeding Goal	Participants provide their breastfeeding goal prior to delivery	<ol style="list-style-type: none"> 1. 6 months 	
Breastfeeding Challenges	Female participants describe challenges they faced/encountered while breastfeeding.	<ol style="list-style-type: none"> 1. Illness 2. Medication 3. Low milk supply 4. Low pumping volume 5. Latching/Attachment 6. Location 7. Break 	<ol style="list-style-type: none"> 1. Participant saw illness as a challenge because it caused her milk supply to decrease. 3. Participant was put on medication that she could not breastfeed while taking. 4. Most commonly reported challenge in breastfeeding caused by various reasons. 5. Being able to pump and provide breastmilk while away proved to be challenging upon mom returning to work. 6. Baby had difficulty latching on to mom's breast for nursing. 7. Participant expresses that finding a comfortable location to breastfeed can be a challenge

			8. Participant expresses that she cannot bottle feed baby because baby prefers milk from beat as opposed to expressed into bottle
Shift in Breastfeeding Perspective	Participants describe a shift in the way they viewed breastfeeding before and after delivery	1. Become comfortable 3. Length of breastfeeding 4. None	1. Public breastfeeding, but around people that she was comfortable asking if they were comfortable with her breastfeeding 2. Did not think they would last breastfeeding for 6 months 3 No shift in breastfeeding perspective, pro breastfeeding before delivery and after.
Public Breastfeeding	Participant shares their feelings about public breastfeeding their child.	1. Not comfortable	1. Participant shares that she is not comfortable feeding in areas where there are lots of people
Solutions to public breastfeeding	Participant shares how they overcome breastfeeding n public	1. Feeding in car 2. Covering up	
Partner and public breastfeeding	Participant shares their partners feelings on public breastfeeding	1. Uncomfortable	
Solution to public breastfeeding for partner	Participant shares their partner's solution to public breastfeeding	1. Shield mother and baby	
Breastfeeding preparation	Participant describes the process of preparing to breastfeed prenatally.	1. Prenatal/Lactation class 2. Self-taught 3. 4. No prenatal preparation	1. Participants attended classes to gain breastfeeding education. 2. Books, pamphlets 3. 4. No prenatal preparation, but saw lactation consultant/nurse in hospital post-delivery.
Partner and breastfeeding preparation	Participant shares how their partner felt preparing to breastfeed via breastfeeding classes	1. Fairly comfortable	
Influence breastfeeding views	Participant describes what help shaped their breastfeeding views prior to delivery	1. Health benefits	
Experienced Benefit of Breastfeeding/Reason for Current Breastfeeding Perspective	Participant describes the benefit they saw from breastfeeding	1. Baby healthy 2. Natural 3. Mother-Child relationship 4. Saved money	1. He stayed quite healthy; giving antibodies; helping with immunity 2. Natural way of feeding child 3. He never once got sick. Never broke a fever, nothing; no colds, nothing. (PA1; L228); We think it's because shes giving him all his, her immune system to him, uh, through the breastfeeding. So that's why we're a little bit

			<p>stronger on it now because we can see that it actually does help him (PA1; L232-233)</p> <ol style="list-style-type: none"> Creates strong bond/closeness/connection between mother and child. Breastfeeding child saves the family money
Why no extended breastfeeding	Participant shares why should does not want to participant in extended breastfeeding	<ol style="list-style-type: none"> Not comfortable 	<ol style="list-style-type: none"> Not comfortable when she feels they can ask for it.
Breastfeeding Support	Participants share their partners' role in providing them with breastfeeding support.	<ol style="list-style-type: none"> Pushed for formula Bottle-feed Remind to pump Keep company while pumping Help position kids Acts as breastfeeding coach Late night awake Help get baby positioned/latched 	
Partner differences during breastfeeding	Participant describes differences had with partner during breastfeeding	<ol style="list-style-type: none"> Arguments 	<ol style="list-style-type: none"> Partners argued about whether to breast or formula feed. Wife wants to breastfeed; father pushes formula when wife is tired or sick.
acceptance of formula	Participant shares what caused them to accept feeding child formula	<ol style="list-style-type: none"> After depleting stored milk supply 	
Process of formula acceptance	Participant shares the families process of formula acceptance	<ol style="list-style-type: none"> Father Pediatrician 	<ol style="list-style-type: none"> Pushed formula when mom is sick or tired Assured formula was okay
Pumping Challenges	Female participants describe pumping challenges they faced/encountered while breastfeeding.	<ol style="list-style-type: none"> Location 	<ol style="list-style-type: none"> Trying to find a location to pump can be challenging with work and school.
Breastfeeding experience	Female participant describes her view of the families' overall experience of breastfeeding.	<ol style="list-style-type: none"> Very smoothly Very well Frustrating 	<ol style="list-style-type: none"> Participant expresses that she's had no problems breastfeeding directly from breast. Frustrated because milk supply was not able to keep up with baby's demand
Exclusive Breastfeeding Length	Number of months fathers recall baby being breastfed or bottle-fed with breastmilk only.	<ol style="list-style-type: none"> 6 months 3 months Over 12 months 2.5 months 	
Reasons for Supplementing/transitioning to with Formula	Female participants provide reasons that they (parents) began	<ol style="list-style-type: none"> Illness Mother-Baby separation Supply 	<ol style="list-style-type: none"> Medication use sometimes keeps a mom from being able to breastfeed a certain lengths of time.

	supplementing or completely transitioned to formula.		<ol style="list-style-type: none"> 2. Mother returning to work, may not be able to keep up with the volume of breastmilk that baby is demanding. 3. Mother not producing enough milk to satisfy baby(ies)
Formula Challenge	Participants describe challenges they faced/encountered while formula feeding	<ol style="list-style-type: none"> 1. Baby prefers breastmilk 2. Finding the “right” formula 3. Allergy 	<ol style="list-style-type: none"> 1. Participant expresses that her baby prefers to have breastmilk over formula even if breastmilk is given by bottle. 2. Child allergic to something in formula so they had to find a formula that would not affect the baby’s health.
Formula Experience	Female participant describes her view of the families’ overall experience of supplementing or transitioning with formula.	<ol style="list-style-type: none"> 1. Good 	
Alteration in breastfeeding goal	Participants provide their breastfeeding goal after breastfeeding	<ol style="list-style-type: none"> 1. 1 year 	
Does father have a major impact	Participant shares if she feels a father has a major impact on a mother’s decision to breastfeed	<ol style="list-style-type: none"> 1. No 	<ol style="list-style-type: none"> 1. It’s your body, no one can tell you what to do with it
Why no extended breastfeeding - father	Participant shares why their partner does not want to participant in extended breastfeeding	<ol style="list-style-type: none"> 1. Recognized eating from breast; asking 2. Weird – 3 years old 	<ol style="list-style-type: none"> 1. When child is old enough to ask for milk from breast, they are too old to receive milk from breast.
Fathers feeling to mom wanting to breastfeed 1 year	Participant describes their partners feelings towards them wanting to breastfeed for 1 year	<ol style="list-style-type: none"> 1. Surprised, but supportive 	<ol style="list-style-type: none"> 1. Father surprised that mom wanted to breastfeed up until 1 year due to her private nature but supportive or decision.
Future children	Participant share if they would breastfeed future children	<ol style="list-style-type: none"> 1. Will breastfeed 	<ol style="list-style-type: none"> 1. Due to experienced benefits, participant would breastfeed future children
Breastfeeding Advice/Recommendations	Participants provide advice, recommendations, and tips to expecting couples	<ol style="list-style-type: none"> 1. Push through it 2. Get support 3. Seek professional help 4. Don’t get discouraged 5. Supply – mothers milk, supplement pills 6. Attempt to try 7. Pain goes away 8. Breastfeed as long as possible 	<ol style="list-style-type: none"> 1. Participants 2. Lactation consults 3. Class 4. Try alternatives to latch 5. Participants advise at least attempting to breastfeed yourself, because one does not know how it will go until they try. 6. Participant shares that pain does subside so do not let the initial pain cause cessation in breastfeeding

		9. Sacrifice 10. Breastfeed as much as possible 11. Be persistent	7. Participants recommend seeking professional assistance after deciding to breastfeed even before baby is born so that you can gain all of the information you can to prepare you. 8. Breastfeed as long as possible to reap as many benefits as possible 9. Even if the baby has a hard time, they; earn
Formula Advice/Recommendations	Participants provide formula advice, recommendations, and tips to expecting couples	1. Formula is not going to kill you 2. Brand recommendations	
Any hypothetical changes	Participants share if they would change anything that took place during breastfeeding experience	2. Been more persistent being more help 3. Tired harder 4. Tired longer	1. Some participants wished they could have sought more help
Transition to formula	Participant shares feelings toward transition to formula	1. Depressed	
Outside support vs Household support	Participant compares partner support to outside support	1. Men don't always understand 2. Other women or parents who have been there 3. Greater support	1. Being that men do not breastfeed they do not always understand 2. Understand your struggles and can relate
Father Advice/Recommendations	Participants provide breastfeeding advice, recommendations, and tips to expecting fathers	1. Read 3. Speak with others 4. Literature 5. Be supportive	2. Get more information 3. Get a better understanding of why it's important to others not just wife 4. Get the facts