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Breast is Best: Decisional Balance on Breastfeeding Amongst Hispanic Youth

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Abstract

Breast is Best: Decisional Balance on Breastfeeding Amongst Hispanic Youth

By: Melia Haile

Background: Despite the wealth of and access to cutting edge healthcare, breastfeeding rates in the United States fall well below levels recommended by organizations such as the World Health Organization and the American Academy of Pediatrics. Minority women in the United States have the lowest rates of breastfeeding. While Hispanic women have high rates of breastfeeding after birth, their rates of breastfeeding plummet with each successive month. A myriad of social, environmental, societal, economic, and cultural factors impact a woman's ability to breastfeed, but as the largest fastest growing ethnic group in the United States and in Georgia, Hispanics' low continued breastfeeding rates are a cause for concern. Breastfeeding can protect a mother and her child from cancers, infections, obesity, and other chronic conditions, and so breastfeeding rates can impact a child's current and later health outcomes.

Objective: To gain a deeper understanding of the relationship between gender and the factors affecting Hispanics' decision to breastfeeding using the Transtheoretical Model.

Methods: Guided by the Transtheoretical Model, qualitative and quantitative methods were used to understand the pros and cons that influence a parent's decision to breastfeed or not. In-depth interviews and surveys were conducted with Hispanic emerging adults to identify pros and cons of breastfeeding by gender.

Results and Conclusions: The pros and cons were mostly similar across genders (impact of work, support from partner, health benefits etc.), however several pros and cons such as body image, quality of milk, struggles with breastfeeding, and price of milk versus formula differed across genders. This study demonstrates the need for more support for breastfeeding women in the workplace and more supportive and knowledgeable male partners.

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GLOSSARY*

Bottle-fed Infant/Formula-fed infant: An infant that is not exclusively breastfed, traditionally refers to an infant fed entirely on commercial infant formula through a bottle; an infant not consuming human breast milk as his or her sole source of nourishment

Breastfed Infant: Infant partially or exclusively fed human breastmilk; generally refers to infants consuming breastmilk as their major form of energy; includes infants who are occasionally supplemented with infant formula and infants beyond age 4-6 months who are consuming complementary foods in addition to breastmilk

Breastfeeding: Feed a human infant breastmilk through the act of suckling at its mother's breast; also called lactating. This definition may also include women who occasionally pump their breasts and provide the breastmilk to the infant through a cup, bottle, or tube feeding

Breastfeeding Initiation: The inception of breastfeeding following the birth of an infant

Breastfeeding Intention: Plans related to breastfeeding one's infant

Formula: Commercial infant feeding products with a soy or cow's milk base used as a substitute for breastfeeding a human infant

Hispanic/Latino(a): Hispanic and Latino(a) are not synonymous. Hispanic includes all Spanish speaking countries, however Latino includes Spanish speaking nations as well as

Portuguese speaking nations. These terms are used interchangeably since the participants used the terms interchangeably

Youth: Person over age 16 but younger than age 26

*As defined by Humphreys, Thompson, & Miner (1996)

CHAPTER 1: INTRODUCTION

Background

Breastfeeding is an unequalled best method of providing ideal food for an infant's development and growth (World Health Organization, 2015). Breastfeeding has an impact on the reproductive health of a new mother, the infant's current health, and provides future health benefits for the baby and mother (WHO, 2015). Breast milk is the only natural food for infants that contains all of the energy and nutrients necessary for optimal growth- benefits a breastfed baby can continue to reap even through the second year of life (WHO, 2015). In addition to the physical health benefits for the infant, breastfeeding can reduce the likelihood of another pregnancy (for spacing children), reduce the risk of ovarian and breast cancer, and has no negative impact on the environment (WHO, 2015).

Infant mortality is defined as the death of an infant before the first birthday of an infant (Barfield and D'Angelo., 2013). As of 2011, the US infant mortality was 6.07 infant deaths per 1000 live births, down from 6.87 in 2005 which is quite higher than other nations such as the United Kingdom (4.2 infant deaths per 1000 live births) and Czech Republic (2.7 infant deaths per 1000 live births) (CDC, 2014). According to data compiled by the Central Intelligence Agency, the United States ranks 55th out of 224 nations in infant deaths per 1,000 live births (The World Factbook, 2015). Among the nations of the Organization for Economic Cooperation and Development, the United States ranked second to last in infant mortality with an infant mortality rate that was three times higher than some of the other nations (Barfield & D'Angelo, 2013). The American

Academy of Pediatrics recommends breastfeeding "as much and as long as a mother can" as one of the best methods to reduce early infant death (Barfield & D'Angelo, 2013). According to the World Health Organization, the recommendation of breastfeeding for at least six months is supported by evidence indicating that on a population level, breastfeeding is the optimal way to feed infants (2015). Breastfeeding reduces the risk of death for infants in the first year of life, protects from cavities, reduces incidence of juvenile diabetes, reduces incidence of ear infections, and protects against allergies, and protects from childhood cancer (CDC, 2013). Furthermore, according to the Centers for Disease Control and Prevention (2013), breastfeeding helps protect against childhood obesity, strengthens the immune system, and lowers medical costs. Babies who are fed formula and stop breastfeeding early have higher risks of obesity, diabetes, respiratory and ear infections, and sudden infant death syndrome (SIDS), and tend to require more doctor visits, hospitalizations, and prescriptions (2013). Breastfeeding for at least 9 months reduces a baby's odds of becoming overweight by more than 30% (CDC, 2013).

The benefits of breastfeeding extend well beyond the benefits towards the child. For example, breastfeeding lowers medical costs. More specifically, low rates of breastfeeding add $2.2 billion a year to medical costs contributing to the rising care of healthcare costs, sick days for workers, and lost productivity (CDC, 2013). Furthermore, breastfeeding can prevent type 2 diabetes, breast cancer, ovarian cancer, and postpartum depression in mothers. Furthermore, Women's Health (2013) finds that breastfeeding creates societal benefits in that it reduces infant deaths and lessens pollution. Once

breastfeeding becomes routine, the Office on Women's Health (2013) states that feeding an infant is easier without bottles and nipples to sterilize or formula to buy/prepare.

Despite significant improvements in the rates of black and white mothers' breastfeeding, from 2000-2008 there have been no significant improvements in the rates of Latinos breastfeeding (CDC, 2013). Latina women have one of the highest rates of formula supplementation of breastfed infants before two days of life (Chapman & Perez-Escamilla, 2012). Formula supplementation runs contrary to the advice of agencies such as the World Health Organization and American Academy of Pediatrics who recommend exclusive breastfeeding for at least the first six months of life for an infant (Barfield & D'Angelo, 2013) (WHO, 2015). However, many in the United States use formula which is related to cessation of breastfeeding. For example, one study found that the greater the amount of formula given to the infant, the greater the likelihood of not breastfeeding after 1-2 months (Brown, 2014). All reasons for supplementation (inadequate milk supply, poor latching, etc.) increased the risk for supplementation which indicates that it is formula supplementation that increased the risk of breastfeeding cessation (Brown, 2014). Thus, Latinos are an important population for intervention related to breastfeeding. Unfortunately, US national data does not report on breastfeeding practices by subgroups, and thus, do not reflect the variability in the breastfeeding practices of ethnic subgroups such as Puerto Ricans versus El Salvadoreans.

The decision to breastfeed is not made spontaneously, and is usually made before child birth (Seidel, Schetzina, Freeman, Coulter, & Colgrove, 2013). The US Surgeon General's Call to Action to Support Breastfeeding cites lack of knowledge, perceptions (of inconvenience, and bottle feeds as a social norm), and social factors such as family and friends' perceptions as barriers to initiating breastfeeding (Cox, Binns, & Giglia, 2015). Most women will consider the pros and cons of breastfeeding well before delivery, and will weigh the pros and cons based on the perceived benefits, personal and family beliefs, and knowledge of breastfeeding (Giles et al., 2007). The decision to breastfeed after birth can be predicted by the mother's intention, experiences, perceptions, societal norms, and attitudes (Apostolakis-Kyrus, Valentine, & DeFranco, 2012; Brownell, Hutton, Hartman, & Dabrow, 2002; Chezem, 2012; Cox et al., 2015; DiGirolamo, Thompson, Martorell, Fein, & Grummer-Strawn, 2005; Darwent & Kempenaar, 2014; Eckhardt, Lutz, Karanja, Jobe, Maupome, & Ritenbaugh 2014; Morrison, Collins, Lowe, & Giglia, 2014; Odom, Li, Scanlon, Perrine, & Grummer-Strawn, 2014; Sipsma, 2013; Hannon, Willis, Bishop-Townsend, Martinez, & Scrimshaw 2000; Swanson & Power, 2005).

Attitudes/Pros and Cons

Attitudes towards breastfeeding are formed early in life, and can have an impact on later breastfeeding decisions (Seidel et al., 2013). Intervention to increase breastfeeding duration and initiation are necessary for young mothers, particularly ones from disadvantaged backgrounds. Some studies suggest that knowledge about the health benefits of breastfeeding is inadequate and limited in adolescent populations (Baisch,

Fox, & Goldberg, 1989; Goulet, Lampron, & Ross, 2003; Greene, Steward-Knox, & Wright, 2003; Leffler, 2000). Some studies indicate that teenage mothers face many barriers and experience negative events and as a result cease breastfeeding (Dykes, Moran, Burt, & Edwards 2003; Hannon et al., 2000; Nelson & Sethi, 2005; Spear, 2006; Wambach & Cohen, 2009). Thus, the attitudes and perceptions of youth are of particular importance when considering breastfeeding interventions.

Hispanics

Culture can be defined as "a learned system of knowledge, behaviors, attitudes, beliefs, values and norms, that is shared by a group of people", and the culture of Hispanics in the United States is of particular relevance as there are over 45 million as of 2008 (Healthy Communities Program, 2014). Hispanic is defined as any person of "Cuban, Mexican, Puerto Rican, South or Central American, or any other Spanish culture or origin, regardless of race" (Healthy Communities Program, 2014). Hispanics often use traditional healing and culture is of utmost importance, and the power structure are strongly patriarchal. Hispanic culture is collectivistic in nature with an emphasis on collectivity, harmony, and cooperation especially among families who tend to be large in size (Healthy Communities, 2014). Hispanics are at risk for a multitude of health issues that affect morbidity and are affected by lifestyles, behaviors, environmental factors, and lack of effective health services (Healthy Communities Program, 2014; Lorenzo-Blanco, Unger, Ritt-Olson, Soto, & Baezconde-Garbanati, 2013). As Hispanic youth adapt to American culture through acculturation, they often feel stress and experience negative

health issues such as depression, which can in turn lead to negative health behaviors such as smoking and substance abuse (Lorenzo-Blanco et al., 2013).

Infant feed practices can vary according to culture, ethnicity, and socioeconomic status. Young ethnic minority women with low incomes and insufficient social support are least likely to breastfeed (Dennis, 2002). Hispanics are the fastest growing and largest minority group in the United States, thus the public health implications of poor breastfeeding rates are significant (St. Fleur, 2012). While Hispanic women have among the highest levels of early initiation of breastfeed, in the months after childbirth, those rates tend to decrease significantly (St. Fleur, 2012). The reasons why can include language barriers, lack of culture-specific interventions, cultural practices (such as los dos: mixing breast milk and formal for optimal benefits for the infant), misconceptions, lack of knowledge, and acculturation (eg. Ahluwalia, D'Angelo, Morrow, & McDonald, 2012; Bartick, 2012; Bunik et al., 2006; Gill, 2009; Glassman, McKearney, Saslaw, & Sirota, 2014; Hernandez, 2006; Kaurfan, Deenadayalan, & Karpati, 2010; Newton, Chaudhuri, Gossman, & Merewood, 2009; St. Fleur, 2012; Vaugh, 2010; Waldrop, 2013). An example of a major hindrance to exclusive breastfeeding in Hispanic families is the cultural practice to supplement breastfeeding with formula and food due (called los dos) which is initiated with the intention of providing the infant with a complete meal (breast milk is seen as insufficient) (Waldrop, 2013; Bartick, 2012).

Fathers

In Latin America, family is the center of life, and not only a source of economic/social stability, but a source of pride (Holladay, 2013). The extended family is

a means of survival and success, and together, extended family member work together to pool resources (Healthy Communities Program, 2014; Holladay, 2013). An important aspect of Hispanic culture that has an impact on men's relationships with women is the role of "machismo" a concept encapsulating the qualities of the ideal Hispanic man (strong, aggressive, fearless, high libido, and primary breadwinners) (Galanti, 2003; Holladay, 2013). Another important concept in Hispanic culture is "familismo" (loyalty, solidarity, reciprocity) which espouses solidarity and collaboration within the extended family (Galanti, 2003). As the protector of the family, Hispanic men often seek patriarchal control over their spouses and the success of their family is the very foundation of their masculinity (Holladay, 2013).

Thus, the father's impact on the decision to breastfeed can be quite significant. Lack of support from family members, particularly fathers or partners, is a major barrier to breastfeeding. Fathers are often in a unique position to directly impact the breastfeeding decisions and support systems of women (Chezem, 2012; Van Wagenen, Magnusson, & Neiger, 2015). Thus, it is of major importance for the father to be informed about breastfeeding and take an active and prominent role in facilitating breastfeeding (Chen, Chie, & Chang, 2010; Fletcher, Vimpani, Russell & Keatinge, 2008; Mitchell-Box, Braun, Hurwitz, & Hayes, 2013; Nickerson, Skykes, & Fung, 2012; Pontes, Osorio, & Alexandrino, 2009; Susin & Giugliani, 2008; Turan & Turan, 2007; Laantera, Pölkki, Ekström, & Pietilä, 2010; Rempel & Rempel, 2011; Schmidt & Sigman-Grant, 1999; Tahotoa, Maycock, Hauck, Howat, Burns & Binns, 2011; Torres de Lacerda, Lucena de Vasconcelos, Nascimento de Alencar, Osorio, & Pontes, 2013).

Theoretical Framework

Wilhelm, Stephans, Hertzog, Rodehorst, and Gardner (2005) note that by increasing the readiness to breastfeed in a step-by-step process, breastfeeding intention can increase. This step-wise progression towards behavior adoption follows the Transtheoretical Model (TTM). According to this model, a woman progresses from no intention to perform a behavior to continuing the behavior through a series of stages. Thus, the TTM provides a useful framework for better understanding and predicting the process of adopting breastfeeding as an infant feeding method. The TTM postulates that changes in breastfeeding are a result of a process involving progress through stages. An important facet contributing to progress through the stages towards sustained breastfeeding is decisional balance—the determination of the perceived advantages/pros and disadvantages/cons.

James O. Prochaska and his colleagues developed the Transtheoretical Model (TTM) in 1977, utilizing a foundation of analysis and different theories of psychotherapy (Boston University School of Public Health, 2013). The transtheoretical model focuses on the decision making and is a model of the intention to change; TTM assumes that people do not change behaviors quickly and decisively, but slowly and with thought and consideration (Boston University School of Public Health, 2013). TTM also includes other prominent constructs including Processes of Change, Decisional Balance, and Temptation (Boston University School of Public Health, 2013).

This study focuses on a series of intermediate/outcome measures using a construct from TTM that is sensitive to progress through all the steps of the Stages of Change (Cancer Prevention Research Center, 2004; Fahrenwald & Walker, 2003). The Decisional Balance construct reflects an individual's evaluation of the advantages and disadvantages of changing a health behavior (Hulton, 2001; Prochaska, Redding, & Evers, 2008). It encompasses an individual's relative weighing of the pros and cons of changing from one behavior, e.g., bottle feeding, to another, e.g., breastfeeding, through the weighting of the importance of the Pros and Cons (Cancer Prevention Research Center, 2004; Hulton, 2001; Patel, Sandars, & Carr, 2015; Tung, Cook, and Lu, 2012). Individuals consider the pros and cons, which can include knowledge, skills, self-confidence, and ability to continue despite issues, of a decision and use that weighing of benefits and costs to make their decision after taking into count all considerations (Hulton, 2001; Patel et al., 2015; Tung et al., 2012).

Many mothers weigh the pros and cons before breastfeeding. The factors that are weighed when making a decision to breastfeed can include beliefs about the health benefits, the availability of social support, expectations of breastfeeding and the future, attitudes, skills, self-efficacy, demand feedings, and barriers (such as work, shame, etc.) (Daly, Pollard, Phillips, & Binns, 2014; Dykes, 2005; Hall & Hauck, 2006; Moore & Coty, 2006). Women need to be able to easily find sources of advice and information which will contribute to their skills and self confidence in being able to breastfeed (Daly et al., 2014; Hall & Hauck, 2006; Dykes, 2005). In addition to overcoming internal barriers such as self confidence, emotional distress, and personal beliefs, women also

face physical barriers that weigh heavily as cons; these can include sore/bleeding nipples, difficulties with latching, pain, mastitis (infection), cramping, and after pains (Kelleher, 2006). Women also cite many reasons to initiate breastfeeding. These reasons can include benefits to the baby's health; intimacy (with the baby) while negative factors can include social pressure, anxiety regarding the quantities the baby is consuming, and pressure from work (Johnston and Esposito, 2007; Kelleher, 2006).

Purpose of the Study

In light of the limited research regarding the perspectives of young Hispanic men and women, this study investigated the decisional balance of breastfeeding employed by young Hispanic men and women using
the Transtheoretical Model. Several studies exploring the barriers to initiating and maintaining breastfeeding behaviors have been conducted, however few studies have included data on the attitudes and perceptions of Hispanic women or the male/male partner perspective on breastfeeding. Utilizing the Transtheoretical Model to explore the pros and cons of breastfeeding that male and female individuals consider both before and after pregnancy will better inform current literature as to the attitudes, and perceptions, that impacts the decision to breastfeed. Thus, this study including the perceptions of both males and females can address this gap in research.

This study aims to determine the following:

1. **What pros and cons of breastfeeding are important for young, first-, second- and third generation Latino males?**

2. **What pros and cons of breastfeeding are important for young, first-, second-, and third generation Latina females?**

3. **Do the levels of means of pros and cons for breastfeeding differ by gender?**

CHAPTER 2: LITERATURE REVIEW

Breastfeeding Recommendations

Breastfeeding is promoted by most maternal and child health serving organizations within the United States and internationally. Healthy People 2020, a science-based, ten-year national objectives established and managed by the United States Department of Health and Human Services have established goals and monitored outcomes over time in order to encourage collaboration, guide individuals towards making informed health decisions and measuring the impact of prevention activities undertaken (Department of Health and Human Services (DHHS), 2014). Healthy People 2020 sets several breastfeeding goals for mothers. Healthy 2020 encourages parents to increase the proportion of infants who are breastfed ever, for 6 months, for one year, and exclusive breastfeeding for 3 and 6 months (DHHS, 2014).

The American Academy of Pediatrics (AAP) advocates for youth through the "protection, promotion, and support of breastfeeding" (AAP, 2012). The American Academy of Pediatrics supports and encourages breastfeeding efforts through education for physicians, policy makers, and insurance providers as well as through development of reliable breastfeeding publications and support of breastfeeding families in times of disasters (AAP, 2012). The American Academy of Pediatrics recommends for exclusive breastfeeding for the first six months, followed by breastfeeding with complementary foods for at least one year (AAP, 2012). The United Nations Children's Fund (UNICEF) and the World Health Organization (WHO) both recommend early initiation of

breastfeeding within one hour of birth, exclusive breastfeeding for six months, and the introduction of solid foods at 6 months while the mother continues to breastfeed for two years or more (WHO, 2014; WHO, 2015). WHO and UNICEF encourage breastfeeding through development of guidelines/counseling courses, protection/promotion/support of infant and young child feeding at the policy, community, and health service levels, as well as through data collection and analysis on infant and young child feeding practices (WHO, 2014).

Prevalence of Breastfeeding

Several entities within the United States collect and report data on breastfeeding incidence and prevalence. The Centers for Disease Control and Prevention (CDC) collects information on maternal experiences through several data collection and analysis initiatives such as the Pediatric Nutrition Surveillance System (PedNSS) and Pregnancy Nutrition Surveillance System (PNSS). Pediatric Nutrition Surveillance data from 2011 demonstrated how breastfeeding duration drop by more than half from 63.2% to 30.1% within the first four months of an infant's life (PedNSS, 2011). When asked about exclusive breastfeeding, only 10.8% of mothers reported exclusively breastfeeding for at least three months, and about half (6.3%) of those mothers reported breastfeeding exclusively for at least six months (PedNSS, 2011). Furthermore, when analyzed by age, the data collected revealed that young mothers ages >15-19 had some of the lowest breastfeeding rates (56%-65.7%), whereas of the mothers ages 30+, 75.4% had ever breastfed (PNSS, 2011). The pregnancy nutrition surveillance data indicated prevalence of ever breastfeeding is positively associated with education. Mothers who did not

graduate high school breastfed 64.3% of the time, and mothers with a degree higher than high school reported breastfeeding at least once 75.4% of the time (PNSS, 2011). The Pregnancy Nutrition Surveillance System data also indicated differences in breastfeeding practices among the varying races/ethnicities. Asians, American Indian/Alaskan natives, and bi/multiracial mothers reported the highest rates of ever breastfeeding about 70%, and Whites/Blacks reported the lower levels of breastfeeding (67.9% and 62.4% respectively) (PNSS, 2011). Hispanics reported the highest rates of ever breastfeeding (79.1%) (PNSS, 2011).

Among mothers in the United States, statistics show that breastfeeding rates in the United States are not optimal, and neither is knowledge regarding breastfeeding. In a 2013 HealthStyles Survey, a survey drawn to be nationally representative, over four thousand respondents answered questions regarding breastfeeding. Nearly 50% believe that infant formula is as good as breast milk, over 75% either disagree or neither agree/disagree with the fact that feeding a baby formula instead of breast milk increases the chances the baby will become ill, and over 48% disagreed or neither disagreed/agreed with the statement "if a child is not breastfed, she/he will be more likely to become overweight" (Division of Nutrition, Physical Activity, and Obesity, National Center for Chronic Disease Prevention and Health Promotion, 2013).

Role of the Partner

A breastfeeding mother's partner can play a significant role in the adoption and maintenance of breastfeeding. A father's perception of his role as a component of the breastfeeding process can greatly hinder or improve the breastfeeding experience (Chen,

Chie, & Chang, 2010; Fletcher, Vimpani, Russell, & Keatinge, 2008; Laantera, Pölkki, Ekström, & Pietilä, 2010; Mitchell-Box, Braun, Hurwitz, & Hayes, 2013; Nickerson, Sykes, & Fung, 2012; Pontes, Osorio, & Alexandrino, 2009; Rempel & Rempel, 2011; Schmidt & Sigman-Grant, 1999; Susin & Giugliani, 2008; Tahotoa et al., 2011; Torres de Lacerda, Lucena de Vasconcelos, Nascimento de Alencar, Osorio, & Pontes, 2013; Turan & Turan, 2007). In one qualitative study of 21 fathers of breastfeeding babies, results showed that the primary role of a father in supporting his breastfeeding partner and baby is through support which manifests as knowledge of breastfeeding, assisting breastfeeding mothers (through sharing housework, child care etc.), and valuing his partner (Rempel & Rempel, 2011). The nurturing role played by the father enhances the breastfeeding experience and positively impacts the father-infant relationship. The role of a partner, in the experiences of fathers of breastfeeding mothers, is that of a teammate in the breastfeeding family. The partner will often use "we" when talking about breastfeeding and focus significantly less on their role as a father and more on the role of a supporter (Rempel & Rempel, 2010). Many of the fathers in the Rempel and Rempel study described the critical role they played in the decision to initiate or stop breastfeeding, facilitating breastfeeding, and valuing the breastfeeding mother by valuing her choices and decisions.

Similarly, Pisacane, Continisio, Aldinucci, D'Amora, & Continisio conducted a controlled trial to investigate whether supporting fathers recognized the significance of their role in successful breastfeeding, and placed the men in the intervention group (received training and education about breastfeeding (and how to manage the problems that can arise such as engorgement and mastitis)) or the control group (2005). The wives

of the men in the intervention group reported fewer difficulties with lactation, less perceptions of milk insufficiency, higher breastfeeding rates, and less cessation due to lactation issues (Piscane et al., 2005). Several studies support the role of fathers as significant factors in the mother's decision to breastfeed and in the duration of breastfeeding (Arora, McJunkin, & Wehrer, 2000; Britton, McCormick, Renfrew, & Wade, 2007; Piscane et al., 2005, Swanson and Power, 2005). Furthermore, the Piscane et al. study also suggested that the mother's satisfaction with breastfeeding, length of breastfeeding, and initiation is related to the father, and supporting or including the father can improve maternal satisfaction, and breastfeeding initiation/duration (2005).

Attitudes towards Breastfeeding

Greater Socio-culture

Attitudes towards breastfeeding vary according to culture and ethnicity/race, and are reflected in the breastfeeding rates of different ethnic groups. For example, while Hispanics have breastfeeding rates of about 80% (drops to 46% by 6 months), only 76% of non-Hispanic Whites and 58% of Blacks ever breastfeed and these statistics decline dramatically in the months following birth (Office of the Surgeon General, 2011). These statistics are reflective of the general public attitude towards breastfeeding; only 75% of the United States ever breastfeeds and only 22% breastfeeds for at least one year (Office of the Surgeon General, 2011). The reasons for the differences in breastfeeding rates among different ethnic groups are generally attributed to work, where minority women tend to return to work earlier after childbirth than White women, and are more likely to work in environments that do not support breastfeeding (Office of the Surgeon General,

2011). Additionally, income, education status, and geographic location are factors that affect breastfeeding rates; particularly affecting minority women's such as Hispanic women's, ability to breastfeed (Office of the Surgeon General, 2011).

Generally, bottle feeding is viewed by many as the "normal" infant feeding method, and with each successive generation after the initial immigrants reach the United States, bottle feeding is perceived as more and more acceptable (Office of the Surgeon General, 2011). National attitudes towards breastfeeding in public border on conservative, and are certainly more conservative and restrictive in nature than other European and Canadian sentiments. According to federal law, a woman may breastfeed at any location on Federal property, but there are no enforcement provisions for this law (Marcus, 2015). Additionally, while employers are required to provide space and time for breast milk pumping, there are no enforcement procedures in place (Marcus, 2015). Georgia law contradicts federal law, in that employers may provide reasonable unpaid break time for breast milk pumping, however this is an entirely voluntary accommodation from the employer with no enforcement policy (Marcus, 2015).

Mothers

Women generally want to attempt breastfeeding as demonstrated by their breastfeeding rates after giving birth (75%), however several factors interfere and prevent women from breastfeeding for the AAP and WHO recommendations of six months to two years, and this is demonstrated by the declines to an average of 43% of women breastfeeding by six months, and 22% of women breastfeeding by 12 months (Office of the Surgeon General, 2011). The decision to breastfeed after birth can be impacted

significantly by the mother's intention and attitude. For example, positive attitudes and viewing breastfeeding as more pro than con is found to lead to higher rates of sustained breastfeeding (Hundalani et al., 2013). Intention to breastfeed is one of the strongest predictors of initiating breastfeeding (Hundalani, Irigoyen, Braitman, Matam, & Mandakovic-Falconi, 2013). In one study, among those who intended to breastfeed, 75% were upon discharge from the hospital (Hundalani et al., 2013). Among the women who intended to exclusively breastfeed, 40% were doing so when they were discharged from the hospital. Intention can determine behavior; of the women with the intention to use formula, nearly 90% were doing so when discharged from the hospital (Hundalani et al., 2013). The intention to breastfeed is there, as demonstrated by the percentages of women who breastfeed, however along the way, several factors impact the decision and ability to exclusively breastfeed. Almost half of breastfed newborns are given formula while still at the hospital (after delivery), which is completely medically unnecessary for most healthy, full term breastfed newborns, and nearly half of newborns consume solid foods within the first four months of life, despite the AAP recommendations that no infant, (breastfed or formula fed) should eat solid foods before the age of four months (Office of the Surgeon General, 2011). This factor combined with factors of policies on work/parental leave, cultural norms, legislation, employers, returning to work, income, knowledge, and the persuasive and targeted marketing strategies of infant formula, lead impedes women's ability to exclusively breastfeed.

Partners

An important component of the patriarchal Hispanic culture regarding relationships, is "machismo" a concept representing the qualities of the ideal Hispanic man (strong, aggressive, fearless, high libido, and primary breadwinners) (Galanti, 2003; Holladay, 2013). Thus, the father plays a significant role in the decision to breastfeed (Chezem, 2012; Van Wagenen, Magnusson, & Neiger, 2015). Empirical evidence demonstrates the influence fathers have on woman's initiation and duration of breastfeeding (Arora et al., 2000; Britton et al., 2007; Sherriff, Hall, & Panton, 2014; Swanson and Power, 2005). The research on breastfeeding exploring the relationship between breastfeeding rates and fathers is not extensive, and more research is needed.

The father's attitude towards breastfeeding can also have a major impact on the initiation and duration of breastfeeding; positive attitudes from the father are associated with higher intention to breastfeed in the mother (Mitchell-Box, 2013). Several mothers have reported that deciding to breastfeed is a mutual decision between the mother and father, and the father's support (physical and emotional) of breastfeeding provided the mothers with much needed support (Nickerson et al., 2012). Similarly, in this qualitative study, fathers expressed a strong desire to support breastfeeding both emotionally and physically (Schmidt, 2013). Knowledge is an important way a father can contribute to the breastfeeding process, a knowledgeable father will likely lead to a longer duration of breastfeeding for the infant (Nickerson et al., 2012). Fathers want to know more about the facts behind breastfeeding and how they can physically and emotionally support their

partner; this indicates a need for more interventions that include the fathers as an integral component of the breastfeeding process (Brown & Davies, 2014).

The following study on the attitudes of expectant fathers by Freed, Fraley, and Schanler (1992) found that fathers in the breastfeeding groups (where their partners planned to breastfeed exclusively immediately after birth) were more knowledgeable and had more positive attitudes towards breastfeeding than were fathers in the formula fed groups (where their partners planned to exclusively formula feed). In the Freed et al. article, attitudes to breastfeeding in public and breastfeeding promotion were measured by a survey constructed on the basis of themes discussed in prior focus group discussions (1992). Themes included in the survey arose within the context of how attitudes to infant feeding are formed (Freed et al., 1992). In the surveys, a scoring system of 1-4 (strongly disagree- strongly agree) was used for positive statements/attitudes; higher scores indicated stronger agreement with the instrument items. Fathers in the breastfeeding group were more likely to know about specific benefits of breastfeeding to mother and child than those in the formula utilizing groups. Fathers who intended to have their children bottle-fed overwhelmingly perceived negative results occurring to their wives from breastfeeding and were unaware of the benefits to their child (Freed et al., 1992). Findings such as these suggest that fathers' consideration of the pros and cons of breastfeeding may influence mothers' breastfeeding behavior (Arora et al., 2000; Brown & Davies, 2014; Tahotoa et al., 2011). The women appear to understand their partner's negative reaction as a con, and thus become more reluctant to breastfeed (Freed et al., 1992).

The role of the partner in breastfeeding is undeniably a factor in the duration of breastfeeding an infant. For example a study by Chezem found that while a positive attitude from a father can improve the quality and duration of breastfeeding, a less positive attitude can lead to interrupted or curtailed breastfeeding (2012). Men and women oftentimes have quite different attitudes towards breastfeeding. A study of 71 interviewed couples by Chezem (2012) found that compared with fathers, more mothers said breastfeeding was natural, better for infants, protected infants from diseases, and improved the mother-infant bonding experience. The study generally reported positive attitudes from women, however, fathers were more likely to indicate that breastfeeding was harmful to the breast and made breasts unattractive (Chezem, 2012).

In the following controlled clinical trial, researchers divided 586 mother/father/baby triads into a control group, a mothers only intervention group (only mothers received the breastfeeding workshop), and a mothers/fathers intervention group (both parents received the workshop). Before the start of the study, most mothers (93.3%), wanted to receive help from their partners while breastfeeding (Susin & Giugliani, 2008). After the intervention, 16.5% of mothers were breastfeeding exclusively at 4 months, much higher than the mothers only intervention and control groups (11.1% and 5.7% respectively) (Susin & Giugliani, 2008). Including fathers in the intervention significantly increased the likelihood of exclusive breastfeeding through six months (Susin & Giugliani, 2008). The value of the father's demonstrated interest and support is supported by several other studies (Chen et al., 2010; Fletcher et al., 2008; Laantera et al., 2010; Mitchell-Box et al., 2013; Nickerson et al., 2012; Pontes et al.,

2009; Rempel & Rempel, 2011; Schmidt et al., 1999; Susin & Giugliani, 2008; Tahotoa et al., 2011; Torres de Lacerda et al., 2013; Turan & Turan, 2007).

Hispanics

Breastfeeding rates are higher among Hispanic women than any other racial or ethnic group in the United States (Ahluwalia, D'Angelo, Morrow, & McDonald, 2012). However, as time passes after birth, most do not continue to exclusively breastfeed for the recommended minimum of six months. The reasons why include but are not limited to language barriers, lack of culture-specific interventions, cultural practices (such as los dos: mixing breast milk and formal for optimal benefits for the infant), misconceptions, lack of knowledge, and acculturation (Ahluwalia, IB., 2012; Bartick & Reyes, 2012; Bunik et al., 2006; Gill, 2009; Glassman, McKearney, Saslaw, & Sirota, 2014; Hernandez, 2006; Kaurfan, Deenadayalan, & Karpati, 2010; Newton, Chauduri, Gossman & Merewood, 2009; St. Fleur, 2012; Vaughn, 2010; Waldrop, 2013).

As more young Hispanic women grow up in the United States, they develop different perspectives given their level of acculturation (Ahuluwalia et al., 2012). Ahuluwalia et al. analyzed data collected from women identified using the Pregnancy Risk Assessment Monitoring system- a program developed by the Centers for Disease Control and Prevention to collect data on maternal behaviors (2012). About 40% of participants were "highly" acculturated (to the United States) and 60% were considered to have "low" acculturation (Ahuluwalia et al., 2012) based on language abilities. While over 86% initiated breastfeeding, only 15.1% continued to exclusively breastfeed beyond 10 weeks, significantly less than recommendations of AAP and WHO (AAP, 2012;

Ahluwalia et al., 2012; WHO, 2015). The mothers considered "highly" acculturated tended to be young, speak English as a primary language, educated beyond high school, and with only one child (Ahluwalia et al., 2012). They were also less likely to initiate breastfeeding, less likely to report exclusively breastfeeding and less likely to breastfeed beyond 10 weeks (Ahluwalia et al., 2012). This suggests that the older Hispanic women still hold on to cultural practices of breastfeeding, but as the women become more assimilated into American culture, breastfeeding rates (exclusive and with supplements) drop.

Barriers to Breastfeeding

Barriers to breastfeeding are numerous and include negative attitudes towards breastfeeding, employment, lack of social support, lack of emotional support, insufficient latching techniques, pain during breastfeeding, perceptions, expectations, acculturation etc. (Ahluwalia et al., 2012; Apopstolakis-Kyrus, Valentine, & DeFranco, 2012; Brownell, Hutton, Hartman, & Dabrow, 2002; Chezem, 2012; Kelleher, 2006; Mitchell-Box et al., 2013; Nickerson et al., 2012; Pontes, 2009). In the United States, there are cultural and institutional barriers that prevent more women from easily breastfeeding (Apostolakis-Kyrus et al., 2012; Daly, Pollard, Phillips, & Binns, 2014; Dykes, 2005; Vaughn et al., 2010). For example, many hospitals distribute free infant formula, which decreases the duration of breastfeeding, and so the Baby-Friendly Hospital Initiative was launched in order to decrease the amount of formula given away by hospitals (Brown, 2014; Scott, 2005).

The institutional barriers can range from hospitals distributing formula to employer policies that do not accommodate breastfeeding mothers (Brown, 2014; Johnston & Esposito, 2007; Scott, 2005). For example, the following study by Clark, Anderson, and Adams focuses on childcare providers; the impact of childcare providers can be substantial on a mother's position on the stages of change, and when she is weighing the pros and cons of continuing to breastfeed (2007). If a mother is going to work while breastfeeding, she will need to be able to leave breast milk with the child care facility. The study assessed attitudes, knowledge, behaviors, and training needs related to breastfeeding found the knowledge of infant room teachers and directors on ways to adequately store breast-milk to be quite low and breastfeeding benefits to be low (Clark et al., 2007). Over a third of the providers felt that formula had no disadvantages over breast-milk- only a few of the childcare providers found breast-milk to be "not embarrassing" (Clark et al., 2007). These are telling findings since childcare providers are in a position to influence mothers' options and create policies for their childcare facilities as to what sort of infant feeding method is permitted. For example, if a mother is determined to breastfeed, but finds that her daycare encourages using formula at their facility or tells her that there are no disadvantages to using formula, she may decide that the advantages of breastfeeding are low, and the advantages of using formula are higher.

Another example of an institutional barrier is employment. An accommodating and understanding work environment is crucial to successfully breastfeeding (Rojjanasrirat, 2004; Stevens & Janke, 2003; Witters- Green, 2003). "Mothers who work full time tend to breastfeed for shorter intervals than those who work part time or are unemployed" (Johnston & Esposito, 2007). When mothers return to the work place they

are faced with a multitude of issues such as lack of privacy, lactation rooms, understanding, break-times to pump and so on (Johnston & Esposito, 2007; Wambach & Cohen, 2005). In the systematic review of research regarding the barriers working women face, Johnston and Esposito found that social support in the workplace from coworkers and supervisors is significant to the continuation of breastfeeding as a working mother (2007). If pumping is unsuccessful, working women often begin supplementing with formula (Clark et al., 2008).

Hispanic Culture

Hispanics in Georgia

Georgia has experienced rapid growth of Hispanic populations with over one million residents who identify themselves as Hispanic/Latino and form nearly 10% of Georgia's population (Andes et al., 2012). The Hispanic Health Coalition of Georgia (the only statewide organization focusing on Latino/Hispanic health in Georgia) compiled statistics collected from a variety of sources such as federal census data, Pew Research Center, and the Kaiser Family Foundation to generate a report detailing the health status of Hispanics in Georgia. Despite the fact that the Hispanic population of Georgia has grown eight-fold since 1990, over a quarter live below the poverty level, nearly half are uninsured, and about three quarters of Hispanic immigrants do not have health insurance (Andes et al., 2012). Hispanic youth in Georgia are less likely to have health insurance coverage than all other non-Hispanic youth, and suffer from a disproportionate amount of obesity, poor oral health, and substance abuse (Andes et al., 2012). Furthermore, Hispanic birth rates are higher than any other ethnic or racial group nationally and

statewide, and yet Hispanic women are less likely to seek prenatal care and have high rates of teenage pregnancies and sexually transmitted infections (Andes et al., 2012).

Gender Roles

As mentioned, "machismo" defines the roles men and women play in a family and in the Hispanic community (Galanti, 2003, Holladay, 2013). The women are expected to be demure, submissive, and obedient, and the men are expected to be strong, sexually aggressive, and with voracious sexual appetites (Holladay, 2013, Galanti, 2003). These concepts illustrate the roles men and women play, and are the framework within which breastfeeding occurs. The men have a powerful say in the husband-wife relationship, and so have an impact on the mother's decision to breastfeed. The mother-to-be will likely weigh the pros and cons, and careful consider the advantages and disadvantages before deciding on an infant feeding technique. The following study is an example of how theory can be used to examine the decisional balance. This study by Humphreys, Thompson, and Miner (1998) is an example of a synthesis of the two constructs, stages of change and decisional balance, and how they can be applied to better predict and enable sustainable breastfeeding practices. The authors found that breastfeeding promoting initiatives could use the stages of change to target individuals and satisfy the needs associated with each stage (Humphreys et al., 1998). This study determined the current stage of each participant with a five-item questionnaire (Infant Feeding Plans) where each item correlates to a stage of change. The resulting stage of change was then compared to decisional balance to see if there were correlations. Examples of items measuring decisional balance include pros such as "Breastfeeding is good for me" and

"Breastfeeding can help me lose weight" and con such as "breastfeeding is old fashioned" and "breastfeeding makes your breasts sag". These items were measured using a five point Likert scale ranging from strongly agree to strongly disagree. Humphreys et al. found a positive and high correlation between the stages of change and positive beliefs about breastfeeding (Pros). This correlation indicates that utilizing both these constructs in studying breastfeeding should yield greater understanding of breastfeeding practices (Humphreys et al., 1998).

Humphreys, Thompson, and Miner (1999) investigated breastfeeding attitudes; beliefs, social support, and behavior in order to better understand breastfeeding intention. Humphreys et al. measured the aforementioned constructs with a 70 item instrument that measured the aforementioned constructs with statements associated with each construct. Processes of change measure was measured with a 20 item section of the survey with answers ranging from strongly agree to strongly disagree on a 5 point Likert scale. Decisional balance was measured with 20 statements (pros and cons) on a 5- point Likert scale. Study findings validated the ability of TTM constructs such as stages of change to predict and explain the Intention to breast-feed following the TTM framework. Women in the later stages of change, such as maintenance, had less negative attitudes towards breastfeeding than did women in the earlier stages, such as the pre-contemplation or contemplation stages. These findings indicate that tailoring breastfeeding promotional strategies to women's specific stages of change can be effective in ensuring women's progress towards the later stages of the stages of change (Humphreys et al., 1999).

Acculturation in the US

Acculturation affects a myriad of health behaviors within Hispanic populations. It can affect breastfeeding behavior, sexual/reproductive health, health access, and cause other health issues particularly among adolescents (Ahluwalia et al, 2012; Haderxhanaj et al., 2014; Lee & Hahm 2010; Santelli, Abraido-Lanza, & Melnikas, 2009). "Hispanic youth face numerous sexual and reproductive health challenges including unplanned pregnancy and a disproportionate burden of sexually transmitted infections (STIs) compared to non-Hispanic White youth" (Haderxhanaj et al., 2014). Hispanics are at a higher risk for STIs partially due to acculturation and access to comprehensive health care, similar to the risk factors for low breastfeeding rates (Haderxhanaj et al., 2014). For example, in addition to the aforementioned impact on breastfeeding behavior studied by Ahluwalia et al. (2012), acculturation has a significant impact on sexual and reproductive health as demonstrated in the following study by Haderxhanaj et al. (2014). Haderzhanaj et al. (2014) created an acculturation proxy, and interviewed 4,165 Hispanic and non-Hispanic Whites. Compared to their White and Hispanic and more acculturated counterparts, significantly fewer Spanish speaking immigrants used a condom at first sex, reported more encounters of vaginal sex, and older sex partners at age of first vaginal sex. Additionally, most Spanish speaking immigrants reported no health insurance coverage in comparison to non Hispanic White youth (70.2%). Acculturation was associated with increased access to health care. While this study focused on sexual health behaviors, these findings have implications for breastfeeding. The hospital might be an excellent intervention location for language and culture specific breastfeeding interventions.

Transtheoretical Model

The Transtheoretical Model (TTM) utilizes analysis and different theories of psychotherapy (Boston University School of Public Health, 2013). Changes in behavior occur through a cyclical process, and are dependent on varying variables (Boston University School of Public Health, 2013; Patel, Sandars, & Carr, 2015; Tung et al., 2012). This integrative model of behavior change is comprised of several key constructs, the central organizing construct of which is the Stages of Change.

Several studies have used TTM constructs to model behavior change (Fahrenwald & Walker, 2003; Patel et al., 2015; Odom, Li, Scanlon, Perrine, & Grumer-Strawn, 2014; Tung, Cook, & Lu, 2012). For example, Hulton (2001) used TTM to study adolescent sexual behaviors. The researcher used a cross section of students (n-694) participating in an abstinence program (Hulton, 2001). Hulton developed the Adolescent Stages of Change Scale for Sexual Abstinence and the Adolescent Decisional Balance Scale for Sexual Abstinence to study where the students were in the stages of change (Precontemplation, Contemplation, Preparation, Action, and Maintenance stages) and the pros and cons they considered (Hulton, 2001). The findings suggested targeted health promotion programs with media components were used, and the model-based research indicated that if pros were emphasized during the intervention, youth would be more likely to engage in healthy behavior (Hulton, 2001).

CHAPTER 3: METHODS

This study aimed to explore the pros and cons of breastfeeding as perceived by Hispanic youth in Georgia.

Specifically, the research questions are:

1. **What pros and cons of breastfeeding are important for young, first-, second- and third generation Latino males?**

2. **What pros and cons of breastfeeding are important for young, first-, second-, and third generation Latina females?**

3. **Do the means of pros and cons for breastfeeding differ by gender?**

Due to the exploratory nature of these research questions, qualitative methods were used in conjunction with quantitative methods to study the perceived pros and cons of breastfeeding. Data were collected via individual, in-depth interviews and surveys of Hispanic youth, conducted in the Gwinnett County area. Data were triangulated to inform findings.

Sample

Study participants consisted of Hispanics/Latinos ages 16-26. Hispanic or Latino is defined as having self-reported origins in Central/Latin America, Cuba, Puerto Rico, or the Dominican Republic via one or both parents, or self-identifying as Latino or

Hispanic. Participants included first, second, and third generation Hispanics and Latinos. Both male and female participants were eligible for this study. Youth ages 16-26 were eligible to participate. Youth must have been willing to be audio-recorded. Youth with ages over 26 were excluded or could not read English were excluded.

Quantitative study. The study sample size included 34 males and 32 females. The researcher gave youth the survey on the spot.

Qualitative study. Participants for the in-depth interviews were selected from the youth who completed the survey. The researcher interviewed six (three female, three male) participants.

Recruitment

Quantitative. Latino youth were recruited for the quantitative portion through word of mouth-- information about the study was disseminated by researcher. Data collection sites included the Center for Pan Asian Community Services (CPACS) offices and the Lilburn branch of the Gwinnett County Public Library system.

Qualitative. At the end of the survey, participants were asked if they would be interested in participating in an in-depth interview. The researcher interviewed six (three female, three male) participants.

Procedures

This was a mixed-method study comprised of quantitative and qualitative components. For all data collection methods, oral consent was obtained from all adult participants 18 years and older. For study participants who were 16 and 17, oral consent

was obtained. This study was very minimal risk with little potential for discomfort or unease. Most of the participants under 18 were parents themselves and did not live with their parents but with husbands and boyfriends; thus, they were more than capable to give oral consent. The investigators were IRB-approved to waive the requirement for parental consent for the youth aged 16-17. The consent/assent was collected by a CITI certified researcher and not associated with the interviews and surveys, and was kept in separate, but still secure, folders in a locked cabinet. The surveys and interviews were not anonymous, but they were kept confidential.

Quantitative study. The researcher had a recruitment table on location with permission from the establishments such as supermarkets and stores, in a private office (CPACS locations), or in the private group study rooms of the libraries. Participants were provided with a consent form at one of the recruitment sites by a CITI certified researcher. This was then placed in a secured and locked box. The participant was then led to the study room at the library to take a survey, which lasted 8-10 minutes. After the survey was completed, the researcher collected the surveys and kept them in a secured and locked box until reaching the office, where they were secured in a locked cabinet.

Qualitative study**.** After completing the survey, the study participant was asked if they were interested in completing an interview. If the participant agreed, a mutual time and place was agreed upon. The CPACS offices were the default location, however if the participant felt more comfortable elsewhere, the researcher accommodated. The researcher then met the participant at the mutually agreed upon location and time, and the participant was interviewed by the CITI-certified researcher, using the interview guide located in Appendix A. With the permission of the participant, the interviews were audio

recorded with a digital recording device.

If the participant did not wish to take the survey but was willing to participate in the interview, consent/assent (if applicable) was obtained at the interview and secured in a locked box until it was stored in the locked CPACS office cabinet.

Measures

The quantitative component included information gathered through a brief survey asking about the pros and cons of breastfeeding. The qualitative component gathered information about the pros and cons of breastfeeding through in-depth interviews.

Quantitative Measure. Pros and cons of breastfeeding were measured among Latina females using the Beliefs About Breastfeeding instrument (Humphreys, Thompson, & Miner, 1998), found in Appendix A. The Beliefs About Breastfeeding is a 20-item instrument that measures beliefs and decisional balance constructs regarding breastfeeding through 10 positive and 10 negative breastfeeding statements. The responses were provided on a five-point Likert scale and range from "strongly agree" to "strongly disagree". The internal consistency of the Beliefs About Breastfeeding instrument using Cronbach's Alpha was 0.788 (Humphreys et al., 1992).

A modified version of the Beliefs About Breastfeeding instrument was used among male participants (see Appendix A). The original instrument was designed for females with questions specific to the female experience. However, it was possible to adapt those same scenarios for males. The adapted version of the Beliefs about Breastfeeding instrument had the same questions as those for females, but from the male perspective. For example, a question such as "Breastfeeding makes your breasts sag."

was modified to “Breastfeeding makes a woman’s breasts sag”.

Both instruments took about 8-10 minutes to complete. They were administered on paper, in person by the CITI-certified researcher through individual administrations at the locations from which the participants were recruited. For example, individuals were told about the project at libraries and the CPACS offices and asked to take the survey at those locations.

Qualitative Measures. In conjunction to the Beliefs About Breastfeeding instrument, interviews were conducted with six Latino youth recruited from among those who took the initial survey. The purpose of these interviews was to better understand what Latino youth perceive the pros and cons of breastfeeding to be, and the relative importance of these pros and cons. Interview responses expanded the findings of the Beliefs About Breastfeeding instrument, and allowed for a deeper exploration of the perceived pros and cons through probes. Furthermore, males are an understudied population in regards to breastfeeding, and interviews allowed men to further elucidate what they perceive or have experienced to be the pros and cons of breastfeeding. In addition, the interview questions explored whether there were more pros and cons than those found in the Beliefs About Breastfeeding instrument.

The qualitative data were collected following a semi-structured interview guide (Appendix A). Sample questions asked during the interviews included: “What are your experiences with breastfeeding” or “Can you describe the benefits of breastfeeding to me”.

Risks

This study presented minimal risk to the participants. The participants may have experienced some discomfort answering questions or speaking about the personal topic of breastfeeding. Risks were reduced by assuring participants that they could skip any question they wished not to answer. The participants were also told they could withdraw from participating at any time.

Benefits

There are limited data regarding males and breastfeeding, particularly fathers. There are even fewer data on young adults' perceptions and beliefs about breastfeeding. These youth had an opportunity to increase the general knowledge about breastfeeding, and indirectly, inform future studies.

Analysis

Quantitative. The quantitative data were analyzed using SPSS version 17.0 software remotely accessed using the RSPHdesktop. For the first two research questions, importance of each pro and con was calculated as a continuous variable on a scale from -2 (strongly disagree) to +2 (strongly agree). Items with scores farthest from zero (in either direction) were deemed most important.

Chi-square was used to determine if the mean pros and cons of breastfeeding differed by gender (male and female). SPSS was used for statistical calculations. A p-value of <0.05 was considered statistically significant.

Qualitative. The audio-recorded interviews were transcribed verbatim by CITI-

certified researchers. A codebook was developed by one CITI-- certified MPH student from Rollins School of Public Health who has experience with qualitative studies. She read the first 2-3 transcripts and developed codes for the codebook.

The data gathered from all the transcripts were then coded for emerging themes by one coder. After these themes were decided upon, the emergent themes were aggregated and compared by gender for similarities and differences.

Training

Surveys and interviews were only administered by the CITI-certified investigator. She has experience conducting surveys and interviews through classes such as Qualitative Methods, and Quantitative Methods.

Data Management

Following the completion of the interviews, the audio files were transferred from the recording device to an encrypted and secured laptop, which was kept in a secured and locked cabinet when not in use. The digital files (recordings) were destroyed upon transcription. Pseudonyms were used as identifiers on the transcriptions.

After the completion of the survey, the data was inputted into an Excel spreadsheet on a secured and encrypted laptop, which was kept in the CPACS offices when not in use by a CITI-certified researcher. The data entry was double checked by a second CITI certified researcher.

Until they were processed, all data were kept in a secured box in a secured and locked drawer at the CPACS office with access only by the CITI-certified main

investigator. After data entry and transcription, all data were stored in an encrypted laptop, which was kept in a locked drawer at the CPACS office when not in use.

Confidentiality

All data were kept in a secured box in a secured and locked drawer at the CPACS office, to which only the CITI-certified main investigator had access.

Quantitative. All surveys were kept in a secured box in a secured and locked drawer at the CPACS office, to which only the CITI-certified main investigator had access. After the survey data was recorded, the surveys were shredded.

Qualitative. All surveys were kept in a secured box in a secured and locked drawer at the CPACS office, to which only the CITI-certified main investigator had access. After transcription, all digital files were deleted.

Sharing of Results

Participants were asked if they would like to join a mailing list with which we will send out the results of the study.

CHAPTER 4: RESULTS

For the quantitative analysis, means, as originally proposed in the research questions, were not used, since the data from the survey were not normally distributed. All tables referred to in the results section are in Appendix B.

Research Question 1: What pros and cons of breastfeeding are important for young, first-, second- and third generation Latino males?

Quantitative

A total of 34 Latino males participated in the survey. Please refer to Table 1 (Appendix B) for demographic information. The males ranged in age from 16 to 26. Their most frequent response for country of origin was "USA" (12, 35.3%). The remainder identified their country of origin as (in order of frequency, high to low) Mexico, Guatemala, Puerto Rico, Argentina, Colombia, El Salvador, Nicaragua, and Peru. The majority (18, 52.9%) completed high school and the remaining had some college (9, 26.5%), completed middle school only (6, 17.6%), and only one male completed graduate or professional school. The majority of males reported they were not working (9, 26.5), one reported working in finance (1, 2.9%), many worked in retail (5, 14.7%), painting (6, 17.6%), or as servers (5, 14.7%) and the rest (8, 23.5%) worked in clerical, labor, law, or were a student. Four males who reported no income listed an occupation. The majority of income earning males made less than $8 per hour (11,

32.4%), and the remaining working males made $10 and more (10, 29.4%). The majority of males had one or more children (27, 79.4%) and the remaining 7 (20.6%) males had no children. Four males who reported no income listed occupations.

Variable	Mean (SD; Range)	Percentage (N)
Age	**(3.87, 16-26)**	
Gender		
Boys		**51.6% (n=34)**
Girls		**48.5% (n=32)**
Education		
Bachelor degree +		**4.5%n (n=3)**
Some college		**33.3% (n-22)**
High school degree		**42.4% (n=28)**
Middle school		**19.7% (n=13)**
Income (per hour)		
>$8		**19.7% (n=13)**
$8- $9.99		**3% (n=2)**
$10-$11.99		**18.2% (n=12)**
$12+		18.2% (n=18)
Contractor		3% (n=3)
Not working		37.9% (n=25)
Employment		
Employed		31% (n=21)
Unemployed		69% (n=45)
Number of children		
>1		**56.1% (n=37)**
2		**16.7% (n=11)**
3+		**27.3% (n=18)**

Table 1. Demographic information from sample population

The Latino males' responses regarding the pros and cons of breastfeeding are presented in Appendix B, Table 2. The highest levels of agreement were for the statements, "Breastfeeding is the healthiest feeding for a baby" (32, 94.1%), "I think breastfeeding is good for my baby" (31, 91.2%), and "I don't think I know enough about breastfeeding (2, 85.3%), and the statements "I think my partner's breasts are too small to make enough milk for our baby," and " I think breastfeeding will be painful for my partner" had the highest proportions who strongly agreed (18, 52.9%). The statements, "Breastfed babies' diapers don't smell as bad." (2, 5.9%), "Breastfeeding helps my partner's uterus (womb) get back to its normal size faster" (3, 8.8%), and "Breastfeeding is easy to do" (5, 14.7%) had the least agreement. The Latino males' responses regarding the pros and cons of breastfeeding are presented in Table 2.

Item	Agree freq (%)	Strongly Agree freq (%)
1. Breastfeeding is old-fashioned.	10 (29.4)	2 (5.9%)
2. Breastfeeding is the healthiest feeding for a baby.	19 (55.9%)	13 (38.2%)
3. Breastfeeding means only my partner can feed the baby.	15 (44.1%)	11 (32.4)
4. Breastfeeding means my partner has to eat differently.	11 (32.4%)	3 (8.8%)
5. I think breastfeeding is good for my baby.	17 (50.0%)	14 (41.2%)
6. I would be embarrassed if someone saw my partner breastfeeding.	17 (50.0%)	7 (20.6%)
7. Breastfeeding makes a woman's breasts sag.	18 (52.9%)	6 (17.6%)
8. Breastfeeding is good for my partner.	16 (47.1%)	12 (35.3%)
9. Breastfed babies' diapers don't smell as bad.	1 (2.9%)	1 (2.9%)
10. I think breastfeeding is disgusting.	8 (23.5%)	0 (0.0%)
11. Breastfeeding will help my partner feel close to our baby.	15 (44.1%)	4 (11.8%)
12. I think breastfeeding will be painful for my partner.	7 (20.6%)	18 (52.9%)
13. Breastfeeding helps protect the baby from getting sick and having allergies.	16 (47.1%)	6 (17.6%)
14. Breastfeeding means my partner can't go back to	3 (8.8%)	10 (29.4%)

work or school.		
15. Breastfeeding helps my partner's uterus (womb) get back to its normal size faster.	3 (8.8%)	0 (0.0%)
16. Breastfeeding can help my partner lose weight.	5 (14.7%)	3 (8.8%)
17. I don't think I know enough about breastfeeding.	17 (50.0%)	12 (35.3%)
18. Breastfeeding is easy to do.	3 (8.8%)	2 (5.9%)
19. Breastfeeding is cheaper than using formula.	4 (11.8%)	7 (20.6%)
20. I think my partner's breasts are too small to make enough milk for our baby.	5 (14.7%)	18 (52.9%)

Table 2. Ratings of Pros Cons by Latino Male Survey Participants (n=34)

Qualitative

The list of the major themes to arise from the in-depth interviews is located in the Appendix B in Table 3. A total of 3 Latino males participated in the interviews. Their ages were 18, 24, and 26. The themes coded in the in-depth interviews are presented in Table 4. Several of the pros of breastfeeding mentioned by the fathers were similar to those proposed in prior studies. The most commonly referenced pros of breastfeeding by males were health benefits for the baby. The list of the major themes to arise from the in-depth interviews is located in the appendix in Table 3.

Theme	Description
Safety	How safe the mother/partner feels when breastfeeding/supporting his partner's breastfeeding; can include how accommodating the location/environment is to breastfeeding
Convenience	Convenience of breastfeeding; this includes the caregiver's time, availability of space for breastfeeding, access to clean water, microwave, or refrigerator for the milk
Embarrassment/Shame	Lack of presence of embarrassment or shame. The pride or shame involved in breastfeeding or how the mother/partner is made to feel when breastfeeding ; also includes positive or negative body image
Beliefs/Perceptions	The beliefs of the mother/partner regarding breastfeeding; includes culture/traditions
Support	The support of family members and partners such as (but not limited to) financial, encouragement, lack of support/encouragement
Expense	The cost of breastfeeding and/or formula, rental of breast pump equipment, loss of wages
Work	Employers' perceptions of breastfeeding, breastfeeding/pumping accommodations

	at the workplace. Conduciveness of the workplace to breastfeed
Knowledge	The mother/partner's knowledge of breastfeeding health benefits, advantages, disadvantages
Milk Supply	Mother's ability to make breastfeeding, how high the quality of the milk is perceived to be, and the difficulties/ease of breastfeeding

Table 3: Themes from in-depth interviews

I know all about breast milk. It has so many benefits for the mom and for the baby. I think later on it protects her against diseases, and it keeps protecting the baby after she stops breastfeeding.

-Age 18

I know the milk has a lot of benefits for the baby, it keeps them from getting sick and everything. I know that. I don't know what else there could be to say?

-Age 18

Yea, she just wanted to use formula from the beginning. She tried breastfeeding at the hospital, but I mean, it didn't

> *work so easy when we got home. The formula is expensive, and I don't make a lot, but I can't let the baby go hungry, right?*
>
> -Age 24

Two new pros were also mentioned. One male participant also mentioned the benefit of spending breastfeeding time with the mother and baby.

> *It is not so hard for my wife to breastfeed at home. I get the chair all ready, bring her pillows, anything she needs. We had twins, so sometimes I warm a bottle with her milk in it and feed one baby while she feeds the other. I like to take this time to do something together, a way to spend time together, even if it is just watching tv.*
>
> -Age 26

The most commonly mentioned cons of breastfeeding are the difficulties balancing work/school and breastfeeding and painful breastfeeding.

> *I know that she had a lot of pain at the beginning. The baby was very colicky, and she had a lot of mastitis. She had bleeding and cracked nipples, and it was very hard for me*

> *because there was nothing I could do. I couldn't help my wife when she was in pain. The baby was always crying and she was crying because it hurt to breastfeed. It was a real struggle sometimes.*
>
> -Age 26

> *She wasn't able to work. She is a teacher, and so she had to take all that time off. She left working, it was impossible to pump at work. They had nowhere for her to pump that was private, she could only use the break room or the restroom. Also, she was not allowed to store her milk in the break room fridge, because it was a sanitation and hygiene issue.*
>
> -Age 26

A new con that was mentioned was that one man stated he felt "alienated" after his wife gave birth; furthermore, he felt envy at the attention the baby received from the mother and frustration at his inability to participate in feeding their child.

> *You know, I feel that there is a lot of focus on the child, more so than myself after she started breastfeeding. I felt a little bit alienated after she gave birth. It was all about the baby. I understand, but I want to participate too, you know? I want to feed the baby, and cuddle and provide*

nourishment, but it is hard, because only she can feed the baby. I am less able to participate.

-Age 26

Research Question 2: What pros and cons of breastfeeding are important for young, first-, second-, and third generation Latina females?

Quantitative

The Latino females' responses regarding the pros and cons of breastfeeding are presented in Appendix B, Table 4. A total of 32 Latina females participated in the survey. They ranged in age from 16 to 26. Their most frequent response for country of origin was "USA" (16, 50.0%). The remainder identified their country of origin as (in order of frequency, high to low) El Salvador, Mexico, Guatemala, Brazil, Colombia, Costa Rica, Dominican Republic, Puerto Rico. The most frequent level of education reported was "some college" (13, 40.6%), and several reported completing high school (10, 31.3%). The remaining women reported completing middle school only (7, 21.9%), and two (6.3%) reported completing graduate/professional school. The majority of females were employed (20, 62.5%), and most of the working females reported incomes of $10+ per hour (14, 43.8%). The positions varied and included construction, finance, insurance, mentoring, cashiering, customer service, laborer, medical billing, neuroscientist, research assistant, sales, server, teacher, under the table work, and painting. The majority of females had one or more children (27, 84.4%) and the remaining 5 (15.6%) females had no children.

The highest levels of agreement were for the statements, "Breastfeeding is the healthiest feeding for a baby" (27, 84.4%), "I think breastfeeding is good for my baby" (27, 84.4%), and "Breastfeeding is cheaper than using formula (26, 81.3%). The

statements, “Breastfed babies’ diapers don’t smell as bad.” (3, 9.4%), “Breastfeeding helps my uterus (womb) get back to its normal size faster” (3, 9.4%), and “I think breastfeeding is disgusting” (6, 18.8%) had the least agreement.

Item	Agree freq (%)	Strongly Agree freq (%)
1. Breastfeeding is old-fashioned.	2 (6.3%)	5 (15.6%)
2. Breastfeeding is the healthiest feeding for a baby.	9 (28.1%)	18 (56.3%)
3. Breastfeeding means no one else can feed the baby.	11 (34.4%)	4 (12.5%)
4. Breastfeeding means I have to eat differently.	16 (50.0%)	9 (28.1%)
5. I think breastfeeding is good for my baby.	9 (28.1%)	18 (56.3%)
6. I would be embarrassed if someone saw me breastfeeding.	6 (18.8%)	4 (12.5%)
7. Breastfeeding makes your breasts sag.	9 (28.1%)	2 (6.3%)
8. Breastfeeding is good for me.	9 (28.1%)	11 (34.4%)
9. Breastfed babies’ diapers don’t smell as bad.	1 (3.1%)	2 (6.3%)
10. I think breastfeeding is disgusting.	5 (15.6%)	1 (3.1%)
11. Breastfeeding will help me feel close to my baby.	9 (28.1%)	8 (25.0%)
12. I think breastfeeding will be painful.	11 (34.4%)	9 (28.1%)
13. Breastfeeding helps protect the baby from getting sick and having allergies.	3 (9.4%)	17 (53.1%)
14. Breastfeeding means I can’t go back to work or school.	2 (6.3%)	5 (15.6%)

15. Breastfeeding helps my uterus (womb) get back to its normal size faster.	0 (0.0%)	3 (9.4%)
16. Breastfeeding can help me lose weight.	6 (18.8%)	6 (18.8%)
17. I don't think I know enough about breastfeeding.	17 (53.1%)	8 (25.0%)
18. Breastfeeding is easy to do.	11 (34.4%)	0 (0.0%)
19. Breastfeeding is cheaper than using formula.	10 (31.3%)	16 (50.0%)
20. I think my breasts are too small to make enough milk for my baby.	6 (18.8%)	4 (12.5%)

Table 4. Ratings of Pros and Cons by Latino Female Survey Participants (n=32)

Qualitative

A total of 3 Latina females participated in the interviews. Their ages were 17, 21, and 22; and they are from El Salvador, Peru, and Mexico. One of the women only breastfed a few days at the hospital, one breastfed for about a month, and the third woman breastfed for several months. All three of the women worked on and off while breastfeeding, and currently make less than $9/hour part time. Only one woman was in a relationship when the baby was born, and all currently have one child each. One woman dropped out of school after middle school, one is currently enrolled in college, and one recently received her GED. All three are currently working, one is recently married, and two are in a relationship.

Several of the pros and cons of breastfeeding mentioned by the mothers were similar to the ones mentioned in the survey. However, all of the women also elaborated on the barriers to breastfeeding related to work.

> *I would get like weekends off and sometimes…yea. But, on the job, I could not pump or anything like that because the job was so fast paced.*
>
> -Age 22

> *There is no way I could breastfeed at work. No way! I would be thinking about how my boobs would be hurting and filling up with milk. I would not be able to work with that pain, and milk leaking out. I would have to overthink it at work. Obviously, I would want to be focused on my work and not on when I can go to restroom to get my milk out. There is no way I could be a good employee. I think my boss would not want to hire me or would fire me if I told him I would need to breastfeed. I don't think he would give me many breaks, but I guess it depends on the boss. He might say yes, or he might get mad and say if you decide to do all that, you might as well stay home because you won't be able to concentrate on your job. That happened to my friend.*
>
> -Age 17

If it [breastfeeding] was that serious, like life or death they [employer] would let me, maybe? It is a Hispanic place, and Hispanics are pretty used to breastfeeding. But, there would be issues finding a good place to store the milk. I could not just pump and put it next to the beers. I would have to make sure it stays cold so she could have it later.

-Age 21

It was really really hard to pump while working two jobs with no partner.

-Age 22

Oh, I don't know! It would depend on what job I have. If I am bartending like I am now, then I would have issues. I work all night and it is busy all night, there would be no time to pump. It is not like I could walk out and pump for a little bit. He probably would not let me. Plus, the environment of my job is pretty bad. The air is filled with smoke and you are surrounded by alcohol, it is not the best place to pump or feed a baby.

-Age 21

Research Question 3: Do the means of pros and cons for breastfeeding differ by gender? Do the means of pros and cons for breastfeeding differ by gender?

Quantitative

The levels of agreement for females (15, 46.9%) and males (26, 76.5%) differed for the statement, "Breastfeeding means no one else/only my partner can feed the baby", and the statement "Breastfeeding means I/my partner have/has to eat differently" (25, 78.1% and 14, 41.2%) for females and males respectively). The levels of agreement for females (10, 31.3%) and males (24, 70.6%) differed for the statement "I would be embarrassed if someone saw me/my partner breastfeeding", and for the statement "Breastfeeding makes your/my partner's breasts sag" (11, 34.4%; 24, 70.6% for females and males, respectively). They also differed for the statement, "Breastfeeding is cheaper than using formula" (26, 81.3%; 11, 32.4%) for females and males respectively), and the statement "I think my/my partner's breasts are too small to make enough milk for my baby" (10, 31.3%, 23, 67.6% for females and males respectively). The levels of agreement for each pro and con are presented by gender in Table 5.

Item	Female %	Male %	ChiSquare	p-value
1. Breastfeeding is old-fashioned.	21.9%	35.3%	1.448	0.229
2. Breastfeeding is the healthiest feeding for a baby.	84.4%	94.1%	1.650	0.199
3. Breastfeeding means no one else can feed the baby.	46.9%	76.5%	6.136	0.013
4. Breastfeeding means I/my partner have/has to eat differently.	78.1%	41.2%	9.310	0.002
5. I think breastfeeding is good for my baby.	84.4%	91.2%	0.716	0.397
6. I would be embarrassed if someone saw me/my partner breastfeeding.	31.3%	70.6%	10.213	0.001
7. Breastfeeding makes your/my partner's breasts sag.	34.4%	70.6%	8.679	0.003
8. Breastfeeding is good for me/my partner.	62.5%	82.4%	3.276	0.070
9. Breastfed babies' diapers don't smell as bad.	9.4%	5.9%	0.287	0.592
10. I think breastfeeding is disgusting.	18.8%	23.5%	0.225	0.635
11. Breastfeeding will help me/my partner feel close to my baby.	53.1%	55.9%	0.051	0.822
12. I think breastfeeding will be painful [for my partner].	62.5%	73.5%	0.924	0.336
13. Breastfeeding helps protect the baby from getting sick and having allergies.	62.5%	64.7%	0.035	0.852
14. Breastfeeding means I/my partner can't go back to work or	21.9%	38.2%	2.089	0.148

school.				
15. Breastfeeding helps my/my partner's uterus (womb) get back to its normal size faster.	9.4%	8.8%	.006	0.938
16. Breastfeeding can help me/my partner lose weight.	37.5%	23.5%	1.523	0.217
17. I don't think I know enough about breastfeeding.	78.1%	85.3%	0.570	0.450
18. Breastfeeding is easy to do.	34.4%	14.7%	3.473	0.062
19. Breastfeeding is cheaper than using formula.	81.3%	32.4%	16.001	0.000
20. I think my/my partner's breasts are too small to make enough milk for my baby.	31.3%	67.6%	8.735	0.003

Table 5. Difference in Percentage Agreeing with Pros and Cons for Latino Male and Female Survey Participants (n=66)

Qualitative

Overall, the pros were very similar for the males and females. All of the males and females mentioned health benefits, expenses, and emotional attachment between mother and baby, and the continuation of family breastfeeding traditions as pros (in addition to all of the themes of the survey). All of the females and males mentioned the inconvenience of breastfeeding (compared to formula), feelings of embarrassment/shame, and safety as cons of breastfeeding. Only one of the men referenced the quantity or quality of milk as a con of breastfeeding (for example, insufficient milk production), while all of the women expressed concern their milk was of poor quality or insufficient to

properly feed their baby. All of the females mentioned difficulties with breastfeeding and working, while the men understood the potential for difficulties, but did not really understand how breastfeeding difficulties are experienced by women.

Emotional attachment was perceived as a pro or a con by both males and females. The men mentioned feelings of alienation and disconnection from the family unit or happiness at the mother's flourishing bond with the baby, thus experiencing emotional attachment as either a pro or con. The women, however, mentioned the baby's dependency on breastmilk as a con or strongly struggled when the baby stopped or refused breastfeeding.

> *Oh ok. Yea, the way I stopped it, was, ok so every time I would be there, I am like you know what, I won't do it [breastfeed] anymore. If she cries, I will just ignore her and just give her the bottle. She wouldn't take the bottle. She wouldn't eat, she would want me. I felt so bad, I was like, fine, I would put her right to me. Then, people told me, and I knew myself too, if I was to drink, I could not drink. So, I thought to myself, you know what I should to make myself not give it to her is to drink. So, I could resist breastfeeding her.*
>
> -Age 21

Because she just got so used to being on my boob, all the time. I couldn't even like go to the store because she would cry. I guess I got her used to it too much, or because every time she would cry I would put her right there (indicates her left breast) and she would always go to sleep. So, Selena was always like attached to me all of the time.*

-Age 21

One of the sad things was that I could not bond with him when I fed him formula. It made me feel very frustrated and ashamed that I could not bond with him by putting him on my breast. He just didn't want it. It really stressed me out.

-Age 17

You know, I feel that there is a lot of focus on the child, more so than myself after she started breastfeeding. I felt a little bit alienated after she gave birth. It was all about the baby. I understand, but I want to participate too, you know? I want to feed the baby, and cuddle and provide nourishment, but it is hard, because only she can feed the baby. I am less able to participate.

-Age 26, Male

Additionally, all of the women mentioned struggles and pain with breastfeeding as a con, while only one of the men mentioned the pain associated with breastfeeding as a con.

> *They showed me how to breastfeed him, and it kind of worked out a little bit, and during the whole month of breastfeeding I would be struggling for him to latch on. I would try to find ways for him to latch on, and it was so hard. So, I gave up. I couldn't find a way to get him to latch on and get all the milk out. It was hurtful, shameful, and painful. I was so embarrassed that I could not even feed my own baby with my milk.*
>
> -Age 17, Female

> *Um I mean, it …it affects you either way because um if you stress out a lot because you don't or can't breastfeed, then the baby gets stressed and upset. When you breastfeed and you don't do it enough, it leaks everywhere. Some people don't like that and so don't breastfeed. Some people don't like breastfeeding because you have to take that milk out somewhere, and when you are out and about or working, it can be stressful figuring that out.*

Finding a safe place where you can do that is hard. You can't just whip out your boob anywhere.

-Age 17, Female

Oh yea, so I went out...you know, when you don't take the milk out, your breasts grow and grow and grow and they turn real hard and it is bumpy. And when I was out that night, oh my God, they were huge and they hurt so much. My shirt was so wet, because I needed to breastfeed. Oh my God, when I got home, I had so many bumps on my breast, and I was like no, I am not going to take it out. I am not going to take it out because, I don't know, I just didn't, and Selena was crying and crying, and I was making fun with her, and I was like I have alcohol in my boobs right now, and you cannot have none. Literally, I just stopped giving her milk.*

-Age 21, Female

Uh, the baby would get used to it. I would say that [1 year of breastfeeding] might be too long. Obviously, the baby is going to want it more, and it will be harder for you to take it away from the baby.

You have to wean them early, to get them ready for when you won't be there most of the time, because you have to work. You cannot let them get used to it, I don't think it is good.

-Age 22, Female

Another struggle that the women mentioned as a con is how breastfeeding affected their relationships with their partners

Well, it has changed my body. At first my boobs were big and nice, now they are sagging and ugly. Since, I didn't have any boobs before pregnancy, they really grew. After I stopped breastfeeding, I had so many stretch marks from how much it grew. Then it flattened down from that, and ever since when I am about to get romantic with my partner or undress in front of other people, I never take my shirt off. Like never. It didn't affect my relationship with my partner, he said it was no problem. But even now, though he is gone, it still bothers me a lot.

-Age 21

Actually, he was really weirded out. I mean he was sort of understanding- he had to be in a sense. It is

his baby too, so he was forced to try to understand. I didn't want to breast feed all the time because I wanted to do things I wanted to do…No, I was embarrassed to ask my boyfriend to help [support] me pump or breastfeed the baby. I was too embarrassed and shy to let him touch me or the baby when I was breastfeeding.

-Age 17

I am kind of shy, and I would not want to breastfeed in front with my partner. I don't want my boob all out while Selena is on it, and he is there. It might be nice if he is near me, but I am not going to whip my boob out to feed my baby in front of my partner.

-Age 21

She was always breastfeeding. I was really glad, I know the health benefits. But sometimes, I wished that I could be a part of it. I mean she and the baby would just snuggle on the couch and in the bed, and when I came to be close to her at night, she would push me away because of the new baby.

-Age 24

All of the females mentioned social pressure to breastfeed from their or their partner's family, and only one of the males mentioned this factor.

> *My family told me that I should have been breastfeeding, but I mean they said if I couldn't, then I should be ashamed. It is a big deal, and makes me a bad mom. They gave me a lot of pressure. I was living with my boyfriend's family at the time, and they really made it hard.*
>
> -Age 17

> *But my mother in law, now that I am married, my mother in law told me that she breastfed her grandchild. Now he is like 22. To me, I think it is awkward.*
>
> -Age 22

CHAPTER 5: DISCUSSION

This study examined what Hispanic males and females perceive pros and cons of breastfeeding to be using a survey instrument and in-depth interviews. Using the theoretical framework of the Transtheoretical Model and the decisional balance construct, we were able to examine the pros and cons males and females consider when deciding to breastfeed. Mothers will always weigh the pros and cons before making the decision to breastfeed, and the pros must outweigh the cons if the parents are to breastfeed. The high initiation breastfeeding statistics in the Hispanic population suggest that the pros outweigh the cons in the beginning (Waldrop, 2013; Bartick, 2012). However, within the first few months, many Hispanics supplement with formula or discontinue exclusive breastfeeding and presumably the pros no longer outweigh the cons.

Males reported most agreement with pros regarding the health benefits of breastfeeding, the merits of breastfeeding, and the desire to learn more about breastfeeding. Hispanics have one of the highest rates of breastfeeding and a culture that normalizes breastfeeding, and so these findings are in line with previous findings of Hispanic breastfeeding behavior. The pros were strongly aligned with health benefits for the child. While the Hispanic males did not know the extent of those benefits for the infant or those for the mother, they knew breastfeeding is good for the baby (Waldrop, 2013; Bartick, 2012). The survey results indicated the need for more education and knowledge regarding breastfeeding and how the female anatomy works (Baisch, Fox, & Goldberg, 1989; Goulet, Lampron, & Ross, 2003; Greene, Steward-Knox, & Wright, 2003; Leffler, 2000). Despite the strong pros towards breastfeeding perceived by the

males, the Hispanic males demonstrated room for improvement regarding knowledge. The statements regarding scent of breastfed baby diapers and the ease of breastfeeding could imply lack of knowledge or lack of experience with babies. In the interviews, the older male (age 26) with the most children reported stronger support for his partner when breastfeeding. He described bringing pillows and ensuring the comfort of lactating mother in an effort to support her physically and emotionally. Several studies have demonstrated the significance and impact of an informed and active father in the breastfeeding process (Chezem, 2012; Van Wagenen, Magnusson, & Neiger, 2015). Support from the partner is one pro that all of the women interviewed expressed a desire for, and the time to bond with the mother and baby is a definite pro for the father. Contrarily, two younger males interviewed saw this same factor (i.e., the mother spending time with a baby) to be alienating and a con. The most commonly mentioned cons of breastfeeding reported in the in-depth interviews were unsupportive employers and the pain associated with breastfeeding. Previous studies have mentioned that more informed and knowledgeable fathers had partners with less painful, better, and longer lasting breastfeeding sessions; the con of painful breastfeeding can be mitigated with more informed and capable fathers, as indicated in prior studies (Chen, Chie, & Chang, 2010; Fletcher, Vimpani, Russell & Keatinge, 2008; Mitchell-Box, Braun, Hurwitz, & Hayes, 2013; Nickerson, Skykes, & Fung, 2012; Pontes, Osorio, & Alexandrino, 2009; Susin & Giugliani, 2008; Turan & Turan, 2007; Laantera, Pölkki, Ekström, & Pietilä, 2010; Rempel & Rempel, 2011; Schmidt & Sigman-Grant, 1999; Tahotoa, Maycock, Hauck, Howat, Burns & Binns, 2011; Torres de Lacerda, Lucena de Vasconcelos, Nascimento de Alencar, Osorio, & Pontes, 2013).

Many of the breastfeeding barriers mentioned by the Hispanic females (health benefits, price, etc.), are similar to the ones indicated by the males. The women had a stronger understanding of what barriers, such as lack of privacy or room to pump, no/limited breaks etc., will manifest after they start working, while the males were less aware. The in-depth interviews suggest there are many barriers in the workplace that encumber a woman's ability to breastfeed. The female Hispanics disagreed in the cons of breastfeeding- the mothers stressed the barriers to work, whereas the males did not really understand or note the barriers involving working and breastfeeding. Surprisingly, all of the females mentioned embarrassment or shame about their bodies while breastfeeding. This con manifested itself within the relationship with the partner, and within themselves. The females were ashamed of how their bodies looked after birth, and embarrassed by how they looked while breastfeeding. These negative sentiments manifested as refusal to allow the father to participate in the breastfeeding process and within the romantic aspects of the relationship.

As noted, for the most part, the Hispanic males and females had similar views of the pros and cons of breastfeeding. Males and females did disagree on the role of the father and how he can participate. The females generally believe there are many ways for fathers to be involved, and the males believe that there is little to no room for a male partner in the breastfeeding process.

Limitations

The findings of this study cannot be generalized beyond young Hispanics in the Atlanta-Gwinnett area who are similar to these participants. Many of the youth in the Gwinnett area are not representative of the broad spectrum of Latin American countries, and so most participants were mostly from 3-4 countries. Unfortunately, the very small sample size is an impediment to generalizability and transferability. The qualitative findings cannot be generalized at all on a larger scale. However, this study does address the aim of better understanding how Hispanics perceive breastfeeding in metro Atlanta.

The limited number of youth interviewed may reflect selection bias. Youth are a vulnerable population, and most of the youth in this study are high risk (high school drop outs, behavioral issues, drug seeking behavior, teenage parents, etc.). Many of the youth may not have been willing to speak candidly in a recorded interview, and might feel judged, and so accessing a sizable sample was difficult.

Selection bias may have operated in the quantitative survey, as well. Many youth are not willing to sit down and take a 10 minute survey, and not including an online version of this instrument may also have hindered the number of youth who were reached.

Unfortunately, due to time constraints the researchers were not able to interview more youth. While the survey sample size is limited, it was sufficient to note the differences in breastfeeding perceptions between males and females.

The cross-sectional nature of this breastfeeding study was, in itself, a limitation. Much of what we have described could imply a possible cause-effect relationship, but

due to the cross-sectional nature of this mixed methodology design, we can only infer this putative relationship.

Implications for Public Health

Currently, there is insufficient research on the role fathers play in the breastfeeding process. The research that has been conducted suggests that fathers play an integral role in the breastfeeding process, and are significantly associated with successful breastfeeding. The lack of more father-centered breastfeeding studies means that an important factor in the breastfeeding process is being overlooked which could have an impact on breastfeeding initiatives. Additionally, there are even fewer studies regarding Hispanics and breastfeeding. It may be assumed that due to the high rates of Hispanics breastfeeding after birth, they are successfully breastfeeding. However, the statistical data imply the rates of breastfeeding decline rapidly after birth and are rarely exclusive breastfeeding. This study fills that gap by providing information about the pros/cons Hispanics perceive through experiences and statistics. While the results are not generalizable, an in-depth understanding of the unique and ubiquitous pros and cons of breastfeeding in Hispanic cultures is gained. Ultimately, these findings will stress the need for more inclusion of fathers in breastfeeding programs and initiatives, not as a bystander, but as a partner in the breastfeeding process. Exclusive breastfeeding rates are very low in the United States, and the inclusion of fathers in educational breastfeeding activities will lead not only to longer exclusive breastfeeding, but even perhaps the normalization and acceptance of breastfeeding. As behavioral scientists and health

educators, these are important pros and cons to consider when creating breastfeeding promotional activities and initiatives.

Future Research

This study demonstrates the differences and similarities between male and female perceptions of breastfeeding. The researchers also identify areas where more research should be taken. More breastfeeding programs should find ways to include males. It is clear from this study that even young males have incorrect and insufficient understanding of breastfeeding and the female anatomy. Thus, it would be beneficial for future research to explore incorporating breastfeeding into early reproductive health curriculums with preadolescents (in an age appropriate manner), not only to normalize discussions about breastfeeding, but also to begin the education of young males and females before they develop too many incorrect perceptions of breastfeeding. Since, teenage pregnancies are particularly high in the Southeastern United States where this study was located, correct breastfeeding information is of particular importance to the youth. Males are very focused on the big picture, and females worry about pain, price, and costs on their own.

The survey and interview participants in this study were in no way nationally representative of the diversity in the Hispanic community present in the United States. Thus, it would be ideal for future research to incorporate more Hispanic immigrants that are linguistically, ethnically, nationally, racially, and culturally diverse to better develop future public initiatives. Furthermore, more qualitative data needs to be gathered to better explore the depth of the United States Hispanic population's experiences with infant feeding.

Additionally, more breastfeeding initiatives, classes, educational materials, and outreach need to include more males. Breastfeeding promotional materials need to include males in the images, partners need to be encouraged to attend the breastfeeding classes, and it should be stressed that breastfeeding does not have to be only a mother-child bonding activity, but that there are plenty of ways males can and should be involved. The pros and cons of breastfeeding are always considered by the mother before the choice to breastfeed is made. With the support of an enthusiastic partner, the continuation of exclusive breastfeeding can bring families closer, make the mother and child healthier, reduce costs, and ultimately improve societal health outcomes.

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Appendix A: Data Collection Instruments

Prenatal Breastfeeding Pros and Cons (Male)

Please read the question and check either strongly disagree (SD), disagree (D), neutral (N), agree (A), and strongly agree (SA)

Self-Efficacy Scale Item	SD	D	N	A	SA
Breastfeeding is old-fashioned.					
Breastfeeding is the healthiest feeding for a baby.					
Breastfeeding means only my partner can feed the baby.					
Breastfeeding means my partner has to eat differently.					
I think breastfeeding is good for my baby.					
I would be embarrassed if someone saw my partner breastfeeding.					
Breastfeeding makes a woman's breasts sag.					
Breastfeeding is good for my partner.					
Breastfed babies' diapers don't smell as bad.					
I think breastfeeding is disgusting.					
Breastfeeding will help my partner feel					

close to our baby.					
I think breastfeeding will be painful for my partner.					
Breastfeeding helps protect the baby from getting sick and having allergies.					
Breastfeeding means my partner can't go back to work or school.					
Breastfeeding helps my partner's uterus (womb) get back to its normal size faster.					
Breastfeeding can help my partner lose weight.					
I don't think I know enough about breastfeeding.					
Breastfeeding is easy to do.					
Breastfeeding is cheaper than using formula.					
I think my partner's breasts are too small to make enough milk for our baby.					

Demographic Questions: Please Circle or Write in Your Answer	
What is your country of origin?	
What is your age?	
What level of school have you	**Middle School**

last completed?	**High School** **Some College** **College (Bachelors)** **Graduate School (Masters)** **Doctorate**
What is your income level?	**Not working** **>$8/hour** **$8-$9.99/hour** **$10-$11.99/hour** **$12+** **Contractor (pay depends on job)**
What kind of work do you do?	
How many children do you have?	

Prenatal Breastfeeding Pros and Cons (Female)

Please read the question and check either strongly disagree (SD), disagree (D), neutral (N), agree (A), and strongly agree (SA)

Self-Efficacy Scale Item	SD	D	N	A	SA
Breastfeeding is old-fashioned.					
Breastfeeding is the healthiest feeding for a baby.					
Breastfeeding means no one else can feed the baby.					
Breastfeeding means I have to eat differently.					
I think breastfeeding is good for my baby.					
I would be embarrassed if someone saw me breastfeeding.					
Breastfeeding makes your breasts sag.					
Breastfeeding is good for me.					
Breastfed babies' diapers don't smell as bad.					
I think breastfeeding is disgusting.					
Breastfeeding will help me feel close to my baby.					
I think breastfeeding will be painful.					
Breastfeeding helps protect the baby from getting sick and having allergies.					

Breastfeeding means I can't go back to work or school.					
Breastfeeding helps my uterus (womb) get back to its normal size faster.					
Breastfeeding can help me lose weight.					
I don't think I know enough about breastfeeding.					
Breastfeeding is easy to do.					
Breastfeeding is cheaper than using formula.					
I think my breasts are too small to make enough milk for my baby.					

Demographic Questions: Please Circle or Write in Your Answer	
What is your country of origin?	
What is your age?	
What level of school have you last completed?	**Middle School** **High School** **Some College** **College (Bachelors)** **Graduate School (Masters)** **Doctorate**
What is your income level?	**Not working** **>$8/hour** **$8-$9.99/hour** **$10-$11.99/hour**

	$12+ **Contractor (pay depends on job)**
What kind of work do you do?	
How many children do you have?	

Interview Guide: Breast is Best

1) Can you tell me a little about yourself?
   a) Where are you from? How long have you lived in the States? Do you have any siblings? How old?

2) Can you tell me a little about what you know about breastfeeding?

3) What do you think might be some reasons people choose to breastfeed?

4) What do you think might be some reasons people choose NOT to breastfeed?

5) Can you describe any times you have been around breastfeeding?
   a) Maybe a friend or relative breastfed a child
   b) Maybe you or your partner breastfed your own child?

6) When you were around breastfeeding or you breastfed yourself, how did it make you feel?
   a) How did other people who were around you or your partner react?

7) What do you think your friends think about breastfeeding?

8) What do you think your family thinks about breastfeeding?

9) What do you think your partner things about breastfeeding?

10) (Females) If you had a child, do you think you would choose to breastfeed? Why or why or not?
   (a) Females) Do you think your partner would support you if you breastfed your baby?

11) (Males) If you had a child, would you want your partner to choose to breastfeed the child? Why or Why not?

b) (Males) Do you think your partner would support you if you wanted your baby to be breastfed?

c) Would you support your partner if she wanted to breastfeed?

11) Do you think your family would support your decision to breastfeed/not to breastfeed?

12) If you/your partner chose to breastfeed, where do you think you would go to get more information about how to breastfeed?

13) How hard do you think it would be for you or your partner to breastfeed for one year?
   a) Can you describe what that would be like?
   b) Can you describe how your/your partner's employer would react if you/she told the employer that you were/she was breastfeeding?
      i) Do you think the employer would allow you/her to pump milk at work?

14) Where do you think you are allowed to breastfeed in public?
   a) Can you breastfeed in a restaurant? In the park? In the library?

15) Do you have any final questions or comments for me?

Thank you for participating!

Appendix B: Results

Variable	Mean (SD; Range)	Percentage (N)
Age	**(3.87, 16-26)**	
Gender		
Boys		**51.6% (n=34)**
Girls		**48.5% (n=32)**
Education		
Bachelor degree +		**4.5%n (n=3)**
Some college		**33.3% (n-22)**
High school degree		**42.4% (n=28)**
Middle school		**19.7% (n=13)**
Income (per hour)		
>$8		**19.7% (n=13)**
$8- $9.99		**3% (n=2)**
$10-$11.99		**18.2% (n=12)**
$12+		18.2% (n=18)
Contractor		3% (n=3)
Not working		37.9% (n=25)
Employment		
Employed		31% (n=21)
Unemployed		69% (n=45)
Number of children		
>1		**56.1% (n=37)**
2		**16.7% (n=11)**
3+		**27.3% (n=18)**

Table 1. Demographic information from sample population

Item	Agree freq (%)	Strongly Agree freq (%)
21. Breastfeeding is old-fashioned.	10 (29.4)	2 (5.9%)
22. Breastfeeding is the healthiest feeding for a baby.	19 (55.9%)	13 (38.2%)
23. Breastfeeding means only my partner can feed the baby.	15 (44.1%)	11 (32.4)
24. Breastfeeding means my partner has to eat differently.	11 (32.4%)	3 (8.8%)
25. I think breastfeeding is good for my baby.	17 (50.0%)	14 (41.2%)
26. I would be embarrassed if someone saw my partner breastfeeding.	17 (50.0%)	7 (20.6%)
27. Breastfeeding makes a woman's breasts sag.	18 (52.9%)	6 (17.6%)
28. Breastfeeding is good for my partner.	16 (47.1%)	12 (35.3%)
29. Breastfed babies' diapers don't smell as bad.	1 (2.9%)	1 (2.9%)
30. I think breastfeeding is disgusting.	8 (23.5%)	0 (0.0%)
31. Breastfeeding will help my partner feel close to our baby.	15 (44.1%)	4 (11.8%)
32. I think breastfeeding will be painful for my partner.	7 (20.6%)	18 (52.9%)
33. Breastfeeding helps protect the baby from getting sick and having allergies.	16 (47.1%)	6 (17.6%)
34. Breastfeeding means my partner can't go back to work or school.	3 (8.8%)	10 (29.4%)
35. Breastfeeding helps my partner's uterus (womb) get	3 (8.8%)	0 (0.0%)

back to its normal size faster.		
36. Breastfeeding can help my partner lose weight.	5 (14.7%)	3 (8.8%)
37. I don't think I know enough about breastfeeding.	17 (50.0%)	12 (35.3%)
38. Breastfeeding is easy to do.	3 (8.8%)	2 (5.9%)
39. Breastfeeding is cheaper than using formula.	4 (11.8%)	7 (20.6%)
40. I think my partner's breasts are too small to make enough milk for our baby.	5 (14.7%)	18 (52.9%)

Table 2. Ratings of Pros and Cons by Latino Male Survey Participants (n=34)

Theme	Description
Safety	How safe the mother/partner feels when breastfeeding/supporting his partner's breastfeeding; can include how accommodating the location/environment is to breastfeeding
Convenience	Convenience of breastfeeding; this includes the caregiver's time, availability of space for breastfeeding, access to clean water, microwave, or refrigerator for the milk
Embarrassment/Shame	Lack of presence of embarrassment or shame. The pride or shame involved in breastfeeding or how the mother/partner is made to feel when breastfeeding ; also includes positive or negative body image
Beliefs/Perceptions	The beliefs of the mother/partner regarding breastfeeding; includes culture/traditions
Support	The support of family members and partners such as (but not limited to) financial, encouragement, lack of support/encouragement
Expense	The cost of breastfeeding and/or formula, rental of breast pump equipment, loss of wages
Work	Employers' perceptions of breastfeeding, breastfeeding/pumping accommodations at the workplace. Conduciveness of the workplace to breastfeed
Knowledge	The mother/partner's knowledge of breastfeeding health benefits, advantages, disadvantages
Milk Supply	Mother's ability to make breastfeeding, how high the quality of the milk is perceived to be, and the difficulties/ease of breastfeeding

Table 3: Table of identified themes that were perceived as strictly pros, strictly cons, or both (n=6)

Item	Agree freq (%)	Strongly Agree freq (%)
21. Breastfeeding is old-fashioned.	2 (6.3%)	5 (15.6%)
22. Breastfeeding is the healthiest feeding for a baby.	9 (28.1%)	18 (56.3%)
23. Breastfeeding means no one else can feed the baby.	11 (34.4%)	4 (12.5%)
24. Breastfeeding means I have to eat differently.	16 (50.0%)	9 (28.1%)
25. I think breastfeeding is good for my baby.	9 (28.1%)	18 (56.3%)
26. I would be embarrassed if someone saw me breastfeeding.	6 (18.8%)	4 (12.5%)
27. Breastfeeding makes your breasts sag.	9 (28.1%)	2 (6.3%)
28. Breastfeeding is good for me.	9 (28.1%)	11 (34.4%)
29. Breastfed babies' diapers don't smell as bad.	1 (3.1%)	2 (6.3%)
30. I think breastfeeding is disgusting.	5 (15.6%)	1 (3.1%)
31. Breastfeeding will help me feel close to my baby.	9 (28.1%)	8 (25.0%)
32. I think breastfeeding will be painful.	11 (34.4%)	9 (28.1%)
33. Breastfeeding helps protect the baby from getting sick and having allergies.	3 (9.4%)	17 (53.1%)
34. Breastfeeding means I can't go back to work or school.	2 (6.3%)	5 (15.6%)
35. Breastfeeding helps my uterus (womb) get back to its normal size faster.	0 (0.0%)	3 (9.4%)
36. Breastfeeding can help me lose weight.	6 (18.8%)	6 (18.8%)
37. I don't think I know enough about breastfeeding.	17 (53.1%)	8 (25.0%)

38. Breastfeeding is easy to do.	11 (34.4%)	0 (0.0%)
39. Breastfeeding is cheaper than using formula.	10 (31.3%)	16 (50.0%)
40. I think my breasts are too small to make enough milk for my baby.	6 (18.8%)	4 (12.5%)

Table 4. Ratings of Pros and Cons by Latino Female Survey Participants (n=32)

Item	Female %	Male %	ChiSquare	p-value
1. Breastfeeding is old-fashioned.	21.9%	35.3%	1.448	0.229
2. Breastfeeding is the healthiest feeding for a baby.	84.4%	94.1%	1.650	0.199
3. Breastfeeding means no one else can feed the baby.	46.9%	76.5%	6.136	0.013
4. Breastfeeding means I/my partner have/has to eat differently.	78.1%	41.2%	9.310	0.002
5. I think breastfeeding is good for my baby.	84.4%	91.2%	0.716	0.397
6. I would be embarrassed if someone saw me/my partner breastfeeding.	31.3%	70.6%	10.213	0.001
7. Breastfeeding makes your/my partner's breasts sag.	34.4%	70.6%	8.679	0.003
8. Breastfeeding is good for me/my partner.	62.5%	82.4%	3.276	0.070
9. Breastfed babies' diapers don't smell as bad.	9.4%	5.9%	0.287	0.592
10. I think breastfeeding is disgusting.	18.8%	23.5%	0.225	0.635
11. Breastfeeding will help me/my partner feel close to my baby.	53.1%	55.9%	0.051	0.822
12. I think breastfeeding will be painful [for my partner].	62.5%	73.5%	0.924	0.336
13. Breastfeeding helps protect the baby from getting sick	62.5%	64.7%	0.035	0.852

and having allergies.				
14. Breastfeeding means I/my partner can't go back to work or school.	21.9%	38.2%	2.089	0.148
15. Breastfeeding helps my/my partner's uterus (womb) get back to its normal size faster.	9.4%	8.8%	.006	0.938
16. Breastfeeding can help me/my partner lose weight.	37.5%	23.5%	1.523	0.217
17. I don't think I know enough about breastfeeding.	78.1%	85.3%	0.570	0.450
18. Breastfeeding is easy to do.	34.4%	14.7%	3.473	0.062
19. Breastfeeding is cheaper than using formula.	81.3%	32.4%	16.001	0.000
20. I think my/my partner's breasts are too small to make enough milk for my baby.	31.3%	67.6%	8.735	0.003

Table 5: Difference in Percentage Agreeing with Pros and Cons for Latino Male and Female Survey Participants (n=66)