ABSTRACT

JOHNSON-YOUNG, ELIZABETH ANNE. “What to Expect When You’re Expecting”: Communication, Body Image, and Breastfeeding Decisions. (Under the direction of Dr. Andrew R. Binder.)

This research investigates the influences on breastfeeding intentions that women make during pregnancy. Breastfeeding is one of the major maternal health behaviors advocated by health organizations, including the Center for Disease Control, World Health Organization, and the American Academy of Pediatrics. The current research looks at influences from a multi-theoretical perspective, including the Theory of Planned Behavior (TPB) and Uses and Gratifications, with the purpose of exploring a more complete model of breastfeeding intentions for researchers and health practitioners. By using two seemingly divergent theories—one regarding behaviors specifically and the other a media effects theory, it is argued that although the TPB is a more effective model for predicting behavioral intentions, the addition of uses and gratifications and body satisfaction variables are important for practical purposes for planning interventions to increase breastfeeding rates and durations.

In this dissertation I introduce the importance of breastfeeding and the possibilities that the theory of planned behavior, uses and gratifications, and the concept of body satisfaction might add to our understanding of breastfeeding intentions. Chapters 1 and 2 review recommendations regarding breastfeeding and theoretical literature. In Chapter 3 a model of breastfeeding intentions based on the TPB is explored and in Chapter 4 a model of breastfeeding intentions based on uses and gratifications is explored. Chapter 5 combines the models to explore the possibility of a more thorough understanding of how breastfeeding intentions develop and what influences these intentions. Finally, Chapter 6 draws conclusions
and comparisons regarding Chapters 3, 4, and 5, as well as discusses limitations and important areas for future research.
“What to Expect When You’re Expecting”: Communication, Body Image, and Breastfeeding Decisions

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DEDICATION

To my husband, Josh Young, and my daughter, Hadley Young. Hadley was and is a ray of light born in the midst of this adventure and without the support and sacrifices of my husband I could not have accomplished this.
BIOGRAPHY

Elizabeth Johnson-Young was born in Alexandria, Virginia in 1983. She graduated from the University of North Carolina at Greensboro with a Bachelor of Arts degree in Media Studies and a minor in political science. She worked as a paralegal in Winston-Salem, North Carolina before she went on to pursue her Masters of Arts in Communication at Virginia Tech, finishing in 2008. After spending a year as an Adjunct Instructor of Communication at Guilford Technical Community College in Jamestown and Greensboro, NC, she joined North Carolina State University to pursue her Ph.D. in Communication, Rhetoric and Digital Media. Her research has focused on media, communication and body image, beginning work in these areas across the lifespan, particularly regarding maternal health. She is published in the *Journal of Health Communication* and has presented at several major national conferences including those hosted by the Association for Education in Journalism and Mass Communication, the National Communication Association, and the National Conference on Health Communication, Marketing, and Media.
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CHAPTER 1

Introduction

Although scholars have emphasized media effects, communication, and body image as they pertain to health consequences among younger women (Levine & Harrison, 2009), less research is available regarding women in other stages of life. This apparent lack of research makes some logical sense, most notably because it has been shown that eating disorders might not begin later in life as readily as they do in adolescent years (Levine & Harrison, 2009). Yet, considering the potential physical changes that women face in other later stages of their lives—including changes like pregnancy and menopause—the lack of research in this area suggests a population of women susceptible to psychological distress but underserved by health communication researchers. In the case of pregnancy, for example, evidence does suggest that the experience of pregnancy can radically alter how a woman thinks and feels about her body (Little & Lowkes, 2000; Dworkin & Wachs, 2004; Skouterish, 2012).

Pregnancy is a particular time of change in a woman’s life and her decisions during this time affect not only herself during and after her pregnancy, but also the health of the baby. Thus, there are potentially important health consequences, both psychological and physical, that should be explored and understood during this time in a woman’s life. The current research aims to understand the communication and media influences, as well as body image, on women’s health decisions in relation to pregnancy, specifically breastfeeding.

Women can receive messages about pregnancy from doctors, peers, family members, traditional media, and new media, among others. Traditional media sources include those
without an interactive component and usually without a digital component, such as books, magazines, newspapers, and even television. New media sources include digital media that offer interactivity, fluidity, multimodal forms, and some level of control for the user (Lin, 2009). These new media sources might include mobile applications, online discussion boards and forums, and other Web sources, including digital versions of print sources (Campbell & Lin, 2009; Lin, 2009). Few scholars (e.g. Larsson, 2009; Sumner, Waller, Killick, & Elstein, 1993), though, have explored how communication and media can influence the ways in which a woman understands pregnancy and makes decisions regarding pregnancy, even though the health concerns are many.

Health concerns for pregnancy range from too much to too little weight gain, post-pregnancy weight and exercise expectations, and breastfeeding plans and expectations (Center for Disease Control and Prevention [CDCP], 2013; World Health Organization [WHO], 2013). These decisions have an important impact on both the woman’s health and the health of her baby (CDCDP, 2013; WHO, 2013). This dissertation will focus on one of the main concerns pressed by health organizations regarding maternal and newborn health: breastfeeding.

**The Importance of Breastfeeding**

One of the most important maternal issues being pressed by health organizations is breastfeeding (Healthy People, n.d.; Unicef UK, n.d.; WHO, 2013). A variety of important benefits are linked to breastfeeding including proper mental and physical developments for the baby that are apparent through adolescence (McDowell, Wang, Kennedy-Stephenson, 2008; Peters, Huang, Vaughn, & Witko, 2013). Benefits for infants range from protection against infection, reduced risk of Type 2 diabetes and childhood obesity, and reduced risk of
sudden infant death syndrome (SIDS) (CDCP, 2012). Benefits for women include the possibility of experiencing a reduced risk of certain cancers and osteoporosis, as well as a reduced risk of postpartum depression (CDCP, 2012).

In the United States, several goals from Health People 2020 are associated with breastfeeding. Healthy People 2020 is a United States government initiative run by the Office of Disease Prevention and Health Promotion that provides health goals and measures to improve the health of Americans with ten year benchmarks. Breastfeeding goals from Healthy People 2020 include increasing the proportion of women who breastfeed until six months and one year, as well as increasing the proportion of women who breastfeed exclusively through three months and through six months (Healthy People, n.d.). The WHO (2013) encourages most women to exclusively breastfeed through at least six months. After six months, transitioning to incorporate solid foods is recommended with continued breastfeeding. The WHO recommends that breastfeeding continue until the baby is at least two; The American Academy of Pediatrics (AAP) recommends that breastfeeding continue until the baby is at least one and thereafter as long as the mother and baby wish to do so (American Academy of Pediatrics [AAP], 2012). The differences in duration recommendations can partly be associated with the target audience of the organization—WHO is concerned with all countries including developing countries with higher rates of infant malnutrition and food security issues that breastfeeding can help alleviate (Black et al., 2008; Lamberti, Walker, Noiman, Victora, & Black, 2011; Willumsen, 2013), while the AAP is concerned with breastfeeding in the United States.

Breastfeeding recommendations and goals are influenced by the desire to increase the health of the baby, as well as the mother, in the short term and long term. In the short-term
for the baby, concern is with proper nutrition and associated benefits that come from breast milk. The strongest link of breastfeeding to infant health is in the contribution it makes to fighting infection (WHO; AAP). For example, research has demonstrated that infants who are exclusively breastfed for more than four or six months suffered from approximately half the amount of middle ear infections compared to those who were not exclusively breastfed for that duration (Duncan et al., 1993; Ip, Chung, Raman, Trikalinos, & Lau, 2009). Long-term health impacts for the baby include reduced risk of Type 2 diabetes and childhood obesity. Further, there is some evidence of reduced blood cholesterol in adults who had been breastfed as babies (Owen et al., 2008).

Breastfeeding research has also demonstrated both short-term and long-term potentially important health benefits for the mother. In the short-term, breastfeeding has been associated with reduced stress and increased mood in exclusively breastfeeding mothers when compared to non-breastfeeding mothers (Groër, 2005). Although postpartum depression has been shown to negatively impact breastfeeding and durations of breastfeeding (Dennis & McQueen, 2009; Henderson, Evans, Straton, Priest, & Hagan, 2003), breastfeeding has also been associated with a reduced risk of postpartum stress and anxiety, as well as an increase in important bonding opportunities between mother and baby (CDCP, 2012; WHO). In the long-term, maternal health consequences of breastfeeding include reduced risks of certain cancers and osteoporosis (Unicef UK, n.d.; WHO). For example, studies have demonstrated that for each month a mother breastfeeds there is a significant decrease in risk of ovarian cancer (Rosenblatt & Thomas, 1993). Although initially concerned with reduced bone density during lactation, studies have demonstrated that women who breastfed actually had a reduced risk of osteoporosis and bone fractures at an older age,
specifically fractures in the spine and hip (Labbok, 2001; Melton et al., 1993).

Despite the short and long-term health benefits of breastfeeding, there are a few reasons women are unable to or should not breastfeed. The World Health Organization and Unicef (2009) released a document that outlined reasons they deemed acceptable to use formula instead of breastmilk either temporarily or permanently; however, the organizations stress that almost any mother is able to breastfeed starting within the first hour after birth. Created as a document for use in hospitals, several reasons are outlined for temporary use of substitute breastmilk as a supplement to breast milk, including use for premature babies, babies born with very low birth weights, and blood sugar instability, particularly for babies with diabetic mothers (WHO & Unicef, 2009). Other reasons to temporarily cease breastfeeding include conditions or medications that impact the mother and possibly her milk, such as extreme illness, and medications like radioactive iodine and chemotherapy treatments (WHO & Unicef, 2009). The only reason listed as a reason to permanently replace breastmilk with formula is HIV infection in the mother. Despite these reasons and the assurance that most mothers are able to breastfeed successfully, many mothers in the United States appear to stop breastfeeding before a year.

Currently, Healthy People (n.d.) reports that only 33.6 percent of infants born in 2006 were breastfed exclusively for three months and 14.1 percent of infants born in 2006 were breastfed exclusively for six months. Although 43.5 percent of infants were breastfed not exclusively for six months, the goal is to increase that percentage to 60.6 percent by the year 2020. Previous studies have indicated that many mothers do not anticipate problems with breastfeeding and, therefore, might be taken off guard or frustrated when breastfeeding becomes difficult (Li, Fein, Chen, & Grummer-Strawn, 2008; Mozingo, Davis, Droppleman,
The main problem mothers tended to cite as a reason for early cessation of breastfeeding was related to milk supply—mothers felt that their babies were not satisfied with breastmilk alone and felt anxiety and stress that they were, in their own perceptions, unable to produce a proper supply of milk (Li, Fein, Chen, & Grummer-Strawn, 2008; Scott & Colin, 2002). This perception was used a reason to stop breastfeeding even earlier among women who had prior experience with breastfeeding difficulties (Scott & Colin, 2002). Authors of these studies urge proper and early interventions for mothers to help them overcome these perceived barriers (Li, Fein, Chen, & Grummer-Strawn, 2008; Scott & Colin, 2002), which is especially important given that, while low milk supply is possible, it is not as common as many mothers are led to believe (Moxley & Kennedy, 1994). The current study will address these concerns by including an item regarding the ability to produce enough milk and will include a measure indicating whether or not this is a mother’s first pregnancy, controlling for previous experience.

Communication campaigns to encourage breastfeeding and durations of breastfeeding have been underway by major health organizations (Haroon, Das, Salam, Imdad & Bhutta, 2013; WHO, 2015). The WHO, for example, provides intervention campaigns for breastfeeding and supports assessments of programs. These campaigns range from a focus on increasing breastfeeding rates in developing countries to increasing durations of breastfeeding (WHO, 2015). One thing that is unclear, though, is who women listen to and why regarding decisions about breastfeeding and how much attention they pay to messages is still of question. Although these goals are underway for programs like Health People 2020, it can still be asked how women are influenced to make decisions regarding breastfeeding, whose messages are they paying attention to, and why? Based on systematic assessments of
education interventions for breastfeeding, the WHO has not published formal guidelines for breastfeeding education for increased duration due to the fact that more research is needed (WHO, 2015). Therefore, contributing to breastfeeding research in this way should help practitioners, such as breastfeeding advocacy groups and doctors, as they work to improve their communication with mothers to achieve optimal breastfeeding practices.

The current research will explore influences, including communication influences and other variables that might contribute to breastfeeding decisions, including body satisfaction, on intentions to breastfeed for specific durations of time: exclusively for three months, exclusively for six months, and for one year. These durations serve as the dependent variables based on the recommendations of the health organizations regarding maternal and newborn health. As one of its goals, Healthy People 2020 has included increasing the percentage of newborns that are breastfed exclusively for three months. This is the lower range of breastfeeding goals, but is considered an important benchmark due to the benefits this duration can still have on the immediate health of the newborn, such as reduced risks of gastrointestinal infection (WHO, 2011). Exclusive breastfeeding for six months is another benchmark goal for Healthy People 2020 and others such as the AAP. The AAP recommends that babies start on solid foods after six months so the six-month exclusive breastfeeding is an important goal up to that point. Babies continue to benefit from six month exclusive breastfeeding, including reduced risks of infections and reduced risks of childhood obesity (Duncan et al., 1993; Ip, Chung, Raman, Trikalinos, & Lau, 2009; WHO, 2011). The AAP and Healthy People 2020 make breastfeeding for at least one year a goal, even after introducing solids for the baby. Benefits of breast milk continue after solids are introduced, including in helping fight infection, reduce the risk of Type II diabetes and childhood
obesity, and support proper cognitive development. Therefore, because of the goals of these organizations, as well as the research reviewed here regarding breastfeeding, these three durations will serve as the dependent variables in the current dissertation study.

Weight and Body Satisfaction in Connection with Breastfeeding

Many physical changes occur during pregnancy and weight changes tend to be of the most concern to women and their doctors (CDCP, n.d.). These weight concerns connect to breastfeeding beliefs, too. New CDC guidelines for weight gain during pregnancy reflect what women should gain during a pregnancy with a single infant based on pre-pregnancy Body Mass Index (BMI). According to these guidelines, underweight women (BMI < 18.5) should gain 28-40 pounds during the course of pregnancy. Normal weight women (BMI 18.5-24.9) should gain 25-35 pounds. Overweight women (BMI 25-29.9) should gain 15-25 pounds and obese women (BMI >30) should gain between 11 and 20 pounds. Weight gain during pregnancy can be difficult to deal with, as there are health outcomes associated with too much or too little weight gain. Women who gain too much or too little weight put the baby at risk for issues like low birth weight, fetal growth restriction, and spontaneous preterm delivery (CDCP, n.d.).

Post-pregnancy, women should expect to lose weight gradually as they make healthy choices and exercise, but are advised to be patient with the process (Mayo Clinic, n.d.). This focus on weight might potentially have an impact on a woman’s body image during pregnancy if she gains too much or too little or is highly aware of the concern over her weight. In relation to breastfeeding, some major breastfeeding advocates and organizations, such as La Leche League International (2007) have used post pregnancy weight loss as a point to encourage breastfeeding, even though they still encourage safe and practical weight
loss practices. The La Leche League Web site lists “effortless pregnancy weight loss” as one of their ten easy reasons to breastfeed (Kenady, 2006). Research has demonstrated that women who exclusively breastfeed their babies tend to lose more weight than formula-feeding mothers whether or not the breastfeeding mother consumes more calories (Dewey, 2004). Given the focus on weight gain during pregnancy and the emphasis on patience with post-pregnancy weight loss, this is a potential benefit of breastfeeding that some women might find appealing. As weight tends to be the most prevalent factor studied in relation to body image, this finding leads to another focus of research, which has been on weight, body image and pregnancy.

Findings regarding general body image and pregnancy have varied. In some studies, body satisfaction has been shown to increase during pregnancy for many women (Skouteris, 2011; Wiles, 1994). Other research suggests that body dissatisfaction varies over the course of pregnancy based on a variety of factors, such as first time pregnancy and pre-pregnancy weight and body image. Weight gain and bodily changes in women can also become a source of mental stress and body dissatisfaction for women (Little & Lowkes, 2000; Dworkin & Wachs, 2004; Skouterish, 2012), particularly for women with current or past disordered eating habits or body dissatisfaction (Davies & Wardle, 1994; Little & Lowkes, 2000; DiPietro, Millet, Costigan, Gurewitsch & Caufield, 2003). Several health researchers have called for eating disorder screening during pregnancy to alleviate potential harmful effects of disordered eating behavior during and post-pregnancy (Little & Lowkes, 2000; Micali, Treasure & Simonoff, 2007; Skouteris, 2012).

In connection to breastfeeding, the scant research regarding body image has varied. Research has shown that pregnancy body dissatisfaction can potentially impact intentions to
breastfeed. Past research has been mixed regarding the relationship between body image and breastfeeding. One study found that women who are more satisfied with their bodies have a higher intention to breastfeed than those who are less satisfied (Foster, Slade & Wilson, 1996), but another study did not find that breastfeeding and bottle-feeding mothers differed in body satisfaction (Walker & Freeland-Graves, 1998). How these three variables—weight, body satisfaction, and breastfeeding decisions—work together will be an important point of exploration for the current dissertation.

With the health goals of breastfeeding in mind, as well as the potential importance of communication during pregnancy, the communication messages about pregnancy should be considered in order to understand the messages women receive and how they impact health concerns, expectations, and decisions regarding these important factors. In order to explore these important issues, the current research will study the impacts of media use, attitudes, behavioral beliefs, and body satisfaction on health intentions during pregnancy, focusing on breastfeeding intentions. Three durations of breastfeeding behaviors will be examined: three months, six months, and one year.

**A Multi-Theoretical Approach to the Research**

This dissertation takes a multi-theoretical approach to investigate an exploratory model that explains impacts on breastfeeding decisions. Several researchers in various health contexts have suggested that one theory cannot account for effects on its own. For example, research into the framing of health messages have suggested that “multi-theoretical integrated approaches are necessary to better understand the complexity of these (framing) effects” (Myers, 2010, p. 504). Importantly, the ability to tailor health messages to audiences is integral to the success of health communication efforts (Rimer & Kreuter, 2006) and an
understanding of individual differences is imperative in communicating effectively with patients (Myers, 2010). For example, Myers (2010) concluded a review of framing effects literature aimed at the nursing profession by stating the importance of multi-theoretical and interdisciplinary approaches in order to not just study the impacts of framing, but to also create effective messages. If the importance of individual differences is assumed, then using a multi-theoretical approach to identify impacts on decisions should provide researchers and practitioners with a richer grasp of how to approach patients, in this context, pregnant women, as they encourage healthy behaviors like breastfeeding.

In the chapters that follow, impacts on breastfeeding intentions are explored using both the theory of planned behavior (TPB) and uses and gratifications. Models of breastfeeding intentions are tested using both theoretical guides individually and then combined. It is ultimately argued that although the TPB is a more effective model for predicting behavioral intentions, the addition of uses and gratifications and body satisfaction variables are important for practical purposes for planning interventions to increase breastfeeding rates and durations. In Chapter 2, the two theories are reviewed, as well as literature regarding body image. Chapter 3 explores a model of breastfeeding intentions based on the TPB and Chapter 4 explores a model of breastfeeding intentions based on uses and gratifications. Chapter 5 combines the models to explore the possibility of a more thorough understanding of how breastfeeding intentions develop and what influences these intentions. Finally, Chapter 6 draws conclusions and comparisons regarding Chapters 3, 4, and 5, as well as discusses limitations and important areas for future research.
CHAPTER 2

Literature Review

This project seeks to gain a more complete understanding of the factors that impact intentions to breastfeed for the recommended periods of time—the three month, six month, and one year durations. Chapter 1 established the health importance that the maternal and pediatric health communities place on breastfeeding and the need to continue researching the impacts on this behavior. Two seemingly divergent theoretical frameworks are employed, compared, and, ultimately, combined to investigate these outcomes. On the one hand, the theory of planned behavior (TPB) includes variables such as attitudes towards performing a behavior, what others think about the behavior, and how much control one perceives that she has over a behavior, placing a kind of deterministic aspect on the individual’s behavioral intentions. On the other hand, uses and gratifications originates from a media effects tradition, but assumes the individual is capable of choosing media for specific reasons. Subsequent effects stem from media choices and reasons for those choices, which might help to explain what comes before the three TPB variables. As discussed in the first chapter, utilizing the two frameworks will provide necessary exploration into the influences on breastfeeding intentions through comparisons and by utilizing the variables from each framework in one model, ultimately contributing to the literature theoretically, as well as to practice. Therefore, this chapter reviews the relevant TPB literature, followed by the uses and gratifications literature, and finally, literature regarding the moderating variable under investigation: body satisfaction.

Theory of Planned Behavior (TPB)

The theory of planned behavior posits that the intention to perform a goal-driven
behavior, considered the most important determinant of subsequent behavior (Ajzen, 2011; Ajzen & Fishbein, 1980; Ajzen & Madden, 1986; Godin & Kok, 1996; Noar, 2006), is predicted by three variables: attitudes, subjective norms, and perceived behavioral control (Ajzen & Madden, 1986; Ajzen, 2011). The TPB, stemming from the theory of reasoned action (TRA), derived from the idea that human beings are “usually quite rational and make systematic use of the information available to them” (Ajzen & Fishbein, 1980, p. 5). In clarifying the assumption of the theory, Montano and Kasprzck (2008) explained that the focus of the theory is not on rational behavior, but instead the assumption is that individuals are “rational actors” who process information and that “underlying reasons determine the motivation to perform a behavior” (p. 76). Essentially, people use the information they have to form beliefs about a behavior, to determine what other people think of the behavior (Ajzen & Fishbein, 1980), and, with the inclusion of perceived behavioral control, to form beliefs about obstacles that might make performing the behavior difficult (Ajzen & Madden, 1986).

The TPB, according to its originator, is a theory that intended to make up for the failure of general dispositions, such as personality traits, to predict behaviors (Ajzen, 1991).

The TPB includes three measurable components that should predict behavioral intentions: attitudes towards a behavior (measured in part by beliefs about a behavior), subjective norms (measured by normative beliefs), and perceived behavioral control (Ajzen & Madden, 1986; Ajzen, 1991). The TRA originated without the perceived behavioral control component (Ajzen & Fishbein, 1980). The TPB takes into account the formation of these three essential components that lead to behavioral intentions, such as perceptions of what important referent others think about the behaviors. For the purposes of the current study, behavioral intentions include compliance with medical suggestions regarding
breastfeeding. Knowing that many women choose not to breastfeed or choose not to breastfeed for the recommended period of time (Healthy People, 2013; World Health Organization, 2013), the TPB can explore these particular issues. The concepts measured by the TPB can be used as an important starting point for understanding the influences on breastfeeding intentions made during pregnancy and can enhance other communication and media theories to provide a clearer understanding of these influences and how they operate during pregnancy. The variables are discussed in more detail below, followed by a discussion of criticisms and rebuttals, use in interventions, and applications in health and breastfeeding.

**TPB Variables.** The TPB posits that behavioral intentions are determined by personal and social factors (Ajzen, 1991; Ajzen, 2011; Ajzen & Fishbein, 1980; Ajzen & Madden, 1986; Godin & Kok; 1996; Montano & Kasprzyk, 2008). For example, attitudes are determined by beliefs regarding the behavior of interest. If focused on breastfeeding, then, beliefs might include beliefs about health for the baby, beliefs about weight gain or weight loss due to breastfeeding, beliefs about how breastfeeding will impact one’s body, and beliefs about the mother’s health. Combined with evaluations of the importance one places on breastfeeding beliefs in regards to oneself, these beliefs would indicate attitudes about breastfeeding.

Subjective norms are closely linked to communication, as these are driven by perceptions of others and what an individual perceives regarding how important referent others think she should behave. Several TPB researchers have linked subjective norms to a kind of social pressure to perform a behavior under study (Armitage & Conner, 2001). When it comes to breastfeeding, a woman might consider what her mother thinks she should do, her doctor, her spouse, or close friends think she should do. Media can also play a role in the
formation of normative beliefs, as television shows or celebrities might indicate to a woman that breastfeeding is important or not important. These subjective others can also be thought of as relevant groups rather than individuals. Subjective norms, it might be argued, result in part from communication variables such as media, communication with doctors, family and peers, and even personal observations and past experiences. It has also been argued that subjective norms actually indicate the perceived behaviors of important others (Godin & Kok, 1996). For example, when measuring intentions to breastfeed, a woman might gauge whether friends or important family members breastfed. Therefore, both interpersonal and mediated communication are important components of the TPB that could influence the belief formation regarding a behavior.

Behavioral intentions, according to the TPB, will only be a strong predictor of behavior if the behavior is perceived to be under volitional control. Perceived behavioral control, the third predictor of behavioral intentions, has been found to be particularly important in influencing behavioral intentions (Ajzen & Fishbein, 1991; Godin & Kok, 1996) and is what separates the TPB from other theories, specifically the TRA. In addition to attitudes and subjective norms, individuals must feel they have the ability and control to perform the behavior at hand. In the original experiments testing the TPB it was concluded that “the more that attainment of a personal behavioral goal is viewed as being under volitional control, the stronger is the person’s intention to try” (Ajzen & Madden, 1986, p. 472). An evaluation of perceived behavioral control is affected by beliefs about resources needed to perform the task and the opportunity to perform the task (Ajzen & Madden, 1986; Ajzen & Fishbein, 1991; Godin & Kok, 1996). For the current study, perceptions about breastfeeding control could be hindered by time, such as work constraints; money, such as
needing a breast pump; and physical ability, such as being able to produce a sufficient milk supply for one’s child. Importantly, a TPB study should try to account for all possible important sources of attitudes, subjective norms, and perceived behavioral control (Ajzen & Madden, 1986; Ajzen & Fishbein, 1991; Godin & Kok, 1996) and this relies on complete measurement of the variables.

Many researchers advise that the TPB variables should be measured in particular ways (i.e., Ajzen & Madden, 1986; Ajzen & Fishbein, 1991; Godin & Kok, 1996). Although some researchers have modified measurement for particular studies and purposes, the theory’s originators and others suggest that the ability to predict behavioral intentions is dependent upon accuracy and thoroughness of such measurement (Ajzen, 2002; Ajzen & Madden, 1986; Montano & Kasprzyk, 2008). These researchers have warned that some of the problems cited regarding the TPB have in fact been caused by inaccurate measurement of the three variables and, as such, the variables might not account for as much as they should. For each of the three variables, a researcher might elicit salient and normative beliefs from the sample or, if that option is not possible, can create a modal set of beliefs and subjective others using past research or a pre-test. First, attitudes are measured as the product of beliefs associated with performing the intended behavior and the evaluation a person places on those particular beliefs as it pertains to him or her (Ajzen, 2002; Ajzen & Fishbein, 1980). An example to highlight these measurements is in the prediction of weight loss, specifically through diet and exercise, which was tested in one of the original tests of the TRA (Ajzen & Fishbein, 1980). For accurate measurements of attitude, dieting and exercise indices must be created. First, beliefs regarding the assumptions that dieting and exercise will lead to weight loss must be tested followed by the evaluation of each index item in terms of the extent to
which a person believes that the dieting or exercise item is important for him or her to lose weight. Stressing the evaluation of a person’s own performance of a behavior versus the behavior in general is necessary for accurate prediction (Ajzen & Fishbein, 1980). The product of the beliefs and evaluations should then be used as the measure of the attitudes (Ajzen, 2002; Ajzen, 2011; Ajzen & Fishbein, 1980; Ajzen & Madden, 1986; Godin & Kok, 1996). Regarding breastfeeding intentions, beliefs need to encompass possibilities that include breastfeeding helps fight infection for a baby, breastfeeding creates a close bond between mother and baby, and breastfeeding is the best nourishment for baby. Importantly, then, the evaluations should be directed at the individual, so that they respond to the importance of each of the items to her—how important a close bond is, how important a thriving social life is, how important the best nourishment is. In the end, the responses indicate how important respondents think it is to breastfeed in order to achieve these outcomes. Subjective norms should be measured in a fairly similar manner.

Second, subjective norms should be measured as the product of normative beliefs and the weighted importance one places on the beliefs of each source (Ajzen, 2002; Ajzen, 2011; Ajzen & Fishbein, 1980; Ajzen & Madden, 1986). Similarly to attitudes, subjective norms should first be measured by eliciting important subjective others or, again, from past research or a pre-test (Ajzen, 2002; Ajzen & Fishbein, 1980). For weight loss beliefs regarding diet and exercise, measures should include a bipolar evaluation of one’s perception regarding what each subjective other believes one should do regarding the behavior (Ajzen, 2002; Ajzen & Fishbein, 1980; Godin & Kok, 1996; Montano & Kasprzyk, 2008). An example could be “my partner thinks my exercising regular would be…” with bipolar evaluation of “good” and “bad.” The next set of items would be the respondent’s evaluation of the
importance he or she places on the subjective other’s opinions regarding the behavior. The product of these responses would result in the respondent’s subjective norm measure. The result should correlate with an overall evaluation of subjective norms, such as “most people who are important to me approve of my exercising regularly” (Ajzen, 2002; Ajzen & Fishbein, 1980; Ajzen & Madden, 1986). This also reflects, to an extent, the amount of social pressure one feels to perform a behavior where those with higher subjective norms have more people or sources that they weight as very important and who also think they should perform a behavior (Armitage & Conner, 2001). For breastfeeding intentions, such items should include perceptions of what one’s partner thinks the respondent should do regarding breastfeeding, what one’s mother thinks, and doctor thinks, as well as an evaluation of how important each referent’s opinion is regarding breastfeeding.

Third, perceived behavioral control must also be measured in a similar manner to the other two TPB variables. Perceived control was hypothesized to have both an independent impact on intentions and that it would moderate effects of intentions on behaviors (Ajzen, 2002; Montano & Kasprzyk, 2008); however, analyses have shown less support for the latter (Montano & Kasprzyk, 2008). The product of control beliefs and evaluations of those beliefs should measure perceived behavioral control as they pertain to the respondent (Ajzen & Madden, 1986; Ajzen, 2002; Godin & Kok, 1996; Montano & Kasprzyk, 2008). Beliefs should include a set of items that measures beliefs about the resources needed to perform a behavior; while the evaluation measures the respondent’s perceptions about his or her own access to or the availability of the resources needed (Ajzen, 2002; Ajzen, 2011; Armitage & Conner, 2001; Montano & Kasprzyk, 2008). The product should be used as the measure of perceived behavioral control and should correlate to a direct, one-item measure of one’s
perception of his or her ability to perform a behavior (Ajzen, 2002; Ajzen & Madden, 1986; Montano & Kasprzyk, 2008). Regarding breastfeeding intentions, control beliefs should indicate how important one thinks it is to have access to a breast pump, an accommodating workplace, and supplying enough milk. Evaluations would measure the extent to which one perceives these issues applying to her—if one will have access to a pump, one’s workplace will make breastfeeding easy, and one’s body should be able to produce a proper milk supply. These measurement guidelines are largely similar across study topics.

Methods for proper measurement of each variable has largely remained unchanged since the inception of the TRA and, subsequently, the TPB; however, many studies have not adhered to these guidelines, which is a possible reason for mixed research results and a reason for caution in interpreting findings of the TPB. In a review of the TPB, authors noted that too few studies actually included control beliefs in their study designs (Montano & Kasprzyk, 2008). Without the beliefs component with behavioral control or with attitudes and subjective norms, the measure will not actually follow the model posited by the TPB wherein beliefs are antecedent to attitudes, subjective norms, and perceived behavioral control. Further, any one-item measure used in place of any of the three variables will not add to the body of work regarding the TPB, as it skews the overall effectiveness of the theory (Godin & Kok, 1996; Montano & Kasprzyk, 2008). The current dissertation, then, will ensure that the guidelines will be followed in the ways described above in order to effectively add to the body of work regarding the TPB.

Generally, systematic reviews and meta-analyses of the TPB have found similar results regarding the main variables in predicting behavioral intentions and, in the cases where available, actual behavior. Several reviews have found that perceived behavioral
control and attitudes significantly explain behavioral intentions more effectively than subjective norms. For example, Godin and Kok (1996) found that perceived behavioral control and attitudes were significant in over 80% of studies, while subjective norms were significant in 47.4% of studies. Further, the authors found that the average correlation between behavioral intention and subjective norms was .34, while the average for behavioral and intention and attitudes was .46 and behavioral intention and perceived behavioral control was also .46. Similarly, other meta-analyses have found subjective norms to be the weakest predictor of behavioral intentions (Armitage & Conner, 2001; Rivis & Sheeran, 2003). Importantly, though, many of the study designs included in these analyses utilized a one-item measure of subjective norms, which could explain the weak findings of the variable (Armitage & Conner, 2001). This further emphasizes the previously discussed issues with measurement in TPB studies. Although a one-item measure of breastfeeding subjective norms should correlate to the full measure, the one item would not fully reflect the complexity of subjective norms as it pertains to the behavior. Related to perceived control, Godin and Kok (1996) also noted that perceived behavioral control and actual behavioral control sometimes differ, particularly when it comes to health-related behaviors. However, as Ajzen (2011) pointed out, the perception of control, just like the perceptions of the other beliefs, should still be the best indicator of an intention, whether the perceptions are accurate or not. Therefore, one’s concerns that she might not be able to provide a proper supply of breast milk for her baby or that her workplace will make it difficult would still impact her intentions whether those concerns turn out to be valid or not.

Overall, when it comes to variance explained by the TPB models, reviews have been mostly similar. For example, according to an analysis of TPB studies (Godin & Gok, 1996),
the average $R^2$ was found to be 40.9% and varied from 36% to 47% depending on the context, wherein a study regarding eating behaviors resulted in an $R^2 = 36$%. A meta-analysis found that the average variance in behavioral intention explained was $R^2 = 39\%$ (Armitage & Conner, 2001). Also specific to health behavior predictions, though, a more recent meta-analysis found that the average amount of variance explained by the TPB was 19.6%, which is lower than the overall averages previously discussed (McEachan, Conner, Taylor & Lawton, 2011). This particular meta-analysis, though, was concerned with actual behavioral prediction versus behavioral intention, which, as Ajzen (2011) emphasizes, is what the three variables are actually posited to predict. This dissertation will measure intentions and should be comparable to the health-related TPB models previously conducted. The findings regarding breastfeeding intentions will be used to make recommendations regarding breastfeeding interventions, with which the TPB should effectively assist.

Researchers have used the theory of planned behavior not only to understand behavioral intentions and behaviors, but also to create health interventions (e.g. French & Cooke, 2012). The theory posits that behavior change comes from change in beliefs—salient beliefs, normative beliefs, and control beliefs (Ajzen, 2011; Ajzen & Fishbein, 1980; Ajzen & Madden, 1986; French & Cooke, 2012). Therefore, those using the theory of planned behavior as a theory of behavior change must make use of beliefs in order to decipher what needs to be changed and in what context (Ajzen, 2011; French & Cooke, 2012). For example, in testing an intervention for HIV prevention among college students with the goal of condom use, the theory of planned behavior was a useful tool when combined with other theoretical constructs such as those from social cognitive theory (Sanderson & Jemmott,
The focus of the intervention testing was on attitudes, efficacy (as a measure of control) and intentions to use condoms. Using intervention campaign materials in an experimental design, researchers found that the interventions produced positive changes in attitudes toward condom use and that attitudes should then be, according to the TPB, an important factor in impacting behavioral decisions and behavioral changes (Sanderson & Jemmott, 1996). Importantly, though, even though insignificant intervention results have been used as a criticism of the TPB (Hardeman, Johnston, Johnston, Bonetti, & Wareham, 2002; Sniehotta, Presseau, & Araújo-Soares, 2014), Ajzen (2014) points out that the TPB is not a theory of behavior change; however, it can serve as a framework to guide intervention and campaign planning. The theory can assist in identifying beliefs that must be changed in order for one to engage in a recommended behavior (Ajzen, 2014). With breastfeeding, the TPB can point to what beliefs need to be attended to in order to increase intentions to breastfeed, which can be used by doctors and other breastfeeding advocates.

Specific to the outcome of breastfeeding, the TPB has been used in a couple of instances. Interestingly, these two studies found conflicting predictors of breastfeeding intentions. In one study, only attitudes and perceived behavioral control predicted intentions to breastfeed (Wambach, 1997). In another, the subjective norms measure was the strongest predictor of intentions to breastfeed (Swanson & Power, 2005). Although both studies demonstrate that the variables outlined in the TPB can help explain breastfeeding intentions and behaviors to an extent, the conflicting findings are interesting. The former study measured subjective norms as outlined by the original TRA and TPB frameworks (Ajzen & Fishbein, 1980; Ajzen & Madden, 1986). The important others included doctor, mother/mother-in-law, and partner, but did not include nurses or midwives as a possible
important other (Wambach, 1997). In the latter study, nurses and midwives, as well as partners, were the most important referent others for pregnant women in determining whether or not they should breastfeed (Swanson & Power, 2005). Another explanation for differences could be that measures in the latter study were taken at different points in time to measure changes in breastfeeding intentions and behaviors during the postnatal period. For the current study, the findings regarding subjective norms and how they are measured will be considered using both of the breastfeeding and TPB studies. This will help to ensure that the list of important others is thorough. Attitudes in these studies were also measured using two different scales. One study utilized a breastfeeding attitude scale that was initially developed for adolescent girls (Wambach, 1997), but both included similar items regarding beliefs about breastfeeding. Swanson and Power (2005) found that perceived behavioral control was not a predictor of intention or behavior at any point in time. However, the one item measure for control beliefs is not as thorough as it could be, nor does it adhere to measurement guidelines set forth by the TPB that were previously described. Therefore, this dissertation study will also expand upon this and attempt to improve upon a proper scale for this measure.

**Criticisms of the TPB.** Although measurement issues, such as those in the breastfeeding studies described above, might be the root of some of the problems with the TPB, a couple of the basic assumptions of the TPB have drawn criticism from researchers. The first assumption that has drawn criticism is what has been called the *sufficiency hypothesis*. The TRA, as well as the TPB, were originally developed with the assumption that researchers should only need measure the main variables outlined by the theories in order to successfully predict behavioral intentions (Ajzen, 2011; Ajzen, 1991; Ajzen & Fishbein, 1980; Ajzen & Madden, 1986; Godin & Gok, 1996). This idea is generally referred to as the
sufficiency hypothesis (Ajzen, 2011; Sniehotta, Presseau, & Araújo-Soares, 2014). The idea is that there is generally not a need to measure variables other than the three included in the theory: attitudes, subjective norms, and perceived behavioral control (Ajzen, 2011; Ajzen, 1991; Ajzen & Fishbein, 1980; Ajzen & Madden, 1986; Godin & Gok, 1996). When outlining the TRA, Ajzen and Fishbein (1980) stated that external variables would impact the TPB and intentions only to the extent that they affect the variables in the model. Past behaviors, for example, should not have an impact on the model because the model should already account for past behaviors in the measurement of the three variables (Ajzen, 1991). Basically, the model with the three main TPB variables should account for other variables, such as past behavior, personality traits, or demographics (Ajzen, 1991; Ajzen & Fishbein, 1980). This has been used as a criticism of the TPB, though (Sniehotta, Presseau, & Araújo-Soares, 2014).

The sufficiency hypothesis has been used as an argument to throw out the TPB altogether from use (i.e., Sniehotta, Presseau, & Araújo-Soares, 2014). Specifically because many studies have added other variables to the theory and had more success in predicting behavioral intentions, as well as behaviors, some researchers have argued that this assumption of the theory has been falsified (Sniehotta, Presseau, & Araújo-Soares, 2014). For example, demographics have been shown to be important in determining behavioral intentions (Sniehotta, Presseau, & Araújo-Soares, 2014). Other researchers have found and argued that minor variations of and additions to the TPB should be considered based on the context being studied. Rather than throwing out the theory, it is argued that the theory should be modified as necessary (ex: Wolff et al., 2011).

Another common criticism of the TPB comes from conceptualization and
measurement, specifically regarding subjective norms (Sniehotta, Presseau, & Araújo-Soares, 2014). Subjective norms have generally been found to present the least amount of predictive power in the TPB (Armitage & Conner, 2001; Sniehotta, Presseau, & Araújo-Soares, 2014; White, Smith Terry, Greenslade & McKimmie, 2009). Responses to this finding have varied. Ajzen (1991) argued that subjective norms should be the least important of the three factors, while others argued that measurement of subjective norms has varied widely so conclusions could be difficult to make (Armitage & Conner, 2001). Still, rather than take subjective norms out of the theory altogether, which researchers have practiced, other researchers added additional types of subjective norms that could account for additional variance in TPB models, arguing that the original conceptualization of the variable was lacking (Manstead, 2000; Rivis & Sheeran, 2003). Re-conceptualizations have included a distinction between descriptive norms (the original conceptualization) and injunctive norms, which measures the extent one sees rewards or punishments from the behavior (Rivis & Sheeran, 2003; White, Smith, Terry, Greenslade & McKimmie, 2009). Some of the arguments in favor of retiring the TPB have centered on the lack of clarity of constructs and the changes made in conceptualization and measurement, as it leaves researchers with insignificant findings questioning their measures rather than the theory itself (Sniehotta, Presseau, & Araújo-Soares, 2014). Further, the many changes that occur with TPB measurement and the falsification of the sufficiency hypothesis have been used as evidence that the TPB is not in itself sufficient as a theory (Sniehotta, Presseau, & Araújo-Soares, 2014).

Despite the criticisms of the TPB, researchers have continued to utilize the theory to understand behavioral intentions and subsequent behaviors. Ajzen (2014) has responded to several criticisms raised of the TPB. First, in response to claims that the sufficiency
hypothesis has been falsified, Ajzen (2014) stated that the theory does not preclude additional variables from being included in the model; however, additions should be carefully considered. Some additions to the TPB, like different measures of subjective norms, have made sense (Ajzen, 2011; Ajzen, 2014), and others, like past behaviors might be worth including (Ajzen, 2011), but any variables external to the TPB should first be considered as to whether or not the concept should already be included in another properly conceptualized and measured TPB variable. Measurement issues, particularly with subjective norms, might be attributed to the researchers utilizing a one-item measure of subjective norms—using an overall item rather than a composite indexical measure (Armitage & Conners, 2001; Godin & Kok, 1996). Although original measures included a one-item measure (Ajzen & Fishbein, 1986), one-item measures should not take the place of the more nuanced composite items (Godin & Kok, 1996). Due in part to the arguments surrounding the utility of the TPB, the current study looks at breastfeeding intentions through the TPB alone, then compares the original model to models with additional components to continue to research the possibilities of additional variables in predicting intentions. Although Ajzen (2011) recommended variables like past behaviors could already be presented in the three variables of the TPB, adding them explicitly will assist in understanding more of the background and antecedents to the beliefs, which will help when making intervention recommendations.

On one hand, the TPB made the assertion that people were rational actors, to the extent of using the information they had regarding a behavioral decision to be made. On the other hand, the TPB does not delve into what might impact knowledge and informational beliefs regarding a behavior. This means that while it assumes people might act in a manner rational in regards to the information they have at their disposal, it does not go back further
than that to investigate what possibly impacts those beliefs in the first place. In this way the TPB could be considered deterministic to an extent. Because of this and the criticisms of the TPB’s sufficiency hypothesis, the current research will also look at breastfeeding decisions using a theoretical framework that focuses on impacts of the sources of information and norms from media to which women choose to attend.

**Uses and Gratifications**

Although the TPB helps explain behavioral intentions, it does not inform our understanding of the complex relationships between perceived norms and media exposure, nor does it explicitly consider the individual as an aware agent in making choices and decisions regarding information and behaviors that might influence variables like beliefs and knowledge. Uses and gratifications was described by Katz, Blumler, and Gurevitch (1973) as an emerging research area not simply concerned with direct effects of media on consumers, but concerned with why consumers turn to certain media, the expectations they have when they turn to the media, what they obtain from it (gratifications), and the possible outcomes or effects that occur from this process. The perspective assumes that individuals are capable of self-reporting both what media they attend to and why they attend to it. Research into uses and gratifications began mostly with classifying the gratifications sought by media consumers. Research in the 1970s into uses and gratifications led to typologies of gratifications, including informational, diversion, personal relationships (parasocial or detachment), personal identity, and surveillance (Katz, Blumler & Gurevitch, 1973; Rubin, 2009). Ultimately, a uses and gratifications perspective helps to answer questions related to what media audiences use, why they use them, and what they perceive to gain from them.

Specific media uses, particularly new media uses like the Internet, could be an
important area to cover with health beliefs and ultimate decisions. Simply asking why people use a medium such as the Internet in general, though, is too broad as there are so many different types of sites. Over the past several years, PEW Internet research has found that a large portion of the United States population uses the Internet for health information seeking purposes (Rice, 2006). Women also use the Internet for pregnancy-related health information purposes. Research found that 84% of surveyed women, particularly in the early stages of pregnancy, used the Internet for information-seeking purposes regarding pregnancy (Larsson, 2009). What is yet unknown is where these women go on the Internet or elsewhere for information and for what other purposes the Internet and other media are used during pregnancy.

Beyond specific uses and health information seeking, uses and gratifications research has found that Internet use has served similar functions (gratifications) to traditional media (Flanagin & Metzger, 2001). These functions include entertainment and information seeking. Further, Papacharissi and Rubin (2000) argued that there are four main motivations in Internet use: information-seeking, interpersonal utility, passing time, and entertainment. Although there might be similar motivations for the Internet as a medium, it is important to bear in mind that audience members take away different gratifications for the same media and content (Eighmey & McCord, 1998). Despite the audience members’ explicit reasons and motivations for using a Web site, learning in some form can occur whether users intend that to be their reason for visiting the site or not (LaRose & Eastin, 2004). Therefore, it is important to consider both the media one uses, as well as the reasons for these uses, when seeking to understand the impact media might have on psychological states or behavioral decisions. On the one hand, a woman might, for example, visit a pregnancy Web site just to
browse and pass the time, but end up learning about breastfeeding even though that was not her intention. On the other hand, a woman might visit a pregnancy site specifically to learn about something pregnancy-related and perhaps because of that specific intention, she might not be impacted regarding much else than the particular purpose she set out looking for.

New media in general, including the Internet, has been of interest to uses and gratifications scholars (Quan-Haase & Young, 2010; Rubin, 2009). Quan-Haase and Young (2010) posed the question of what people are gaining from different media if digital technologies are not actually replacing media. In other words, new digital technologies add to the media environment, but have so far not replaced older or traditional media sources like print or broadcast television. If consumers are adding to their media diet rather than replacing traditional media with new media versions, then it makes sense that consumers are fulfilling different needs and having different experiences with the types of media (Quan-Haase & Young, 2010). Despite this question and claim, studies have still been more focused on new typologies of gratifications sought from the media and have not yet taken this research to the level of effects. For example, in researching social media sites, gratifications sought included needs such as pastime, affection, fashion, and social information (Quan-Haase & Yount, 2010). Some of these are similar to traditional uses and gratifications findings and some are more specific to the type of media. An area that the current dissertation will begin to investigate is the differences in the effects of these sources of media, specifically looking at differences between new and traditional media sources. If people are generally not replacing traditional media with new media then the different characteristics of these types of media could make a difference in both gratifications sought from them and in subsequent impacts on the consumers.
Media effects still occur, but why one is using media and outcomes of media exposure might influence those effects, which is where uses and gratifications can be particularly useful. From this perspective it is assumed that individuals seek out specific media to satisfy the needs they have. When it comes to effects, early researchers of uses and gratifications emphasized that the point of the research is to link psychological origins to needs, intentions, and audience characteristics and to include these as variables when studying the persuasive impact of media (Katz, Blumler & Gurevitch, 1973; Palmgreen, 1984). Blumler, for example, started research with several hypotheses that included these links. For example, it was found that cognitive motivation was associated with informational gains (cited in Palmgreen, 1984). Unfortunately, as most authors point out, the effects piece has largely been ignored in most of the research (Palmgreen, 1984; Rubin, 2009). Uses and gratifications is meant to be a media effects theory that differs from others in that it takes the user from a passive consumer to whom effects happen to an active consumer of media who chooses certain media for specific purposes and these should both be considered when exploring effects (Katz, Blumler & Gurevitch, 1973; Palmgreen, 1984). Given these suggestions and the findings regarding use of the Internet for pregnancy information purposes, this dissertation study seems to be an appropriate area in which to utilize uses and gratifications to understand media effects during this time in a woman’s life. This includes impacts on breastfeeding intentions, as well as the moderating variable of body satisfaction.

One area of effects and uses and gratifications research that could be important is in understanding health decisions and motivations; however this has rarely been attempted. In an effort to understand how women sought nutritional information when either trying to conceive or when pregnant, uses and gratifications provided a general framework for forming
research questions and a method (Szwajcer, Hiddink, Maas, Koelen, & van Woerkum, 2008). Results indicated that women tended to use the Internet, primary care physicians, and gynecologists as their main sources of nutrition information. Results also indicated that women trying to conceive have a higher motivation or need to search for nutrition-information than women farther along in their pregnancy and that women in their third trimester and women trying to conceive were more likely to search for pregnancy-specific nutritional topics such as alcohol and safe cheeses than women in different stages (Szwajcer, Hiddink, Maas, Koelen, & van Woerkum, 2008). Although providing an important examination of motivations and sources of information, this study did not explore various media types nor did it go into any detail regarding differences in uses and relevant outcomes.

Another area in which uses and gratifications have been utilized as effects research in the past few years is in body image research, which has proved to be somewhat fruitful. For example, it has been found that for secondary school students total time watching television did not have effects on body image or eating disorder symptomatology; however, when television genres were broken down, it was found that specific genres had negative effects on body image in both males and females, specifically with soap operas (Tiggemann, 2005). This study further looked into the effects of specific uses of television, including entertainment, social learning, and escape from negative affect. Again, specific uses also had effects on body image, with social learning and escape from negative affect having negative effects in both males and females and watching television for entertainment having no effects (Tiggemann, 2005). This study indicates that not only is the why of media use important in body image effects, but the uses of media also seem to indicate a mind set among viewers that is important when examining effects. Other body image studies have found that media
formats such as television and fashion magazines have different outcomes, so studying media in aggregate is not the most effective method for understanding effects (Tiggemann, 2003). Exploring what media women use and why during pregnancy and the potential impacts of the use and motivations could, then, be a helpful method for beginning to explain effects.

By incorporating a uses and gratifications perspective in the current research there are a few accomplishments that can be made regarding the population under study. First, we can understand what types of media women tend to turn to during pregnancy. Second, we can understand the reasons they turn to these media. Third, we can understand the relationship between these uses and specific outcomes such as body satisfaction and beliefs and intentions about breastfeeding. According to the literature, a uses and gratifications approach to health could be beneficial, but has been underutilized. This is an area the current research will attempt to advance.

Both the TPB and uses and gratifications appear to be useful frameworks for understanding and designing research regarding body image and health decisions. Separately, the theories can provide different types of information—the TPB, information about various beliefs and how these work to affect behavioral intentions; and uses and gratifications information about specific media choices, motivations, and subsequent outcomes. The TPB does not explicitly take into account where beliefs stem from, whereas uses and gratifications research focuses almost solely on possible sources of learning, directly or indirectly. One method for dealing with the criticisms of the TPB, particularly the sufficiency hypothesis, is to examine some of the other variables that might impact the TPB variables and behavioral intentions. Together, the two theories might be combined to build a more complete model of the impact of media and beliefs on subsequent behavioral intentions to breastfeed one’s baby.
for three months, six months, and one year. The current study will aim to examine these health outcomes in three manners and explore which model provides a more useful explanation of outcomes, providing important theoretical information for scholarship and practical information for health communication practitioners. Included in this model will be the body satisfaction variable.

**Body Satisfaction**

As discussed in Chapter 1, weight loss has been used as a reason to breastfeed (Dewey, 2004; Kenady, 2006; La Leche League, 2007). Given the emphasis on weight during and after pregnancy and the possible connection to breastfeeding, a woman’s body satisfaction, both state and trait, could potentially impact decisions regarding breastfeeding. Therefore, body satisfaction literature will be reviewed, as well as the available research regarding body satisfaction, pregnancy, and breastfeeding. Body satisfaction will be tested in both theoretical frameworks as a potential moderating variable in intentions as this dissertation explores a more complete predictive model of breastfeeding intentions.

The idea of how a woman perceives and evaluates her own body and appearance—what researchers generally define as “body image” (Cash, Fleming, Alindogan, Steadman, & Whitehead, 2002)—has been a major focus of study within the field of communication (Cash, 2011; Harrison & Hefner, 2011; Levine & Harrison, 2009). Body image disturbance, the most common type being body dissatisfaction, refers to inaccurate perceptions of one’s body or parts of one’s body or, as dissatisfaction is usually defined, discontent one feels about her body or particular parts of her body, such as her size (Harrison & Hefner, 2011). Although body image alone does not necessarily have serious health impacts that could be considered life threatening, the impacts that body image can have on physical and mental
well-being are serious (Dittmar, 2009; Harrison & Hefner, 2011; Levine & Harrison, 2009). Although not as life threatening as clinical eating disorders, body dissatisfaction has been linked to issues such as relationship disruption, over or under exercising, and over or under eating (disordered eating habits) (Harrison & Hefner, 2011; Levine & Harrison, 2009). Body dissatisfaction and unhealthy habits related to dissatisfaction are much more prevalent than clinical eating disorders and, therefore, the influences on dissatisfaction and the consequences of dissatisfaction are deserving of attention (Levine & Harrison, 2009).

Body satisfaction has been conceptualized as either a trait or state variable and caution has been advised to make measurement choices carefully regarding these differences (Thompson, 2004). Thompson (2004) provided two measurement guidelines that are especially pertinent for the current dissertation study. First, Thompson (2004) advised determining if the research is concerned with state or trait body image and to clearly distinguish the two. Trait body image tends to be used most often, but if the concern is one’s body at a particular point in time, then state body image measures should be employed. Trait body image measures deal with a generally stable body evaluation that one usually has regarding his or her body (Cash, Fleming, Alindogan, Steadman, & Whitehead, 2002; Thompson, 2004). Research has demonstrated that body image and its various dimensions fluctuate and change (Cash, et al., 2002) and, therefore, a state function also exists. These state body image satisfaction states tend to come up within particular contexts during which one’s attention is brought to his or her appearance (Cash et al., 2002; Melnyk, Cash, & Janda, 2004; Thompson, 2004). Second, Thompson (2004) advised that researchers thoughtfully use multiple measures of body image when appropriate. This strategy is particularly advised when a study is exploratory in nature; not to simply use many measures and see what ends up
working, rather to thoughtfully consider more than one measure that might work best for your particular research. In relation to the current study regarding pregnancy, trait body satisfaction would consist of the more average and unchanging levels of body satisfaction one has, particularly prior to pregnancy. Pregnancy itself can be considered a state situation in which body satisfaction might be different due to the changing appearance of the individual. Therefore, a pre-pregnancy body satisfaction measure and a current pregnancy, or state, body satisfaction measure will be utilized and carefully considered. Potential impacts on one’s body satisfaction are discussed below.

**Body image and media.** Past studies of media effects on body image show that consumption of media images that conform to a “thin ideal” can lead to problematic perceptions and behaviors in women. A significant amount of scholarly research has been devoted to understanding media messages and effects of those messages on women’s body images and body esteem and even disordered eating habits. A variety of causes have been attributed to eating disorders, such as biological traits and psychological characteristics, but family dynamics and sociocultural factors have also been implicated in many studies (Dittmar, 2009; Park, 2005; Tiggemann, 2011). These sociocultural norms are partly communicated through media images and messages (Park, 2005). In children and adolescents, it has been observed that the media’s chief role is helping to create a social environment that normalizes dieting and excessive thinness, and encourages young people to repeatedly evaluate their bodies, to find them wanting, and to engage in extreme dieting, over-exercising, and other health compromising behaviors in an effort to relieve perceptions of inadequacy. (Harrison & Hefner, 2011, p. 382)
Not surprisingly, prolonged exposure to these norms through media can have serious consequences on how women feel about themselves and their subsequent behaviors in an attempt to live up to an idealized female image (Park, 2005; Tiggemann, 2011).

Although several communication and psychology theories have been applied to body image research, such as cultivation, social learning, and social comparison, a common theme in many studies is the use of elements of the tripartite model of body image. This model includes the possibly unhealthy impacts of media, but also acknowledges that other sources of talk and information are important in shaping body image. The tripartite model recognizes that ideals of thinness and beauty are transmitted through three main sources: media, family, and peers (Shroff & Thompson, 2006; Tiggemann, 2011). This model identifies particular sociocultural factors that influence body image beyond the biological, which are still important moderators of the effects of this model (Shroff & Thompson, 2006; Tiggemann, 2011). Evidence has accumulated demonstrating that ideals of beauty are transmitted through these sociocultural channels; they are internalized and used by women to determine satisfaction with oneself (Tiggemann, 2011). A strong indicator of body satisfaction and body image is peer communication and romantic relationships. When peers, particularly female peers, discuss appearance, this talk has been found to have a significant effect on body image and satisfaction, depending on how the talk proceeds (Jones, 2011). For example, “negative appearance talk” or talking negatively about one’s own or others’ appearances, weight, and figure, can have a negative effect on body satisfaction and body image for those involved in that talk. Positive communication traits among peers, on the other hand, have not been connected to body dissatisfaction nor to protective functions from body dissatisfaction (Jones, 2011). Further, the nature of a romantic relationship and talk
between romantic partners can have a significant effect on body image, where if a female is more interested in being popular among the opposite sex she might exhibit more body dissatisfaction than those interested in romantic relationships for other reasons (Jones, 2011). Though this has mostly been studied in adolescents and college students, it would make sense to posit that this would continue into adulthood and other times of a woman’s life. Women, beyond those in adolescence, still appear to be influenced in some way by negative talk and cultural norms as women age, which can possibly explain body dissatisfaction in older women (Banister, 1999; Halliwell & Dittmar, 2003). If this is the case, then continued peer and romantic relationships, as well as influences of media should be important to understand as women go through other stages of life.

There has been a call for updated body image research that uses other variables, falling into two domains. First, research designs should incorporate new populations beyond children and college students and new measure items, such as new media use, talk with doctors, and the salience of influences should be explored (Tiggemann, 2011). For example, research should acknowledge that the salience of influence from peers or family may change throughout life and, therefore, body image and satisfaction may be altered due to these changes (Jones, 2011). Although the majority of studies have concentrated attention on adolescents and college-aged women, effects are still prevalent in older populations. Bissell (2004) examined body dissatisfaction as related to sports media exposure and sports participation in women ranging from age 18 to 75. One of Bissell’s (2004) original hypotheses was that younger women would have the highest degree of body dissatisfaction; however, results indicated that older women scored higher than the younger women in body dissatisfaction. After media exposure, women between 42 and 53 had the highest body
dissatisfaction scores followed by women between 18 and 29. It was concluded that with regard to this portion of the study “despite much of the recent research that has focused on young girls and college women, the findings suggest older women are just as likely to be unhappy with their body shape” (Bissell, 2004, p. 120). It is possible that some of the variance might be caused by other differences in the population (such as effects of advancing age); however, this does provide reason to posit that media messages may significantly contribute to the variance in body satisfaction in women during stages of life beyond adolescence and college years. Second, both historical and proximal personal life events should be taken into account when understanding body image (Cash, 2011). For example, past experiences with body image, personalities, and past health issues need to be considered in conjunction with new life events, such as body, health, and interpersonal changes in one’s life, in order to fully understand how body image changes throughout life and to understand one’s current state of body image and how that impacts one’s life (Cash, 2011). The current research will take these two issues into account by studying a new population (pregnant women) and how body image operates at a specific point in one’s life in regards to choices about health.

Another challenge facing researchers is aspects of the new communication environment. The media component in influencing body image has generally been studied in the same manner without changes due to new technologies or types of use (Levine & Chapman, 2011). Attention to different types of media, including different types of Internet use like social networking, celebrity gossip sites, and weight management blogs, should be included to gain a more complete understanding of how they contribute to body satisfaction (Levine & Chapman, 2011). As recommended by Harrison and Hefner (2011), it is important
to study media use and the effects on body satisfaction, but not eating disorders, as clinical eating disorders unfold over time. This dissertation takes different media into account in the form of new versus traditional media, discussed in Chapter 1—specifically investigating the possible impacts of the characteristics each has.

The current research, though, is concerned with the behavioral outcome of breastfeeding intentions. In order to explore this fully, the research will include these media recommendations in order to understand specific media uses, reasons for uses, and how they operate with body satisfaction in determining the important health decision of breastfeeding. In other words, the state of being pregnant might impact one’s body satisfaction, and that could then influence media choices that subsequently influence breastfeeding intentions. Pre-pregnancy, or trait, body satisfaction will be included as an antecedent variable, while media use and gratifications (discussed above), as well as pregnancy, or state, body satisfaction will be included as independent and moderating variables in determining breastfeeding intentions.

But what research is available regarding body image during pregnancy?

**Body Image and Pregnancy**

Even though research regarding body image in different stages of life is limited, some scholars have begun addressing these gaps in research by investigating the perceptions of pregnant women. Preliminary research has demonstrated that body dissatisfaction can fluctuate throughout life (Bissell, 2004; Latner & Wilson, 2011). These findings have been supported through initial studies using samples of pregnant women. As previously discussed, pregnancy comes with many changes, particularly to one’s body, and should, therefore, continue to be studied in light of these changes and previous research.

One focus of research that has just started being investigated is media effects on body
image during pregnancy. The results of an experiment using exposure to fashion magazines led researchers to conclude that pregnant women with prior body image issues or distortions should refrain from consuming fashion media that may decrease body image during pregnancy (DiPietro, Millet, Costigan, Gurewitsch, & Caulfield, 2003). Even though pregnant women should feel more comfortable straying from a thin ideal more than in other stages of life, past issues with body esteem combined with exposure to fashion magazines led significantly to body image problems during pregnancy (DiPietro, Millet, Costigan, Gurewitsch, & Caulfield, 2003). Focusing on Taiwanese women during pregnancy, researchers found that women worry about the weight gained during pregnancy affecting their attractiveness (Chang, Chao & Kenney, 2006). This worry is increased with exposure to media and can lead to intentions to engage in unhealthy or non-recommended behaviors, such as dieting (Chang, Chao & Kenney, 2006). This can be a great concern for a woman’s health during and after pregnancy, as well as her child’s health.

This leads to another focus of research, which has been on weight, general body image, and pregnancy. Findings regarding body image and pregnancy have varied. In some studies, body satisfaction has been shown to increase during pregnancy for many women (Skouteris, 2011; Wiles, 1994). Other research suggests that body dissatisfaction varies over the course of pregnancy based on a variety of factors, such as first time pregnancy and pre-pregnancy weight and body image. Weight gain and bodily changes in women can also become a source of mental stress and body dissatisfaction issues for the woman (Dworkin & Wachs, 2004; Little & Lowkes, 2000; Skouterish, 2012), particularly for women with current or past disordered eating habits or body dissatisfaction (Davies & Wardle, 1994; DiPietro, et al., 2003; Little & Lowkes, 2000;). Several health researchers have called for eating disorder
screening during pregnancy to alleviate potential harmful effects of eating disordered behavior during and post-pregnancy (Little & Lowkes, 2000; Micali, Treasure & Simonoff, 2007; Skouteris, 2012).

Although some studies have found that women without a history of disordered eating generally have less body dissatisfaction during pregnancy and may even enjoy their changing body, some studies have found that women will still look to a non-pregnant “thin ideal” as their standard comparison for beauty (Davies & Wardle, 1994; Dworkin & Wachs, 2004). Even if body satisfaction fluctuates throughout pregnancy, then, the “ideal” goal is still looming for most women. A few overarching themes regarding body image and acceptance during pregnancy have been found. Women tended to express excitement when there were first signs of a bump, which changed to expressions of concern about appearance changes, which persisted throughout pregnancy, and finally, exhibited expressions of happiness at gaining weight in the breasts (Johnson, Burrow, & Williamson, 2004). Therefore, there is evidence that despite being in a different phase of life at pregnancy, there is still pressure or a desire to conform to an ideal, non-pregnant form. Knowing that body dissatisfaction can occur during pregnancy and that media might have a potential effect on one’s understanding of pregnancy, it is important to discuss what is known about pregnancy and the media.

**Pregnancy in media.** Systematic reviews of the common media images of pregnancy are scant, but what is available illustrates unrealistic depictions of pregnancy for many women. In one of the few studies that focused specifically on pregnancy messages, Dworkin and Wachs (2004) content analyzed *Shape Fit Pregnancy* magazine over a six-year period. From their findings, the authors argued that through the ubiquitous tone of empowerment in the articles, the magazine actually “normalizes women’s bodily self-surveillance” (p. 621).
The articles that encourage staying fit and taking control of one’s body during pregnancy do so through a lens of being fit for labor or staying sexy, rather than discussing health benefits. Further, the authors found that articles encouraged this without ever mentioning full-time work, other stresses and duties, or even enjoying the pregnant body. Instead, they argue, the articles and images encourage conforming to an ideal fit body, but encourage this through the lens of empowerment, which the researchers recognize as problematic. Physical activity is important during pregnancy, but the manner in which it is encouraged through the magazine focused more on simply looking good rather than the important health benefits physical activity also has.

This distortion of pregnancy has also been found in medical research. A content analysis of two reality television shows in the United States, *A Baby Story* and *Birth Day*, found that patient diversity was under represented and medical needs and emergencies were over represented (Morris & McInerney, 2010). Although these reality programs purport to represent a wide range of birth stories, the researchers discovered that the shows tended to portray birth as dangerous and “women’s bodies as inferior and unreliable” (p. 135). The shows seemed to demonstrate that the many problems depicted in the programs were dangerous and that medical technology was the only way to have a safe birth. Generally, the births in the sample portrayed birthing stories, such as positions, dress, types of encouragement (such as condescension from doctors), and second-guessing of women’s decisions regarding pain medication, all appear to be the “norm” in the programs. Even though this particular analysis was concerned with the birthing process, there is still an important element about the second-guessing of women’s bodies and women’s decisions that could be important throughout pregnancy if a woman expects that she should not rely on her
own body or decisions. This can be particularly important as one considers her physical ability to breastfeed, like producing adequate milk, and her decisions to do so. This study points to the importance of understanding the impacts of messages regarding one’s body and breastfeeding and the importance women place on the messages and the message sources, which both the TPB and uses and gratifications should help to address.

One might expect that images of pregnancy will have negative effects on women as they consider pregnancy or their own pregnant bodies. One study on the effects of media images on body image distortion in pregnancy examined the impact that media depictions of (non-pregnancy) ideal beauty have on pregnant women’s body image. It was suggested that women are more sensitive about body shape during the early stages of pregnancy. Participants were exposed to media images from fashion magazines. Results indicated that when women were exposed to images of women in magazines at 16 weeks in pregnancy, they overestimated their own body sizes. It was demonstrated that pregnant women’s perceptions of their abdomen, though, were influenced by exposure to media images of fashion models throughout pregnancy. The authors of this study conclude that women who are more sensitive about appearance overall should avoid looking at fashion magazines during pregnancy to ensure that this overestimation of body size does not have detrimental effects (Sumner, Waller, Killick, & Elstein, 1993). Similarly, findings indicate that the need for and manners in which women “get their bodies back” after pregnancy are influenced by social norms, popular culture, and other types of media messages (Upton & Han, 2003). Therefore, exposure to these images can matter.

Research on body satisfaction on adolescent and young adult women has demonstrated that body dissatisfaction can be impacted by media and can be directly
detrimental to psychological and physical health. Although it has not been studied much during pregnancy, the research reviewed here shows that women still experience different levels of body satisfaction and impacts from media during other stages of their lives. As pregnancy and breastfeeding alters one’s body in dramatic ways, body satisfaction is a potentially important, albeit understudied, component in understanding pregnancy and a woman’s decisions regarding breastfeeding. Treating body satisfaction as a moderating variable is one way to explore this relationship, as the studies that have investigated direct impacts of body satisfaction and breastfeeding have been mixed. In other words, body satisfaction might not directly impact these intentions, but instead moderate other parts of the process such as attitudes, subjective norms, and perceived behavioral control, outlined by the TPB. On the one hand, for example, for those with moderate to low body satisfaction, the relationship between attitude and breastfeeding intentions could ultimately be negative because despite the positive attitudes they have toward breastfeeding, the behavior ultimately involves their bodies, which they are less confident or comfortable with. On the other hand, for women with a high body satisfaction the relationship between attitude and breastfeeding intentions might be positive as hypothesized by the TPB because they are more comfortable and confident about their bodies and, therefore, do not have an extra impediment to their intentions.

From the available literature on body image and pregnancy, a few variables seem important for understanding the role of communication and body image in health decisions during pregnancy. These variables include interpersonal relationships and discussion and the salience of those relationships (Jones, 2011). Further, the role of media, and particularly more specific types of media usage, should be explored (Levine & Chapman, 2011). As
pregnant women might seek out specific types of media during pregnancy, it is important to include these. The theory of planned behavior (TPB) and uses and gratifications take these variables into account. Even though neither has been used for this specific topic, these theories incorporate specific relationships, discussion, salience, and specific types of media use to understand their influence on particular outcomes.

Overall, past research regarding pregnancy indicates that body image, as well as the components of the TPB and uses and gratifications are especially relevant to the current project. For example, in understanding influences of body image, Cash (2011) argues that changes in life that result in deviations from standards of the body that have been communicated and internalized by someone can cause greater stress on body image. Cash (2011) further argues for the importance of interpersonal experiences, such as by face-to-face interactions and online social networking interactions, as well as personality traits, such as perfectionism, in determining one’s body image. Therefore, the proceeding chapters will investigate body satisfaction during pregnancy as a possible moderating variable with the two theoretical frameworks employed.
CHAPTER 3

Using the Theory of Planned Behavior and Body Dissatisfaction to Predict Breastfeeding Intentions

The purpose of the theory of planned behavior (TPB) is to understand the social and psychological components that influence behavioral intentions and the extent to which they do so. In the context of the current study, the TPB is used to understand the predictors of intentions to breastfeed, a health decision women need to make when expecting and one encouraged by many health organizations. This starts with belief measures that are used to construct variables representing attitudes, subjective norms, and perceived behavioral control, which predict intentions. Past research has shown all three components of the TPB as important indicators of various intentions, so including them all in Study 1 is important. This chapter reports the findings of a study that examined the relationship of the TPB variables, as well as external variables such as body satisfaction, and intentions to breastfeed for three months, six months, and one year.

The TPB should be a reliable explanatory model of intentions to breastfeed; however, studies have found differing beta weights for the variables depending on the context, including analyses that behavioral control is the most important predictor of intentions (Ajzen & Fishbein, 1991; Godin & Kok, 1996). The beta weights demonstrate how much and in what direction the dependent variable changes when the independent variable changes. Therefore, each of the variables in the TPB should help to predict the behavioral intention, but each might have a different impact depending on the behavioral intention of interest. For example, it could be found that attitudes have more of an impact on intentions to breastfeed than the other two variables. If this were the case, it could be important to understand for
health communication scholars and practitioners as they design breastfeeding campaigns, as it would highlight the need to focus more on issues of beliefs and attitudes regarding breastfeeding than on whether or not a woman believes she has the ability to breastfeed. Understanding how each variable impacts breastfeeding intentions, then, can be beneficial in creating messages from organizations and from healthcare practitioners. It is imperative to know what impacts a woman’s decision to breastfeed.

Other issues, though, might also influence how women make breastfeeding decisions. Research has shown that pregnancy body dissatisfaction can potentially impact intentions to breastfeed. Past research has been mixed regarding the relationship between body image and breastfeeding. It has been found that women who are more satisfied with their bodies have a higher intention to breastfeed than those less satisfied (Foster, Slade & Wilson, 1996), but another study did not find that breastfeeding and formula-feeding mothers differed in body satisfaction (Walker & Freeland-Graves, 1998). Given the possibility that body satisfaction could impact feeding method, pregnancy body satisfaction will be included as a potential moderating variable, as shown in conceptual model 2 (figure 1.2). Due to lack of previous research, it is not known how or if body satisfaction and the three TPB variables are connected.

The current study proposes that the relationship between the TPB variables and intentions to breastfeed could be altered due to a moderation effect—an interaction with pregnancy body dissatisfaction. Testing for this will allow for differences in beta weights to be analyzed, which is how the TPB is usually tested, from model 1 to model 2 when body dissatisfaction is added. For example, one might have a fairly positive attitude towards breastfeeding, but rather than that leading directly to an intention to breastfeed, the person’s
higher body dissatisfaction might make them less likely to breastfeed. This would mean that at least in this particular context, the TPB variables alone might not explain as much as they are purported to and that other variables might be affecting intentions along with the TPB variables. If this is the case, then better explanation for how breastfeeding intentions are developed and strongest predictors of breastfeeding can be identified. Based on past research regarding body dissatisfaction and breastfeeding, it could be hypothesized that women higher in body satisfaction will already have a higher intention to breastfeed than those lower in body satisfaction.

Due to the lack of previous research of this kind, it is difficult to anticipate what impact the interaction between body dissatisfaction and the TPB variables will have. From what is available, though, some possibilities arise. For attitudes toward breastfeeding, the TPB could predict that the more positive attitude one has toward breastfeeding the more likely she will be to intend to breastfeed. However, with some research showing that women high in dissatisfaction are less likely to breastfeed than those low in body dissatisfaction, body dissatisfaction could limit that direct effect. Based on past research regarding the TPB and breastfeeding, subjective norms might be the strongest main effect found in the study (Swanson & Power, 2005) and, therefore, each body dissatisfaction group might begin similarly and differences might be subtler. Finally, perceived behavioral control is the variable with even less available research regarding breastfeeding, but following the TPB, a higher sense of control should lead to a higher intent to breastfeed, and a similar hypothetical interaction plot to that of attitudes could be expected.

**Hypotheses and Research Questions**

The TPB hypothesizes that attitudes, subjective norms, and perceived behavioral
control will influence behavioral intentions. These three components are formed through beliefs. Therefore, the first set of hypotheses and research questions are as follows:

**H1:** Positive attitudes about breastfeeding will positively influence one’s intention to breastfeed for recommended periods of time (3 months, 6 months, and 1 year).

**H2:** A higher indication of subjective norms will positively influence one’s intention to breastfeed.

**H3:** Stronger perceived behavioral control over one’s ability to breastfeed will positively influence one’s intention to breastfeed.

**RQ1:** Which component of the TPB will have the most influence on one’s behavioral intentions?

**RQ2:** How will predispositions impact the effects on intentions?

**RQ3:** What is the role of pregnancy body satisfaction in the TPB models?

**Method**

The above hypotheses and research questions were addressed through an online survey of women who were currently pregnant \( N = 156 \).

**Sampling and recruitment**

As random sampling was not possible for this population, a combination of purposive and snowball sampling was used to gain an adequate sample size. Pregnant women were recruited through a variety of means. Following IRB approval in the spring of 2014, postings were placed on online pregnancy forums and social networking sites. Further, announcements were placed, when permitted, in medical facilities and community boards, and passed along to members of the community that are likely to work with pregnant women, such as birth instructors. These various methods of recruitment were attempted due to the
difficulty of reaching the population of interest. These efforts resulted in a sample size of $N = 156$. Although a larger sample size is desirable for a stronger statistical power level, realistically the population is difficult to sample. Convenience sampling methods have been used in past studies through medical centers in which one or more of the researchers worked. The variety of sampling means, though, was helpful in producing a strong enough sample size. Incentive for participation was provided in the form of two drawings for a fifty dollar gift card to Babies R’ Us.

**Procedures**

Following university IRB approval, the survey questionnaire was made available online through Qualtrics. Participants were directed to the survey through a link to Qualtrics where they first provided their consent to participate. After consenting to their participation, participants began the survey with pre-pregnancy disposition items. This was followed by uses and gratifications questions, belief questions related to the TPB, behavioral intentions, and current body image questions. The last set of questions was control measures: demographics, current trimester, past pregnancy experience, and weight measures. The last page of the survey debriefed the participants and directed them to contact information should they have additional follow-up questions regarding the research. Further, they were directed to a link to enter the drawing for the gift card. The link took them to a separate Google form where participants entered an email address in order to be contacted should they win one of the drawings. This separate form ensured anonymity in responses was maintained as the email address and responses cannot be linked. Measures are described below and the full survey is attached as Appendix A.

**Measures**
Pre-Pregnancy Dispositions.

**Body Satisfaction.** Body satisfaction was measured using the body-esteem scale (Cronbach’s α=.85) (Franzoi & Sheids, 1984). This scale is based on the body-cathexis scale, which measures the satisfaction and dissatisfaction one has with his or her body (Goodwin, Astbury, & McMeeken, 2000) and has been found to have an adequately high internal consistency (Cronbach’s α ranging from .78 to .87) and a stable factor structure and rationale (Blascovich & Tomaka, 1991). Further, other body dissatisfaction scales, such as that from the Eating Disorder Inventory (Garner, 1991), which is often used, are more geared towards diagnosing eating disorders so certain body concerns are not included (Crowther & Sherwood, 1997). The weight subscale of the body esteem scale, though, has been found to be able to differentiate between those with eating disordered behaviors and those without (Blascovich & Tomaka, 1991). Therefore, this scale is a useful method for measuring this variable. Participants were asked to think about their feelings prior to pregnancy regarding both sexual attractiveness (i.e., body scent, lips, bust, face) and weight concern (i.e. appetite, waist, thighs, buttocks, hips, legs, figure, weight). The body esteem scale was measured on a 1-5 Likert scale with 1 = very negative feelings and 5 = very positive feelings ($M = 3.20, \text{SD} = .59$).

**Psychological factors.** Following the advice of Cash (2011), perfectionism was included as a psychological factor, measured as a potentially important predisposition. The personal standards subscale from the multidimensional perfectionism scale (Frost, Marten, Lahart, & Rosenblate, 1990) was used to measure perfectionism (Cronbach’s α = .82). The personal standards subscale and concern over mistakes subscale are the most related to the need to strive for and achieve high standards and goals. Items included “If I do not set the
highest standards for myself, I am likely to become a second-rate person,” “I set higher goals than most people,” and “I expect higher performance in my daily tasks than most people.” Participants were asked to indicate agreement to items on a 1-5 Likert scale, where 1 = strongly disagree and 5 = strongly agree (M = 3.10, SD = .68).

**Beliefs Related to TPB Measures**

*Breastfeeding attitudes.* Following the guidelines set forth by TPB, attitudes towards a behavior were measured by beliefs regarding the behavior multiplied by the evaluation of the behavior (Ajzen, 1991; Ajzen & Madden, 1986; Manstead, Proffitt, & Smart, 1983; Swanson & Power, 2005). Breastfeeding beliefs and evaluations towards these beliefs were modified from a breastfeeding attitude scale developed by Manstead, Proffitt, and Smart (1983) and modified by Swanson and Power (2005). Participants responded to belief items on a 1-7 Likert scale ranging from strongly disagree (1) to strongly agree (2). Items included “Breastfeeding provides the best nourishment for baby,” “Breastfeeding protects against infection,” “Breastfeeding will make my social life difficult,” and “Breastfeeding is embarrassing for the mother” (M = 5.82, SD = .76). Evaluations of these beliefs corresponded directly to each belief statement, which was also measured on a 1-7 scale where 1 = not at all important to me and 7 = very important to me; for example, “Providing the best nourishment for baby is…” and “Protecting baby against infection is…” were followed by the 1-7 Likert scale (M = 5.44, SD = .39). Overall attitudes were determined by multiplying each belief item by the corresponding evaluation item. During data analysis these were transformed to a -3 to +3 scale following the methodology set forth in the theory of planned behavior (Ajzen, 1985). Overall attitudes ranged from -12 to 42 with M = 22.72 (SD = 10.49).
**Breastfeeding subjective norms.** Similarly to attitudes, subjective norms were measured by multiplying the normative belief items by an evaluation of importance of the subjective other (Ajzen, 1991; Ajzen & Fishbein, 1980; Ajzen & Madden, 1986; Manstead, et al., 1983; Swanson & Power, 2005). Each item asked participants to indicate the extent to which they believe that a specific other thinks they should breastfeed (ex: “My partner/spouse thinks I should…” and “My mother thinks I should…”) where 1= definitely not breastfeed and 7 = definitely breastfeed. Evaluations were again measured on a 1-7 scale with 1 = not at all important to me and 7 = very important to me. Items corresponded to the normative belief items; for example, “My spouse’s/partner’s views on breastfeeding are…” and “My mother’s views on breastfeeding are…” Again, these were transformed to a scale of -3 to +3. Participants were given a “not applicable” option as it was not assumed that all participants would have each of the subjective others in their lives. For the participants that responded “not applicable” to a subjective norm, their response was coded as “0.” This method was used instead of using the mean as the mean could reduce variability that should be present. Importantly, the zero provides the participants with a score that would be their appropriate norm score because they don’t have a particular referent other in their lives or the specific person and/or that person’s opinion does not matter to them. Subjective norms scores ranged from -63 to 58.74 with a $M = -0.34$, $SD = 17.32$.

**Breastfeeding control.** Finally, perceived behavioral control regarding breastfeeding was measured. First, an overall control measure asked participants to respond to the statement “I can easily breastfeed my baby” ($M = 4.97$, $SD = 1.61$). Next, women were asked to respond to items regarding their beliefs about their ability to breastfeed on two 1-7 Likert scales. Similarly to attitudes and subjective norms, one set asked about the women’s own
abilities and resources to breastfeed and the second set asked about the women’s perceptions of the importance of each ability and resource. For example, the first set of items included statements such as “I have the necessary resources to breastfeed,” “My workplace will make it easy for me to breastfeed,” and “I have the physical ability to breastfeed.” Once these were transformed to the -3 to +3 scale, mean responses ranged from -19 to 45 with $M = 14.51$, $SD = 12.42$.

**Body satisfaction during pregnancy.** Body satisfaction during pregnancy was measured similarly to body satisfaction prior to pregnancy on a 1 to 5 Likert scale. The items, however, were made more specific to possible pregnancy concerns like the belly or legs ($M = 3.11$, $SD = .71$). The items yielded Cronbach’s $\alpha = .89$.

**Behavioral intentions.** Intention to breastfeed was designed to cover several concerns outlined in Healthy People 2020 under maternal health. Women were asked to rate the likelihood of feeding their babies in a given manner on a 1-7 Likert scale with 1 = very unlikely and 7 = very likely. The first item asked the likelihood of breastfeeding exclusively for three months ($M = 6.24$, $SD = 1.52$). The second item asked the likelihood of breastfeeding exclusively for six months ($M = 5.69$, $SD = 1.76$). The third item asked the likelihood of breastfeeding for one year, even after incorporating solid foods ($M = 4.56$, $SD = 2.20$). Breastfeeding was defined as either nursing or feeding expressed/pumped milk, which is consistent with definitions provided by the World Health Organization.

**Control measures.** The last set of survey questions dealt with control variables. Participants were asked to indicate their age by typing in their age ($M = 29.47$, $SD = 1.52$). Race was measured categorically with options including White (85.3%), Black (1.9%), Middle Eastern (1.3%), Indian Subcontinent (0.6%), Asian (1.9%), Hispanic/Latina (3.8%),
Pacific Islander (.6%) and Other (4.5%). This was eventually dummy coded to White (85.3%) and Other (14.7%) due to the small number of respondents self-identifying as other than white. Participants were then asked to indicate their 2013 household income using categories from the U.S. census, including “under $10,000” (.6%), $10,000 to under $30,000 (7.1%), $30,000 to under $50,000 (14.3%), $50,000 to under $75,000 (21.4%) $75,000 to under $100,000 (18.2%), $100,000 to under $150,000 (23.4%) and over $150,000 (14.9%). The mode for income was the $100,000 to under $150,000 range and the median was the $75,000 to under $100,000 range.

Participants were also asked to indicate whether or not they were in their first pregnancy (65.2% yes) and which trimester they are currently in (25.6% in first, 46.2% in second, and 28.2% in third). Trimester was transformed into two dummy variables in order to be used in the regression analyses. Finally, they were asked to indicate their height, their average weight in the year prior to becoming pregnant, and their current weight. This information was used to calculate BMI. The mean height was 5.4 feet. The mean weight prior to pregnancy was $M = 153.95$ ($SD = 38.80$) and the mean current weight was $M = 167.69$ ($SD = 40.11$). BMI was calculated using the following formula:

$$\text{BMI} = \frac{\text{weight (pounds)}}{\text{height (inches)}^2} \times 703$$

The average pre-pregnancy BMI was $M = 25.37$, $SD = 6.20$ and the mean current BMI was $M = 27.64$, $SD = 6.18$. Using the categories defined by the CDC, pre-pregnancy, BMIs ranged from 3.2% underweight (18.5 or lower), 58.4% normal (18.51 through 24.9), 22.1% overweight (25 through 29.9) and 16.2% obese (above 30). These results are very similar to overall BMI findings regarding women in the United States (CDC, n.d.).

**Analysis**
The TPB was tested using ordinary least squares regression analysis to test each step of the model. Attitudes towards breastfeeding, subjective norms, and perceived behavioral control were used as predictors of breastfeeding intentions. After testing each TPB model, control variables and body satisfaction were included in a model to determine their impacts on behavioral intentions. A $p < .10$ threshold was used due to the smaller sample size in order to avoid possible Type II error.

**Results**

**H1-H3**

Hypotheses 1, 2, and 3 posited that attitudes toward breastfeeding, subjective norms, and perceived behavioral control (pbc) would influence intentions to breastfeed for the three recommended periods of time. The results of the regression tests are reported in tables 3.1, 3.2, and 3.3. Hypothesis 1 was supported for all three breastfeeding outcome variables. Attitudes toward breastfeeding positively predicted intentions to breastfeed exclusively for three months, $\beta = .34$, $t(155) = 4.55$, $p < .001$, as well as six months, $\beta = .30$, $t(155) = 4.08$, $p < .001$. Further, attitudes positively predicted intentions to breastfeed for a full year, even after incorporating solids into a baby’s diet, $\beta = .28$, $t(155) = 3.66$, $p < .001$. The higher one’s attitude toward breastfeeding, therefore, the higher one’s intention is to breastfeed for three months, six months, and a full year.

Hypothesis 2 predicted that subjective norms would positively predict intentions to breastfeed for the three recommended periods of time under investigation. This hypothesis was not supported by the regression testing. For intentions to exclusively breastfeed for three months, there was a positive and significant correlation between subjective norms and intentions, $r(155) = .18$, $p < .05$; however, in the regression model with the other two TPB
variables, there was no significant relationship. Similar results were found for intentions to exclusively breastfeed for six months with a significant correlation, \( r(155) = .14, p < .10 \), but the regression test was again non-significant. It appears that the relationship between subjective norms and intentions to breastfeed for three and six months disappears when put into a model with the other TPB variables, attitudes and perceived behavioral control. For intentions to breastfeed for one full year, neither the correlation nor the regression tests were significant.

Hypothesis 3 predicted that perceived behavioral control would positively predict intentions to breastfeed. This hypothesis was supported. Perceived behavioral control positively predicted intentions to exclusively breastfeed for three months, \( \beta = .20, t(155) = 2.75, p < .01 \), as well as intentions to exclusively breastfeed for six months, \( \beta = .29, t(155) = 3.94, p < .001 \). Similarly, perceived behavioral control positively predicted intentions to breastfeed for one full year, \( \beta = .23, t(155) = 3.08, p < .01 \).

**RQ1**

Research question 1 asked which TPB variable would have the strongest impact on the behavioral intentions. Attitudes and perceived behavioral control significantly contributed to the overall models. For the three different outcome variables, the regression models explain a significant amount of variance. For intentions to exclusively breastfeed for three months, \( R^2 = .21, F(3, 152) = 13.03, p < .001 \) and for intentions to exclusively breastfeed for six months, \( R^2 = .22, F(3, 152) = 14.01, p < .001 \). For intentions to breastfeed one year, the variance explained is still significant, although less than the other two models, \( R^2 = .15, F(3, 152) = 8.98, p < .001 \). When looking at the three regression models (Tables 3.1-3.3),
subjective norms contribute the least to the models and its relationship to breastfeeding for three months and six months disappears when together with the other two TPB variables.

**RQ2**

Research question 2 asked how predispositions would impact the regression models in predicting behavioral intentions. Control variables were included to investigate how these variables would impact the models and these were entered in the same way for each of the three dependent variables. The first block of the regression models contained demographic information, including age, race, and income. Block 2 added pregnancy changes, including weight change (calculated by subtracting pre-pregnancy weight from current weight), first pregnancy, and the two trimester dummy variables. For the model predicting exclusive breastfeeding for six months, this block included intentions to breastfeed for three months. For the model predicting breastfeeding for one year, this block included a three and six month breastfeeding intention average. As three and six month intentions were highly correlated, \( r(156) = .78, p < .001 \), they were combined for the model. A check for colinearity found no issues. These additions to the models controlled for previous indications of intentions at the earlier durations. Although the three outcome variables were measured at the same time, treating them as prior behavioral intentions seems appropriate for the breastfeeding context as women might consider the possibilities to plan in advance. Continuing in the regression model, block 3 added psychological variables including pre-pregnancy body satisfaction, perfectionism, and current pregnancy body satisfaction. Finally, the fourth block added the three TPB variables: attitudes, subjective norms and perceived behavioral control.

The results of these models for all three dependent variables are reported in tables 3.4,
3.5, and 3.6. The regression model predicting intentions to exclusively breastfeed for three months explained 25.9% of variance. The ANOVA was not significant for the first block. As Table 3.4 illustrates, none of the demographic variables influenced this behavioral intention. In the second block, the ANOVA was significant, $F(7, 136) = 2.27, p < .05$. Whether this was one’s first pregnancy positively impact the intention to breastfeed for three months--if respondents indicated that this was their first pregnancy, they were more likely to indicate the intention. This relationship remained significant in the fourth model. The ANOVA was also significant in the third block, $F(9, 134) = 1.77, p < .01$. Pre-pregnancy body satisfaction was significantly and negatively related to the intention in the fourth model. Pregnancy body satisfaction was significant when initially added, but once the TPB variables were added the model, the relationship was no longer present. The ANOVA for the fourth block, adding the TPB variables, was significant $F(12, 131) = 3.82, p < .001$. As with the model tested in hypotheses 1 through 3, subjective norms was correlated with the intention to breastfeed for three months, but once in the regression model, it was not significant. Attitudes and perceived behavioral control were both significant predictors of the intention, though.

Analyzing the intention to exclusively breastfeed for six months, the results change some. Demographic variables were still non-significant, $F(3, 140) = .87, p > .05$. At the second block the ANOVA was significant $F(8, 135) = 30.43, p < .001$. First pregnancy was correlated with the intention, but once included in the regression model with intention to breastfeed three months in the same block, it was not a predictor. Intention to exclusively breastfeed for three months was a significant predictor adding an additional 62.5% of variance explained by the model. Block three was also significant, $F(10, 133) = 24.48, p < .001$. Pre-pregnancy body satisfaction was again negatively related to the intention to
breastfeed for six months. No other psychological variables were significant. Finally, when the TPB variables were added to the fourth block, $F(13, 130) = 20.13, p < .001$, attitude and perceived behavioral control were again the significant variables. In total, this model explained 67.2% of variance.

Finally, intentions to breastfeed for one full year even after introducing solids was analyzed and, again, the results changed some. In this model, income was a significant and negative predictor of intentions—the higher one’s income level, the less likely she was to indicate the intention to breastfeed for one year. In the second block, $F(8, 135) = 20.43, p < .001$, previous intentions (three and six month breastfeeding intentions) was a positive and significant predictor of intentions to breastfeed on year. Trimester 3 was also a negative predictor of intentions—those in their third trimester were more likely than those in the other two trimesters to indicate that they would breastfeed for a full year; however, once the TPB variables were included, the relationship disappeared. The third block ANOVA was significant, $F(10, 133) = 16.94, p < .001$. Although pre-pregnancy body satisfaction was significantly correlated to the intention, it was not significant in any of the models; nor were any other psychological variables. Finally, the block with the TPB variables, $F(13, 130) = 14.25, p < .001$, were different than with the other two behavioral intentions. Attitudes and perceived behavioral control were the only two TPB variables that were correlated with the intention to breastfeed one year; however, when added into the model after the other control variables, only subjective norms became a significant predictor of the intention. Those who indicated higher subjective norms were less likely to indicate an intention to breastfeed for one year. It seems as though attitude and perceived behavioral control were encompassed by prior indications of intentions to breastfeed for three and six months.
RQ3

Research question 3 asked about the impact of pregnancy body satisfaction on intentions. Pregnancy body satisfaction was included as a moderating variable. The results of the interactions between pregnancy body satisfaction and the three TPB variables are presented in block 5 of the regression models in tables 3.4, 3.5, and 3.6. Interaction effects were present for intentions to exclusively breastfeed for six months (table 3.5). Specifically, the interaction of attitudes and pregnancy body satisfaction (figure 3.1) and the interaction of subjective norms and pregnancy body satisfaction (figure 3.2) were significant. Figures 3.1 and 3.2 depict these relationships. Other variables from the model are included as covariates. As figure 3.1 illustrates, those in the high body satisfaction group appear to be most strongly impacted by attitude when compared to those in the low or moderate body satisfaction groups. The positive relationship between attitude and intentions to breastfeed for six months is mostly due to the high body satisfaction group. The moderate and low satisfaction groups appear to be impacted less.

Figure 3.2 depicts the relationship between subjective norms and body satisfaction as they impact intentions to exclusively breastfeed for six months. It appears that the higher subjective norms leads to a kind of boomerang where the moderate subjective norms seem to have the most positive impact in all three body satisfaction levels, but most dramatically in the high body satisfaction group. The other two groups, particularly the low body satisfaction group, appear to be most negatively impacted by the presence of high subjective norms where those who indicate high subjective norms are less likely to indicate intentions to breastfeed for six months than those who indicate low subjective norms.

Discussion
The results demonstrated a few important factors in understanding impacts on intentions to breastfeed for the three different periods of time, including the impact of the TPB on its own and the importance of the addition of body satisfaction and other control variables. The results of the first three hypotheses illustrated the impact of the TPB variables. In particular, they highlighted the effects of attitudes and perceived behavioral control for all three breastfeeding time periods. Subjective norms, although correlated with intentions to breastfeed exclusively for three months and for six months, was not a predictor of either when in the model with attitudes and perceived behavioral control. Overall, all three models were significant in predicting breastfeeding intentions for three months, six months, and one year.

When other variables were added to the TPB models, a slightly different picture emerged for the three intentions. For the intention to exclusively breastfeed for three months, the model showed that attitudes and perceived behavioral control contributed a significant amount to predicting the outcome; however, two other variables added explanation, as well. What does this mean for women making breastfeeding decisions? First, if it was a woman’s first pregnancy, she was significantly more likely to indicate an intention to exclusively breastfeed for three months. Second, pre-pregnancy body satisfaction was a negative predictor of intentions to exclusively breastfeed for three months. Perhaps those who have prior experience with children and breastfeeding view it as slightly more challenging than those without prior experience. This explanation is in line with past research investigating why women stop breastfeeding, including having past experiences with breastfeeding that made it difficult to continue (Li, et al., 2008; Scott & Colin, 2002). Previous experiences and realizations that breastfeeding can be difficult makes one more aware of the possibility that
she might not be able to breastfeed exclusively for that time period and, therefore, has a lower intention to do so than those without that experience. A post hoc analysis revealed no significant differences in attitudes toward breastfeeding between those who indicated this as a first pregnancy and those who did not. An analysis did reveal significant differences in perceived behavioral control, where those who indicated this was their first pregnancy perceived more behavioral control than those who did not, $t(153) = -2.38, p < .05$. This could explain some of the differences between the two groups in intentions to breastfeed. Further, those higher in pre-pregnancy body satisfaction also indicated a lower intention to breastfeed exclusively for three months.

Attitudes and perceived behavioral control were again significant predictors of intentions to exclusively breastfeed for six months. Pre-pregnancy body satisfaction was also a significant predictor in a similar way to the intention for three months of breastfeeding. Whether this was a woman’s first pregnancy was no longer significant in the model; instead, prior intentions—intentions to breastfeed for three months—was significant and explained a large amount of variance in the model. Finally, for intentions to breastfeed for one year even after introducing solid foods, the picture changed. Attitudes and perceived behavioral control were no longer significant predictors, but subjective norms was a negative predictor of intentions. Prior intentions—intentions to breastfeed for three and six months—continued to be a positive predictor of intentions. Further, in this model, income became a negative predictor so that the higher one’s income became the less likely she was to indicate intentions to breastfeed for a full year. Given that babies should not be given any kind of milk other than breastmilk or formula until one year, perhaps those with higher income statuses foresee more of an ability to switch to formula or combination feeding as the baby gets older than
those in lower income statuses who might not want to or be able to pay for formula.

Finally, looking at pregnancy body satisfaction as a possible moderating variable with the TPB variables, the intention to breastfeed exclusively for six months revealed two interaction effects. What do these interaction effects reveal about breastfeeding intentions? Body satisfaction significantly interacted with attitudes and with subjective norms. Those in the high body satisfaction group appear to be the most impacted by attitudes, more so than the low or moderate body satisfaction groups. Subjective norms appear to impact intentions to breastfeed for six months depending on the level of body satisfaction during pregnancy and do not seem to be clearly linear in relationship with intentions. High subjective norms resulted in lower intentions to breastfeed in all three body satisfaction group, but most dramatically for those in the moderate and low body satisfaction groups where those who indicated a higher sense of overall subjective norms were less likely to indicate an intention to breastfeed for six months than those who indicated lower overall subjective norms. Subjective norms did not have a direct impact on the outcome variable in the regression model, but the interaction with body satisfaction indicates its importance and perhaps counterintuitive effect. It is possible that those higher in subjective norms feel pressure (Armitage & Conner, 2001) from significant sources of personal and media influences and that pressure, particularly for those lower in body satisfaction, rather than having an encouraging effect on breastfeeding, boomerangs. Possible implications will be further explored below.

**Theoretical Implications**

**Theory of planned behavior.** The current study has several theoretical implications regarding the theory of planned behavior, as well as body image concerns, as it relates to
breastfeeding intentions. First, the TPB outlines three variables in determining behavioral intentions: attitudes, subjective norms, and perceived behavioral control (Ajzen, 1991; Ajzen, 2002; Godin & Gok, 1996; Montano & Kasprzyk, 2008). According to an analysis of TPB studies (Godin & Gok, 1996), the average $R^2$ for was found to be 40.9% and varied from 36% to 47% depending on the context. A meta-analysis of the TPB found that the average variance in behavioral intention explained was $R^2 = 39\%$ with subjective norms being the weakest construct in the TPB model (Armitage & Conner, 2001). As illustrated in tables 1, 2, and 3, the findings of the current study have less variance explained, ranging from 15.1% to 21.7%. Unlike the studies included in the meta-analyses, though, the current research demonstrates other variables that add significant explanation to the model and finds a different effect of subjective norms.

Second, the theory of reasoned action (TRA) from which the TPB stemmed, as well as the TPB, were originally conceptualized with an assumption of sufficiency (Ajzen, 2011; Sniehotta, Presseau, & Araújo-Soares, 2014) without a need to consider variables other than the three included in the theory: attitudes, subjective norms, and perceived behavioral control (Ajzen, 2011; Ajzen, 1991; Ajzen & Fishbein, 1980; Ajzen & Madden, 1986; Godin & Gok, 1996). When outlining the TRA, Ajzen and Fishbein (1980) stated that external variables would impact the variables only to the extent that they affect the variables in the model. Basically, the model with the three main TPB variables should account for other variables, such as past behavior, personality traits, or demographics (Ajzen, 1991; Ajzen & Fishbein, 1980). The current study only supports these assertions to an extent.

Although the three TPB variables explained a significant amount regarding the intentions to breastfeed for the three periods of time under study, other components were also
important and revealed important impacts on intentions. Even with measuring perceived behavioral control, prior intentions explained much of the variance in both the six month breastfeeding and one year breastfeeding models. It could be argued that including the measures of three month breastfeeding and the combined three and six month breastfeeding might not adequately reflect prior intentions; however, the way in which breastfeeding time frames are discussed in terms of planning and preparing for breastfeeding indicates that behavior could be viewed in these terms, even as intentions. Overall, though, the three TPB variables did not appear to encompass all external variables. Comparing the $R^2$ for the models presented in tables 1 through 6, the amount explained by the fuller models is more than those containing just the three TPB variables. It seems that the three TPB variables, when measured properly, can explain a large amount of behavioral intentions, as demonstrated here; but, in some contexts other measures will also be of great importance, such as prior intentions and body satisfaction, as well as demographic information like income (table 6) and whether it is one’s first experience with the situation at hand like a first pregnancy (table 4). Comparing the $R^2$ of the models that include control variables and the interaction terms to the average $R^2$ presented in the research reviews of 40.9% (Godin & Gok, 1996) and 39% (Armitage & Conner, 2001), the variance explained by the current study is higher than the average and higher than the maximum found in either range. It demonstrates the importance of the TPB variables, but also the importance of recognizing the context in which the behavior takes place. In practical considerations, the acknowledgement of the control variables beyond the $R^2$ results are important additions to consider in planning interventions, which will be discussed below. Further, it demonstrates a different way in which subjective norms might exert influence over behavioral intentions.
The current chapter seems to indicate that subjective norms continues to need extra attention and consideration in the way in which it is measured and utilized as a component of the TPB; however, the relationship itself might also be worthy of reconsideration. In the past subjective norms has been identified as the weakest construct of the TPB (Armitage & Conner, 2001; Godin & Gok, 1996; Rivis & Sheeran, 2003). In fact, Armitage and Conner (2001) noted that many studies used just one item to measure the subjective norms variable, which may very well contribute some of the weak findings associated with the construct. In other studies, including previous breastfeeding studies (Swanson & Powers, 2005; Wambach, 1997), subjective norm items have been compared as to their contributions to behavioral intentions, rather than put together as an overall measurement. Following the type of measurement recommended originally by Ajzen & Fishbein (1980) and Ajzen & Madden (1986), the current study found that on its own, subjective norms contributed the least to the behavioral intentions. When added to the larger models with control variables and prior intentions, subjective norms did significantly impact intentions to breastfeed for one full year and interacted with body satisfaction in predicting the same intention. Interestingly, though, the relationship with the intention to breastfeed for one year was negative and, once plotted with body satisfaction, not linear. At least in the current case, the hypothesized higher subjective norms leading to higher intention to behave is not the case. In fact, it is the moderate group, particularly for those with higher body satisfaction that indicate a higher intention to engage in the behavior. An important area for future research is to explore in more detail the direction of the relationship that subjective norms have with certain behavioral intentions. According to the current research, it is possible that subjective norms tell a different story in some cases than the one initially assumed.
Finally, some scholars have argued that the TPB requires minor variations that need to be considered in specific contexts (Wolff et al., 2011), to which the findings of the current study can contribute. Despite the sufficiency hypothesis, which has been used as evidence for the TPB to no longer be used (Sniehotta, Presseau, & Araújo-Soares, 2014), prior intentions and other external factors appear to add to the variance explained by the TPB model in this context. Pre-pregnancy, or trait, body satisfaction is significant in the model predicting three and six month breastfeeding durations, and state body satisfaction moderates the impact of attitudes and subjective norms for six month breastfeeding; however, once one year breastfeeding is examined those relationships disappear. To some extent the TPB variables might encompass more at this point, but the combined three and six month intentions variables add a large amount of variance explained that otherwise would not be should just the TPB variables be examined. The measure of prior intentions more than likely takes over the impact of the body satisfaction variables. This study is in line with past research suggesting that the sufficiency hypothesis is not supported, particularly with past behaviors (Albarracín, Johnson, Fishbein, & Muellerleile, 2001; Conner & Armitage, 1998; Rise, Sheeran, & Hukkelberg, 2010; Sandberg & Conner, 2008) and other personal and demographic characteristics (Sniehotta, Presseau, & Araújo-Soares, 2014; Wolff et al., 2011).

This study adds support to the claims that prior behaviors or, in this case, prior intentions add a large amount of variance explained in the models and should be included in predicting outcome. Further, this particular study also sheds light on the role of body satisfaction during pregnancy in determining breastfeeding intentions.

**Body image and breastfeeding intentions.** Trait and state body satisfaction levels have not often been used in conjunction for comparison purposes when it comes to the few
studies that explore body satisfaction and breastfeeding. The relationship between body satisfaction and breastfeeding has been examined in the past with inconsistent results (Foster, Slade & Wilson, 1996; Walker & Freeland-Graves, 1998). The addition of body satisfaction during pregnancy in the current TPB study begins to clarify that complicated relationship. The findings here demonstrate that even with a component regarding concern about one’s figure included in the attitudes construct (see Appendix items e1 and f1) state and trait body satisfaction still play additional and separate roles in explaining intentions to breastfeed.

Generally, this study found that pre-pregnancy body satisfaction—the trait measure—has a negative relationship to intentions to exclusively breastfeed for three months and for six months. This could be explained in a couple of ways: 1) those who usually have a higher sense of body satisfaction might not be as concerned with breastfeeding as a method for weight loss; or 2) those with a higher sense of body satisfaction might also be more confident in other areas of their life, meaning that they might not feel as much pressure to breastfeed. This is a relationship worth exploring more in future research.

Pregnancy body satisfaction—the state satisfaction measure used here—identifies a different relationship to breastfeeding intentions. On its own, pregnancy body satisfaction was not directly related to intentions to breastfeed for any of the three durations of time examined. Pregnancy body satisfaction did, however, interact with both attitudes and subjective norms in predicting intentions to exclusively breastfeed for six months. Body satisfaction in the current state moderated the impacts of the two TPB variables and assisted in clarifying how state body satisfaction can impact the behavioral intention and how it impacts attitude and subjective norms. This result seems to indicate that, as one past study found (Foster, Slade & Wilson, 1996), body satisfaction during pregnancy can impact
breastfeeding, but as the other found (Walker & Freeland-Graves, 1998) the relationship might not be direct. These studies did not measure intention, though, so the comparison is not direct; however, it might be presumed from the current study that the different results could be due in part to the moderating impact body satisfaction has on breastfeeding intentions.

The role of body satisfaction, as explored in this study, is one to consider further in future research on the subject. It illustrates that the way in which a woman feels about her body, both as a norm or trait prior to pregnancy and as a state pregnancy body satisfaction has consequences beyond the psychological. Breastfeeding is an important health decision that a woman makes for both herself and, mostly, for her baby. The indication that body satisfaction might have an impact on this decision is one that must be explored in replication in order that researchers and practitioners alike take into account all variables that significantly impact these decisions. Implications for women and health care practitioners are discussed in more detail below.

**Practical Implications**

As women and their healthcare providers consider feeding options for their babies, it is imperative that women are provided with facts regarding breastfeeding, but it is also important that practitioners understand other components that impact a woman’s decision. Maternal and pediatric health organizations, as well as maternal and pediatric sub-divisions of major health organizations generally emphasize breastfeeding as one of the most important health decisions a woman can make regarding her child’s health, as well as her own to an extent. The American Academy of Pediatrics, World Health Organization, the CDC and others recommend that women breastfeed their babies for one full year, but have set goals to increase the number of babies breastfed for three months and for six months (Health People
The current study sheds some light on the ways in which health care providers might assist women in navigating their options in order to arrive at an intention to breastfeed for the given lengths of time. Considerations for these conversations include the three TPB variables, as well as body satisfaction.

The variables of the TPB are important predictors of breastfeeding intentions and a health care provider, whether an OBGYN, pediatrician, nurse, midwife, or lactation consultant, might be more effective if they consider other ways in which a woman might be thinking about breastfeeding. Importantly, these three variables are not just about the health benefits of breastfeeding, but also about the attitudes women develop regarding breastfeeding, how much control women feel they have over their ability to breastfeed, the pressure they feel from significant others to breastfeed, and issues such as body satisfaction. Similarly to other studies looking at behavior adoption or change in terms of the TPB (French & Cooke, 2011; McEachan et al, 2011), addressing a woman regarding breastfeeding, then, should require that one goes beyond the facts and acknowledges the other components as identified through this research. If looking to increase the number of women who breastfeed, as well as prevent early cessation, then health care providers should talk to women about control issues and certain beliefs that relate to attitudes. Further, pressure from significant others should be addressed, particularly in thinking in terms of a longer duration of breastfeeding.

This chapter examined intentions to breastfeed through the TPB and an extension of the TPB. The results demonstrated three key factors in determining outcomes. First, the three TPB variables on their own significantly impacted intentions to breastfeed for each of the studied durations of time. Second, the addition of external variables, including prior
intentions, added a large amount of variance explained to each outcome. These findings support the claims of some TPB researchers that call for continued use of TPB as a theory, but with needed external variables, including demographic or prior behaviors (Albarracín et al., 2001; Conner & Armitage, 1998; Rise, Sheeran, & Hukkelberg, 2010; Sandberg & Conner, 2008; Wolff et al., 2011). Third, the inclusion of pregnancy body satisfaction as a moderating variable proved to be an important addition in explaining decisions to exclusively breastfeed for six months. As the literature review discussed, body satisfaction has been studied as a possible factor in determining breastfeeding outcomes, but with varied results. This chapter illustrated the importance of this factor as it impacts other variables, like attitudes and subjective norms, contributing to the findings that the variable is of significant consequence as we try to understand breastfeeding intentions. In the next chapter I take a different approach to investigating influences on breastfeeding intentions by looking more closely at the media women to which women expose themselves during pregnancy. Chapter 4, then, will take an extended and more specific view of mediated communication variables beyond those included in the TPB.
CHAPTER 4

Uses and Gratifications During Pregnancy and Their Impact on Breastfeeding Intentions

The purpose of Chapter 4 is to examine the type and genres of media women use during pregnancy, their motivations for this use, and the impact that has on behavioral intentions. Chapter 3 analyzed influences on breastfeeding intentions based on the TPB both on its own and with external and moderating variables. The models from that chapter proved to be of significance as we considered breastfeeding intentions. As discussed in Chapters 1 and 2, the current chapter looks at breastfeeding intentions through a different lens: uses and gratifications theory. Uses and gratifications provides a framework through which we can understand the media choices that women are making at the current moment in time, why they are making those choices, and importantly, what impact those choices have. Chapter 6 compares and contrasts the findings and fit of these two approaches.

As Chapter 2 discussed, uses and gratifications assumes a certain extent of agency on behalf of the individual rather than the variables impacting psychological and behavioral outcomes of a passive user. Similarly to the TPB models proposed, body satisfaction will be tested as a moderating variable in the uses and gratifications study. As media use and gratifications can be hypothesized to have an impact on body dissatisfaction there will also be a main effect tested from use and gratifications to body satisfaction to intentions to breastfeed. The moderating component is included as certain media gratifications one seeks out might impact intentions to breastfeed, but, similarly to Chapter 3, body satisfaction might disrupt a main effect. Hypothetically, then, more instrumental media use (i.e., health information seeking) would have more of a direct impact on intentions to breastfeed, but
depending on how one is grouped along body satisfaction could make a difference. For example, if one is low in body satisfaction, their instrumental use of media might lead them to have more of an intention to breastfeed, but more ritualistic use (i.e., passing the time or for entertainment) among this group might exacerbate the impact that being less satisfied with one’s body has on intentions to breastfeed.

**Hypotheses and Research Questions**

Uses and gratifications theory considers what specific media people choose and the reasons they choose them, giving insight into the motivations of media use. Further, the approach assumes that these specific choices and motivations impact outcomes, such as body image and knowledge. Therefore, the following research questions and hypotheses will be addressed:

- **RQ4:** What media do women seek during pregnancy?
- **RQ5:** What are the purposes in seeking out the media that they do?
- **RQ6:** How do the specific media choices impact body satisfaction during pregnancy?
- **RQ7:** How do motivations for choosing specific media impact body satisfaction during pregnancy?
- **RQ8:** How do media choices impact behavioral intentions to breastfeed?
- **RQ9:** How do motivations for choosing specific media impact behavioral intentions to breastfeed?

**Method**

Using the same survey presented in Chapter 3, the above research questions were addressed through an online survey of women who were currently pregnant ($N = 156$).
A sample of $N = 156$ pregnant women was produced using the sampling methods and incentives described in Chapter 3, p. 38.

**Procedures**

Following university IRB approval, the survey questionnaire was made available online through Qualtrics. Participants were directed to the survey through a link to Qualtrics where they first provided their consent to participate. After consenting to their participation, participants began the survey with pre-pregnancy disposition items. This was followed by uses and gratifications questions, belief questions related to the TPB, behavioral intentions, and current body image questions. The last set of questions was control measures: demographics, current trimester, past pregnancy experience, and BMI measures. The last page of the survey debriefed the participants and directed them to contact information should they have additional follow-up questions regarding the research. As described in Chapter 3, pp. 38-39, participants were then taken to the form for the gift card drawing.

**Measures**

**Pre-Pregnancy Dispositions.**

**Body Satisfaction and psychological factors.** For description of the body satisfaction and psychological factors measures, please refer to Chapter 3, pp. 39-40 (Appendix items a1-a12) pp. 40 (Appendix items c1-e9).

**Open-Ended Uses and Gratifications Measures**

**Survey items.** Uses and gratifications of media during pregnancy were measured through open-ended questions. In order to avoid people only writing one medium they use, this was asked in a series. First, participants were asked to identify one medium they have used frequently since becoming pregnant and they were asked to be specific regarding type
and genre. The survey item (Appendix items d1, d3, d5, d7, and d9) read: “The next few items ask about your media use since becoming pregnant. In the space below, please name one type of media or genre of media that you have frequently used since becoming pregnant. Try to be as specific as possible. For example: pregnancy magazines, social networking sites, television shows, online pregnancy forums.” The next question on the same page of the survey asked respondents to identify their reason for that media use and provided a couple of examples for them to get started (Appendix items d2, d4, d6, d8, and d10).

The next page of the survey asked them the same set of questions. After the third page they had the option of noting that they were “done” (Appendix items d7 and d9). The expectation was that by asking for these items one by one rather than asking for a full list at once, there would be more responses rather than participants simply listing one item and moving on to the next set of questions.

Coding procedures and coder training. We took an inductive approach to interpret the uses and gratifications data. Three coders read through the open-ended responses to the media use and gratifications items to determine the common themes in order for the data to be categorized in a manner reflective of the responses. Once the categories were determined, coders practiced coding and talked through any issues. This helped finalize coding instructions.

Uses. Media use was initially coded into a nominal variable with four possible categories: new media, traditional media, mixed, or unclear. It was decided that these categories were reflective of the original qualitative data and meaningful in their distinctions, as Chapter 2 discussed. New media was defined as any online, digital, and/or interactive media; for example, social media, online pregnancy forums, mobile applications, or a
searchable database. Traditional media was defined as print or general broadcast media without an explicit or meaningful digital or online component. Examples of traditional media included television, print newspapers or print versions of magazines. Print versions of newspapers or magazines were categorized as traditional media, whereas online versions or other digital versions of newspapers or magazines were categorized as new media. These distinctions were made based on the differences in how users might interact or learn from the media based on the format, as discussed in Chapter 2. The variable was prepared for inclusion in data analysis by transforming it into two variables: 1) traditional uses, which included any traditional use mentions in the five options and 2) new media uses, which included any new media use mentions in the five options. Calculating three dummy variables completed a second method of analyzing this variable. In each case the comparison was with a media diet of low traditional/low new media use mentions. The dummy variables were used in the hierarchical regression analyses.

The comparison category, Media Diet 1, reflected participants without many mentions of either type of media. For example, one participant mentioned using a pregnancy calculator app on her phone, but no other media. Another mentioned online pregnancy forums and no other media. Therefore, participants in this category might have only had a mention of one type of media, but only one mention total or mentioned one new and one traditional media type but no other media.

The first dummy variable, Media Diet 2, reflected a secondary use or no use of traditional media and a primary use of new media. Participants placed in this category mostly reported new media types in the open-ended response options (more than 2 mentions) and reported less new media types (one or less mentions). An example of a participant in this
category mentioned using online tools from the What to Expect When You’re Expecting books, as well as pregnancy apps and Facebook, but also mentioned one printed pregnancy book.

The second dummy, Media Diet 3, variable reflected primary use of traditional media and a secondary or no use of new media. Participants in this category mostly reported traditional media types, such as books in print or print versions of magazines. An example of a participant in this category mentioned a pregnancy book in print, print versions of fashion magazines, and also online fashion and pregnancy blogs (one mention of new media). The print version of fashion magazines was coded as traditional media, whereas fashion blogs was coded as new media.

The third dummy variable, Media Diet 4, reflected what was generally an equality in primary mentions of traditional media and new media. An example of a participant in this category mentioned online pregnancy forums, social media sites, printed fashion magazines, television, and pregnancy blogs. The mix reflected in this example was typical of those in this category. A breakdown of this typology is depicted in figure 4.1.

**Genre.** Based on the qualitative data, genre was initially divided into four categories: parenting/pregnancy, news, medical/health not related to pregnancy, and other/unclear. Due to the high mentions of pregnancy/parenting media, a continuous variable was then created that counted the number of mentions a participant made of parenting/pregnancy media, resulting in a range of 0-4 mentions ($M = 1.63$, $SD = .91$).

**Gratifications.** In order to simplify the coding of the motivations component of the uses and gratifications study, the basic distinction between ritualized or habitual use of the media and instrumental use of media were coded. This is a basic distinction made between
motivations in uses and gratifications (Rubin, 2009). Ritualized use was indicated by media used to pass the time or because a participant was bored, for entertainment, or something done habitually. For example, some participants listed using television in order to relax and wind-down or pass the time. Others mentioned using social media out of habit or boredom. Instrumental use of media was indicated by using media for specific purposes, such as looking up health information or a desire to talk to other pregnant women about their pregnancy (Rubin, 2009). For example, several participants mentioned using online pregnancy forums to interact with or gain support from other pregnant women. Other participants mentioned using mobile pregnancy apps for information on their pregnancy progress. After coders identified instrumental, mixed, and ritualistic uses, the variable was transformed to a dichotomous variable where 1 represented instrumental use of media and 0 represented non-instrumental use of media.

**Intercoder Reliability.** Intercoder reliability was calculated using Cohen’s $k$. Two coders analyzed 20% of the open-ended data for the media type, genre, and gratifications. Intercoder reliability was high for all three of the variables: for media type, Cohen’s $k = .95$; genre, Cohen’s $k = .86$; and gratifications Cohen’s $k = .95$.

**Moderating Variables and Dependent Variables**

**Body satisfaction during pregnancy.** Body satisfaction during pregnancy was measured as it was in Chapter 3 (pp. 43) (appendix items m1-m13).

**Behavioral intentions.** Intention to breastfeed was measured as described in Chapter 3, pp. 43. The first item asked the likelihood of breastfeeding exclusively for three months ($M = 6.24$, $SD = 1.52$). The second item asked the likelihood of breastfeeding exclusively for six months ($M = 5.69$, $SD = 1.76$). The third item asked the likelihood of breastfeeding for
one year, even after incorporating solid foods ($M = 4.56$, $SD = 2.20$). Breastfeeding was defined as either nursing or feeding expressed/pumped milk (see Appendix items n and o).

**Control measures**

The last set of survey questions dealt with control variables as described in Chapter 3 including age ($M = 29.47$, $SD = 1.52$), income ($M = 4.79$, $SD = 1.53$), race (85.3% White), trimester (25.6% in first, 46.2% in second, and 28.2% in third), whether this was one’s first pregnancy (65.2% yes), and current weight ($M = 167.69$, $SD = 40.11$) and average weight one year prior to pregnancy ($M = 153.95$, $SD = 38.80$). For a full list of these items, see Appendix items p1-p13.

**Results**

**RQ4**

This research question asked which media women report seeking during pregnancy. First, analysis of the dichotomous variables showed 99.4% of women reported using at least one new medium and 47.4% of women reported using at least one traditional medium. An examination of the continuous media type variables showed an average of $M = .60$ ($SD = .66$) mentions of traditional media sources and an average of $M = 2.11$ ($SD = .78$) mentions of new media sources. Looking at genre, respondents mentioned parenting/pregnancy media an average of $M = 1.63$ ($SD = .91$). A correlation matrix (table 4.1) shows that for the most part these findings are not related to demographic characteristics or pregnancy characteristics. Primary mentions of both traditional and new media was negatively correlated with race, $r(156) = -.17$, $p < .05$, indicating that those identified as non-White were related to less mentions of traditional media/primarily new media mentions compared to low traditional/low new media use. The third trimester was negatively and significantly correlated with
pregnancy media use, $r(156) = -0.16, p < .05$, and with primary mentions of both traditional and new media, $r(156) = -0.17, p < .05$.

**RQ5**

Research question 5 asked about the gratifications women seek from the media they report using. This was analyzed in two ways. First, frequencies examined the gratifications that the respondents reported seeking. Instrumental use of media was accounted for 61.7% of respondents’ entries. Non-instrumental use of media accounted for 38.3% of entries. Second, crosstabs examined the gratifications by media type and genre and these are presented in Tables 4.2, 4.3, and 4.4. Chi square tests showed that gratifications were significantly connected to pregnancy media use, $X^2 (2, N = 154) = 8.78, p < .05$, and traditional media use, $X^2 (1, N = 154) = 7.00, p < .05$. New media use and gratifications were not significant.

**RQ6 and RQ7**

Research questions 6 and 7 asked about the impacts the reported media use might have on body satisfaction. Linear regressions were used to test this. As the correlation matrix shows (Table 4.1), pregnancy body satisfaction was positively and significantly correlated with the media diet variable of primary mentions of both traditional and new media, $r(156) = .14, p < .05$. Further study included the three media type dummy variables in a multiple regression predicting body satisfaction. The ANOVA was not significant, $F (3, 152) = .22, p > .10$. The measures of traditional and new media did not have a direct effect on body satisfaction during pregnancy. Next, a linear regression tested the influence of pregnancy media on body satisfaction. Results showed a significant and positive impact of pregnancy media use on body satisfaction during pregnancy, $\beta = .14, t(154) = 1.80, p < .10$. Finally, gratifications sought were tested as a predictor of body satisfaction. This was not significant,
Further tests showed that gratifications did not interact with any of
the media use and media type variables in predicting body satisfaction.

**RQ8 and RQ9**

Research questions 8 and 9 asked about the impact of the media choices and media
motivations in predicting intentions to breastfeed. The uses and gratifications variables were
first tested on their own as predictors of intentions to breastfeed with no significant results.
Hierarchical regression analyses were then used to examine the three breastfeeding outcome
variables using the control variables, as well as interactions of the uses and gratifications
variables with body satisfaction. The first block of the regression models contained
demographic information, including age, race, and income. Block 2 added pregnancy
changes, including weight change (calculated by pre-pregnancy weight from current weight),
first pregnancy, the two trimester dummy variables. For the model predicting exclusive
breastfeeding for six months, this block included intentions to breastfeed for three months.
For the model predicting breastfeeding for one year, this block included a three and six
month breastfeeding intention average. As three and six month intentions were highly
correlated, \( r(156) = .78, p < .001 \), they were combined for the model. A check for colinearity
found no issues. These additions to the models controlled for behavioral intentions at the
earlier durations. Although the three outcome variables were measured at the same time,
treating them as controls seems appropriate for the breastfeeding context as women might
consider the possibilities in advance. Continuing in the regression model, block 3 added
psychological variables including pre-pregnancy body satisfaction, perfectionism, and
current pregnancy body satisfaction. Block 4 added the uses and gratifications variables,
which included the three media diet dummy variables, pregnancy media use (genre), and
gratifications (instrumental/non-instrumental). Finally, block 5 included a test of interactions between body satisfaction and each uses and gratifications variable. The results for each of the three models is reported in tables 4.5, 4.6, and 4.7.

The regression model predicting intentions to exclusively breastfeed for three months explained 20.5% of the variance. As table 4.5 demonstrates, the demographic variables did not have a significant impact on intentions to breastfeed. The second block of the model was significant, $F(7, 135) = 2.35, p < .05$. Whether or not it was one’s first pregnancy did significantly impact intentions to breastfeed where respondents were more likely to indicate an intention to exclusively breastfeed for three months than respondents for whom this was not a first pregnancy. This remained a significant predictor of three month breastfeeding in all blocks of the model. Block 3 was also significant, $F(10, 132) = 2.09, p < .05$. Pregnancy body satisfaction was the only psychological variable that was a significant predictor of three month breastfeeding. Block 4 added the media measures and was also significant, $F(13, 129) = 1.70, p < .10$. The media choices and motivations were not significantly related to intentions to exclusively breastfeed for three months. Finally, body satisfaction was tested as an interaction with the uses and gratifications variables. This block added an additional 5.3% of variance to the overall model and body satisfaction significantly interacted with the media diet 3 dummy variable (indicating primarily traditional media mentions/less new media or not) in predicting intentions to breastfeed for three months. As figure 4.2 illustrates, among participants in the moderate and high body satisfaction groups, primarily traditional media mentions/less new media was related to a lower intention to breastfeed exclusively for three months. The effect is most apparent for those in the moderate body satisfaction group. This trend is opposite for those in the low body satisfaction group where the traditional media
use/less new media use group has a slightly higher indication of intention to breastfeed exclusively for three months.

The regression model predicting intentions to exclusively breastfeed for six months explained a total of 69.1% of variance. As table 4.6 shows, demographics were not significantly related to intentions. The second block was significant, $F(8, 134) = 30.19, p < .001$. Whether it was a first pregnancy was correlated with intentions to exclusively breastfeed for six months, but was not significant in any part of the regression model with the other variables. Trimester 3 was not correlated with intentions, but in the second block it was a significant and negative factor in determining intentions; however, once the psychological variables were added to the model, it was no longer significant. Indications of intentions to breastfeed for three months was a strong and positive predictor of intentions to exclusively breastfeed for six months in each of the blocks. Block three was also significant, $F(11, 131) = 22.36, p < .001$. The psychological variables did not add a lot of explained variance, but pre-pregnancy body satisfaction was a significant negative predictor of six month breastfeeding intentions. Finally, block four was significant, $F(14, 128) = 17.44, p < .001$. Similarly to three month breastfeeding intentions, the uses and gratifications variables on their own did not add much variance explained to the model and were not significant predictors; however, pregnancy media use was significant in the final model with a negative relationship to intentions to exclusively breastfeed for six months. Finally, the interaction variables showed a significant interaction of body satisfaction and pregnancy media use in determining intentions to exclusively breastfeed for six months. The interaction is illustrated in figure 4.3 and shows the impact of pregnancy media as a negative predictor of exclusively breastfeeding for six months is in the low body satisfaction group. The moderate body
satisfaction group appears to demonstrate the opposite of the low satisfaction group, where more pregnancy media is related to higher intentions. Those in the high body satisfaction group do not appear to be strongly impacted by pregnancy media use.

Finally, the regression model predicting intentions to breastfeed for one full year explained 62.7% of variance. As table 4.7 shows, income was a significant demographic variable in all models as a negative predictor, meaning that the higher one’s income the less likely she was to indicate an intention to breastfeed for one year. In model 2, $F(8, 134) = 20.32, p < .001$, trimester 3 was a significant and negative predictor of intentions to breastfeed one year. Trimester 3 was not correlated with intentions, but was significant in the full models. Previous three and six month breastfeeding intentions were strongly correlated with intentions to breastfeed for a year and this remained a strong predictor in each step of the regression model. The pregnancy variables block, $F(11, 131) = 16.64, p < .001$, showed a 51.9% $R^2$ change. In this model, the psychological variables did not show a relation with intentions. The uses and gratifications variables, $F(13, 129) = 14.72, p < .001$, were more important in the one year model than the other two outcome models, adding an additional 4.7% of variance explained and demonstrating media diet 2 (less traditional media mentions/primarily new media use) and media diet 3 (primarily traditional media mentions/less new media mentions) as significant predictors of intentions (see figure 4.4). Further, gratifications sought (non-instrumental) were also a significant and positive predictor of intentions to breastfeed for one year (see figure 4.5). No interaction variables were significantly related to one year intentions.

**Discussion**

This study demonstrates a different way in which understanding media uses and
gratifications can be beneficial to understand pregnancy and ultimately intentions. First, it is through this lens that we can better understand influences on body satisfaction and further clarify the relationship between body satisfaction and breastfeeding intentions that was examined in Chapter 3. Second, the results highlight that visiting a media space for an instrumental versus non-instrumental purpose can result in different outcomes. Third, the results demonstrate the possible differences between using a new and traditional media source.

**Body satisfaction and breastfeeding intentions.** The results of this study point to a few important factors in the attempt to understand media use during pregnancy and its relationship to body satisfaction and breastfeeding intentions. The data showed no significant impacts of the media choices and motivations variables on intentions to breastfeed when examined independently from the control and interaction variables. Pregnancy media use, however, demonstrated a positive and significant impact on body satisfaction during pregnancy, showing that the more pregnancy media one reported using the higher her body satisfaction. This finding is encouraging given the content analysis findings regarding pregnancy magazines, such as *Shape Fit Pregnancy* (Dworkin & Wachs, 2004), although it would be difficult to make broad generalizations.

The relationship between body satisfaction and pregnancy media was examined again as an interaction effect on breastfeeding intentions. Results demonstrated a significant impact of the interaction on intentions to breastfeed for six months. What does this mean for breastfeeding researchers and advocacy practitioners? Pregnancy media use had a direct impact on body satisfaction, but then interacted with body satisfaction to predict intentions where those with a lower body satisfaction indicated a lower intention to breastfeed with use
of more pregnancy media and those in with a moderate body satisfaction indicated the opposite effect. This type of finding was not solely with six month breastfeeding. Body satisfaction also interacted with mentions of primarily traditional media/less new media use to predict intentions to breastfeed for three months. This time, those with a moderate body satisfaction indicated a reduced intention to breastfeed exclusively for three months if they mentioned primarily traditional media /less new media use.

**Media uses and gratifications.** Overall, the uses and gratifications variables did add some significant predictors in the intentions to breastfeed when put together with the control and interaction variables. There were no significant effects of interactions when looking at intentions to breastfeed for a full year; however, media uses and gratifications did impact these intentions. This included a negative impact of the media diet of primarily traditional media/less new media use, as well as a positive impact of non-instrumental use of media. Visiting media to pass the time or for entertainment had a more positive impact on intentions. Perhaps visiting a media space without intentionally seeking out specific information leads a woman to interpret what she’s seeing or reading differently than someone going to a space for a specific reason. One way this might be explained is through incidental exposure or through indirect versus direct media placement. Mass media campaign literature, for example, distinguishes between material we come across through scanning information versus information we specifically seek out (Shim, Kelly, & Hornik, 2006) These can lead to different types of information processing and different outcomes. For example, Shim, Kelly, and Hornik (2006) found that people who scan information were significantly more likely to engage in cancer screenings than those who sought specific information. The type of processing, such as heuristic versus systematic, might also be impacting the varying
outcomes. On the one hand, those visiting a space for non-instrumental use could be browsing a site without much attention and processing the information they find heuristically, or without much concentrated thought (Chaiken, 1980). On the other hand, those visiting a media space with a specific purpose such as information seeking might be more prepared to process the information systematically, putting a concerted effort into evaluating the messages they are receiving (Chaiken, 1980). These differing processing routes can have different impacts on receivers and could explain the findings here, although it deserves more research. It could also be possible, then, that someone worried about breastfeeding visits a media space to learn more about possible milk supply issues and finds discussion of switching to formula if milk supplies or lows and the woman comes away with a lower intention to breastfeed for a recommended full year, while someone else visits a site and scans the information available and in the end learns more and comes away with a higher intention to breastfeed for a full year. Interestingly, using specific media for a specific purpose together did not produce any significant results.

Pregnancy might be assumed to be a time in which women are more keenly aware of the media choices they make and are more deliberative in choosing media. The results of this study appear to confirm this and the choice to examine pregnant women as active versus passive consumers, at least during this time of their lives. Every respondent except for one mentioned using some type of new media and close to half of the respondents mentioned some type of traditional media use. New media was mentioned more overall than traditional media in responses. Further, women mostly mentioned pregnancy-related media, such as pregnancy forums, magazines, and Web sites. In analyzing gratifications, women mentioned instrumental use of media in more instances than non-instrumental. Heavy use of traditional
media included an almost even split between instrumental and non-instrumental gratifications sought. For those who indicated less traditional media use, more instrumental gratifications were sought than non-instrumental. Pregnancy media tended to be sought more for instrumental use except for those who used little pregnancy media.

It seems that women tend to be seeking out pregnancy media for both instrumental and non-instrumental use, but more so for instrumental—going to the media for specific purposes, such as information or interpersonal connections and advice. This pattern appears to be the case for the entirety of the sample. Correlations did show a relationship of race and primarily traditional media mentions and new media mentions. Correlations also showed a significant and negative relationship between the third trimester and the same media diet variable, as well as with pregnancy media use. These findings might indicate that women in their third trimesters do not have quite as many needs as those in earlier trimesters for whom pregnancy is still a new experience. This is not out of line with previous findings that women in their third trimester were not as likely to need specific types of information as those trying to conceive or those early in their pregnancy (Szwajcer, Hiddink, Maas, Koelen, & van Woerkum, 2008). By the third trimester, women have much of the information they believe they need.

**New versus traditional media.** In gaining a better understanding of what media women are using during pregnancy and why they are using them, it is necessary to research the types of content they are receiving, the interactions in which they might be engaging, and to begin interpreting the impacts these have on health. For example, and importantly, the characteristics of traditional media and new media might lead to different intentions. Those falling into the primarily traditional media mentions/less new media category were less likely
to indicate an intention to breastfeed for one year in comparison to those in a low new/low traditional group. Traditional media has the one-way communication characteristic and might be more static in the type of information available, whereas new media usually includes opportunities for interactions and information that can be continuously updated. These characteristics can be helpful in understanding the impacts they have on intentions. It could be that the more unchanging nature of the traditional media types, like books, might influence women to not intend to breastfeed for a full year or perhaps not think it very important. There would not be an opportunity within that medium to come across different links and information that could provide the user with other information. Future research should more closely examine how women are using the media and interacting with the media to understand if these characteristics are truly making a difference in outcomes.

**Uses and Gratifications as an Explanatory Model**

The results of this study also highlight a few important points about using uses and gratifications as an explanatory model. As discussed in Chapter 2, researchers have suggested that uses and gratifications not only be utilized for description, but for predictive purposes, as well (Katz, Blumler & Gurevitch, 1973; Palmgreen, 1984; Rubin, 2009). The current study investigates not only the media women are reporting that they use and why, but the subsequent psychological and behavioral impacts they might have. For this study, the psychological variable of body satisfaction during pregnancy was only correlated with primarily both traditional media and new media mentions. Regression testing, though, showed that the variable pregnancy media use was the only uses and gratifications variable with a direct impact on body satisfaction. Gratifications did not interact with any of the media use variables to predict body satisfaction, showing that using certain media for specific
purposes did not have a direct impact on body satisfaction.

On their own, then, the uses and gratifications model was limited in explaining body satisfaction during pregnancy when looking at it from a purely quantitative perspective. Notably, though, these findings demonstrate the importance of designing uses and gratifications studies for the specific population under study. Specifically looking at pregnancy media use was an important element in explaining body satisfaction during pregnancy, which then impacts breastfeeding intentions. The uses and gratifications framework provides a different way to interpret breastfeeding intentions by looking at influences on other predictors of intentions. This begins to provide a clearer picture about the influences on intentions, which is important for researchers who want to understand breastfeeding impacts and for practitioners who need to understand the influences of intentions to successfully intervene. Further, once other control variables were included, the impacts of uses and gratifications variables indicated more quantitative influence.

When control variables and interaction variables were included in the models predicting the three breastfeeding durations, the uses and gratifications variables demonstrated more influence than they did on their own as predictors. In the model predicting intentions to breastfeed for three months, pregnancy body satisfaction was a significant predictor until the interaction variables were included in the model. With the interaction variables, pregnancy body satisfaction fell out of the model, but significantly interacted with primarily traditional media mentions/less new media mentions in predicting intentions. The media use variable might not have predicted body satisfaction, but it did interact and help to explain the impact of body satisfaction on intentions, as discussed above. Similar results were present for the model predicting intentions to exclusively breastfeed for
six months, but with the interaction of body satisfaction and pregnancy media use, as well as a contribution of pregnancy media use on its own in the final model. Again, without the additional control variables in the model, the uses and gratifications variables did not predict breastfeeding intentions, but these does seem to be some impact of the uses on intentions. The one year breastfeeding intentions model revealed the most impact of the uses and gratifications variables. In this model, the interactions were not significant, but in the final model it shows that both media use and gratifications are significant. As an explanatory model in this particular study, the results might not be strong, but are important as they indicate that the media choice and purpose can make a difference in outcomes. The results might be stronger if examined in different ways and looked at different types of outcomes.

The limitations in the strength of uses and gratifications as an explanatory model for both body satisfaction and breastfeeding decisions could possibly be attributed to the classifications made. For the current study, the qualitative data pointed to a distinction between new media and traditional media, as well as pregnancy media use. Other classifications are possible and many uses and gratifications studies take a more descriptive approach when the goal is not explanation (Palmgreen, 1984; Rubin, 2009). Future studies could look at other breakdowns of the data in a more nuanced manner for possible impacts on body satisfaction and behavioral intentions. The classification of pregnancy and non-pregnancy media use provided some useful explanation of body satisfaction and this finding points to the need to focus on the needs of the population being studied, as other research has done (i.e. Tiggemann, 2005). Given the findings here and the exploratory nature of this particular study, uses and gratifications should not be discounted as an explanatory model and shows promise as a media effects model.
Practical Implications

There are many options for women as they try to navigate the media environment and learn about pregnancy—from books to Web sites, to mobile applications and discussion forums. As healthcare workers try to increase breastfeeding rates and durations of breastfeeding, the results of the current study provide another approach to take when discussing these decisions with women during pregnancy and to more effectively meet women where they are. First, healthcare workers should discuss body image with women as we see different impacts of media and intentions to breastfeed based on body satisfaction. Second, with differences in body satisfaction in mind, healthcare workers should inquire as to the types of media use, why they are using them, and what they are finding. If for example, women are visiting media for specific purposes of pregnancy information, breastfeeding information and/or interpersonal support and come out of it less likely to intend to breastfeed for a fully year, healthcare workers should attempt to intervene. For example, a woman might visit a Web site looking for breastfeeding support and find more discussion of inadequate milk supply and support of formula over breastfeeding—this is the type of information that would be helpful for a healthcare worker and breastfeeding advocate to know. Given the emphasis placed on increasing breastfeeding durations (AAP, 2012; CDCP, 2013; WHO, 2013), the additional impact that media choices make on breastfeeding intentions should be considered important as practitioners work towards specific breastfeeding goals.

The next chapter examines both the TPB and uses and gratifications as a combined framework.
CHAPTER 5

A More Complete Model Predicting Breastfeeding Intentions?: Combining the Theory of Planned Behavior and Uses and Gratifications

The final study combines the concepts of the TPB and uses and gratifications into one model. Two competing models are introduced and are tested for the purpose of more thoroughly understanding how measures of the TPB are formed and how adding the media choice variables might change the impact of the TPB variables on intentions. Although uses and gratifications and the TPB come from different areas of research, the goals are not necessarily incompatible given that the components of both should influence psychological and/or behavioral outcomes and that the media components of uses and gratifications might help to further explain the TPB variables.

The two theoretical approaches were used in combination in order to explore whether the strengths and weaknesses of each approach can be enhanced and mitigated in combination. This also allowed an investigation into what components are connected and which turned out to be the most important in predicting behavioral intentions. Media motivations are taken into account, which the TPB on its own does not, and other sociocultural components are included that uses and gratifications does not take into account on its own. The TPB hypothesizes that the three main variables are enough to account for behavioral intentions, but how beliefs form is not fully accounted for. The inclusion of the media measures with the TPB will allow the beta weights and $R^2$ to be compared to what was found in the models presented in Chapters 3 and 4.

In both proposed conceptual models (figures 5.1 and 5.2), the three main components of the TPB are included, as the belief measurements will have been used already to calculate
attitudes. Control variables include weight change, past experience with pregnancy, race, age, and current trimester. The first proposed model incorporates the uses and gratifications variables with the Chapter 3’s first model. The second model includes the pregnancy body satisfaction moderating variable from Chapters 3 and 4. In these combined models, the uses and gratifications variables are included before the TPB variables. This is due to the expectation that the conscious media uses and reasons for the use might have a further impact on attitudes, subjective norms, and behavioral control.

**Research Questions**

Chapter 5 addresses the following research questions:

**RQ10:** What roles will the variables of the TPB and uses and gratifications have in predicting breastfeeding intentions when the models are put together?

**RQ11:** What role will body satisfaction during pregnancy have in moderating the relationships between the main independent variables and behavioral intentions?

**Method**

Using the same survey presented in Chapters 3 and 4, the above research questions were addressed through an online survey of women who were currently pregnant ($N = 156$).

**Sampling and recruitment**

A sample of $N = 156$ pregnant women was produced using the sampling methods and incentives described in Chapter 3, pp. 38.

**Procedures**

Following university IRB approval, the survey questionnaire was made available online through Qualtrics. Participants were directed to the survey through a link to Qualtrics where they first provided their consent to participate. After consenting to their participation,
participants began the survey with pre-pregnancy disposition items. This was followed by uses and gratifications questions, belief questions related to the TPB, behavioral intentions, and current body image questions. The last set of questions was control measures: demographics, current trimester, past pregnancy experience, and BMI measures. The last page of the survey debriefed the participants and directed them to contact information should they have additional follow-up questions regarding the research. As described in Chapter 3, pp. 38-39, participants were then taken to the form for the gift card drawing.

Measures

**Body Satisfaction and psychological factors.** For description of the body satisfaction and psychological factors measures, please refer to Chapter 3, pp. 39-40 (Appendix items a1-a12) pp. 40 (Appendix items c1-c9).

**Open-Ended Uses and Gratifications Measures**

**Survey items.** Uses and gratifications of media during pregnancy were measured through open-ended questions. In order to avoid people only writing one medium they use, this was asked in a series. For details on these questions see Chapter 4, pp. 66 (appendix items d1, d3, d5, d7, and d9).

**Coding procedures and coder training.** We took an inductive approach to interpret the uses and gratifications data. Three coders read through the open-ended responses to the media use and gratifications items to determine the common themes in order that the data be categorized in a manner reflective of the responses. Once the categories were determined, coders practiced coding and talked through any issues. This helped finalize coding instructions.

**Uses.** Media use was initially coded into a nominal variable with four possible
categories: new media, traditional media, mixed, or unclear. It was decided that these categories were reflective of the original qualitative data and meaningful in their distinctions, as Chapter 2 discussed. New media was defined as any online, digital, and/or interactive media; for example, social media, online pregnancy forums, mobile applications, or a searchable database. Traditional media was defined as print or general broadcast media without an explicit or meaningful digital or online component. Examples of traditional media included television, print newspapers or print versions of magazines. Print versions of newspapers or magazines were categorized as traditional media, whereas online versions or other digital versions of newspapers or magazines were categorized as new media. These distinctions were made based on the differences in how users might interact or learn from the media based on the format, as discussed in Chapter 2. The variable was prepared for inclusion in data analysis by transforming it into two variables: 1) traditional uses, which included any traditional use mentions in the five options and 2) new media uses, which included any new media use mentions in the five options. Calculating three dummy variables completed a second method of analyzing this variable. In each case the comparison was with a media diet of low traditional/low new media use mentions. The dummy variables were used in the hierarchical regression analyses. See pages 81-82 for more details on the coding process for this category.

**Genre.** Due to the mentions of pregnancy/parenting media, a continuous variable was then created that counted the number of mentions a participant made of parenting/pregnancy media, resulting in a range of 0-4 mentions ($M = 1.63, SD = .91$) (see Chapter 4, p. 68).

**Gratifications.** After coders identified instrumental, mixed, and ritualistic uses, the variable was transformed to a dichotomous variable where 1 represented instrumental use of
media and 0 represented non-instrumental use of media. Refer to Chapter 4, p 84 for details on the gratifications coding process.

**Intercoder Reliability.** Intercoder reliability was calculated using Cohen’s $k$. Two coders analyzed 20% of the open-ended data for the media type, genre, and gratifications. Intercoder reliability was high for all three of the variables: for media type, Cohen’s $k = .95$; genre, Cohen’s $k = .86$; and gratifications Cohen’s $k = .95$.

**Beliefs Related to TPB Measures.**

*Breastfeeding attitudes.* Attitudes towards a behavior were measured by beliefs regarding the behavior multiplied by the evaluation of the behavior (Ajzen & Madden, 1986; Ajzen, 1991; Manstead, Proffitt, & Smart, 1983; Swanson & Power, 2005). Participants responded to belief items on a 1-7 Likert scale ranging from strongly disagree (1) to strongly agree (7). Evaluations of these beliefs corresponded directly to each belief statement and which was also measured on a 1-7 scale where 1 = not at all important to me and 7 = very important to me. During data analysis these were transformed to a -3 to +3 scale following the methodology set forth in the theory of planned behavior (Ajzen, 1985). For details regarding the measurement of breastfeeding attitudes, refer to Chapter 3, pp. 40-41.

*Breastfeeding subjective norms.* Similarly to attitudes, subjective norms were measured by multiplying the normative belief items by an evaluation of importance for the subjective other (Ajzen & Fishbein, 1980; Ajzen & Madden, 1986; Ajzen, 1991; Manstead, Proffitt, & Smart, 1983; Swanson & Power, 2005). Subjective norms scores ranged from -63 to 58.74 with a $M = -.34$, $SD = 17.32$. Refer to Chapter 3, pp. 41-42 for details on the subjective norms measurement.

*Breastfeeding control.* Finally, perceived behavioral control regarding breastfeeding
was measured. Once these were transformed to the -3 to + 3 scale, mean responses ranged from -19 to 45 with $M = 14.51$, $SD = 12.42$. Refer to Chapter 3, p. 42 for full details on this measurement.

**Moderating Variables and Dependent Variables**

**Body satisfaction during pregnancy.** Body satisfaction during pregnancy was measured as it was in Chapter 3 (pp. 43) (appendix items m1-m13).

**Behavioral intentions.** Intention to breastfeed was measured as described in Chapter 3, pp. 43. The first item asked the likelihood of breastfeeding exclusively for three months ($M = 6.24$, $SD = 1.52$). The second item asked the likelihood of breastfeeding exclusively for six months ($M = 5.69$, $SD = 1.76$). The third item asked the likelihood of breastfeeding for one year, even after incorporating solid foods ($M = 4.56$, $SD = 2.20$). Breastfeeding was defined as either nursing or expressed/pumped milk (see Appendix items n and o).

**Control measures**

The last set of survey questions dealt with control variables as described in Chapter 3 including age ($M = 29.47$, $SD = 1.52$), income (mode of $100,000$ to under $150,000$ range and the median was the $75,000$ to under $100,000$ range), race (85.3% White), trimester (25.6% in first, 46.2% in second, and 28.2% in third), whether this was one’s first pregnancy (65.2% yes), and current weight ($M = 167.69$, $SD = 40.11$) and average weight one year prior to pregnancy ($M = 153.95$, $SD = 38.80$). For a full list of these items, see Appendix items p1-p13.

**Analysis**

The research questions were analyzed using path analyses. First, each breastfeeding
duration outcome was tested without the inclusion of the body satisfaction interaction variables. Second, each breastfeeding duration outcome was tested with the inclusion of the interaction variables. The path analysis method was used in order to determine how each independent variable from both the theory of planned behavior (Chapter 3) and uses and gratifications (Chapter 4) added to the breastfeeding outcome. Each model can then be compared to see if and how the significant predicting variables change for each breastfeeding duration. A $p < .10$ threshold was used due to the sample size and in order to avoid possible Type II error.

In each model, control variables included age, race, income, trimester, weight change, and whether this was one’s first pregnancy (see conceptual models, figures 5.1 and 5.2). The next part of the model added pre-pregnancy body satisfaction and perfectionism, as trait and psychological predispositions. Pregnancy body satisfaction was subsequently added as a state condition. Although pregnancy body satisfaction was correlated with pre-pregnancy body satisfaction, the two variables related to the other variables in the models differently and were, therefore, both included in the models. The next step of the path analysis added the media use variables—the three media types and genre. An argument might be made for pregnancy body satisfaction to follow the media and even the TPB variables; however, prior to tests for interactions, the assumption is that how one feels in her pregnant body will impact how she navigates her communication decisions and those experiences will then impact her intentions regarding breastfeeding. Gratifications sought from media were added after media uses and genre. Finally, the TPB variables were added to the model directly before the dependent variable in order to determine any other factors that might predict the three TPB variables, following the recommendations of some TPB researchers (Albarracín, Johnson,
Fishbein, & Muellerleile, 2001; Wolff et al, 2011). The dependent variables were tested in three separate models for the three different breastfeeding durations under study: three months, six months, and one year.

**Results**

**RQ10**

Research question 10 was addressed using a path analysis for each of the dependent variables: intention to exclusively breastfeed for three months, intention to exclusively breastfeed for six months, and intention to breastfeed for one year (after introducing solids). The path analyses are depicted in figures 5.1, 5.2, and 5.3. Tables 5.1 through 5.6 show the impacts of the exogenous variables on each variable included in the path analyses. Three month breastfeeding was significantly predicted by pre-pregnancy body satisfaction, pregnancy body satisfaction, breastfeeding attitudes, and perceived behavioral control. First pregnancy was also a significant predictor of three month breastfeeding intentions, as Table 5.1 shows. The path analysis results also demonstrated that breastfeeding attitudes and subjective norms were predicted by all three media use variables and gratifications sought from media use, illustrating a path from media diet to gratifications to attitudes to three month breastfeeding intentions. Going back even further, trimester 3 had a significant impact on media diet, including a primarily traditional media mentions/less new media diet versus few mentions of both traditional and new media, and a primarily mentions of both traditional and new media versus few mentions of both traditional and new media. Other significant variables in the model included significant paths from weight change, as well as pre-pregnancy body satisfaction, to pregnancy body satisfaction. Pregnancy body satisfaction had both a direct path to three month breastfeeding intentions, as well as a significant path to
perceived behavioral control, which was significantly related to three month breastfeeding intentions. More pregnancy media use (genre) also had a significant and positive impact on perceived behavioral control, which predicted intentions to exclusively breastfeed for three months. This is demonstrated in tables 5.1 and 5.2, as well as illustrated in figure 5.3.

Turning to intentions to exclusively breastfeed for six months, a slightly different picture appears. As figure 5.4 demonstrates, the direct paths to six month breastfeeding intentions included a negative impact of pre-pregnancy body satisfaction and a positive impact of attitudes. With the addition of previous intentions (three month breastfeeding), the only other exogenous variable that was strongly related to six month intentions was previous intentions, dropping the impact of one’s first pregnancy, which was significantly and positively related to three month intentions. This is detailed in tables 5.3 and 5.4. Other significant paths in the model include a path from perfectionism to gratifications, wherein a higher score on perfectionism significantly predicts more non-instrumental gratifications and then non-instrumental use is related to a higher attitude regarding breastfeeding, which then predicts a higher intention to exclusively breastfeed for six months. Figure 5.4 also illustrates the media diet variables that predict both gratifications and attitudes, which leads to six month breastfeeding intentions.

Finally, intentions to breastfeed for one year are depicted in figure 5.5 and further detailed in tables 5.5 and 5.6. One year breastfeeding intentions were directly and negatively predicted by subjective norms and negatively predicted by media diet 3--high traditional media use/low new media use versus low traditional/low new. Similarly to six month breastfeeding, one year breastfeeding intentions was also significantly predicted by previous duration intentions, but also negatively predicted by income and trimester 3. Other paths
included perfectionism significantly and positively predicting subjective norms, which then negatively predicted one year breastfeeding intentions. All four media use variables significantly predicted gratifications, and the media diet variables predicted subjective norms, leading to one year breastfeeding intentions. For gratifications, instrumental use of media predicted stronger subjective norms, which then negatively predicted one year breastfeeding intentions. Figure 5.6 illustrates the similarities and differences between the path analyses for all three durations.

**RQ11**

Research question 11 asked if and how pregnancy body satisfaction would moderate the relationships between the main uses and gratifications and TPB variables and breastfeeding decisions in the full model. The results of the interactions for all three breastfeeding duration intentions are detailed in tables 5.7 and 5.8. For intentions to breastfeed for three months, there was a significant interaction between media diet 3 (primarily traditional mentions/less new media versus few mentions of both traditional and new media) and pregnancy body satisfaction in predicting intentions. Figure 5.7 illustrates the interaction where for those reporting low traditional media/low new media use, pregnancy body satisfaction follows a positive relationship to breastfeeding intentions; however, for the primarily traditional mentions/less new media use, the relationship becomes more of a u-shape in which those in the low pregnancy body satisfaction group have the highest intentions to breastfeed three months and the moderate body satisfaction group have the lowest intentions, a very different relationship than the other groups.

For intentions to exclusively breastfeed for six months, three significant interactions were found. First, an interaction between subjective norms and pregnancy body satisfaction
predicted six month breastfeeding intentions. As depicted in figure 5.8, those in the high body satisfaction group appear to generally be more likely to indicate an intention to breastfeed for six months. Although all three body satisfaction groups tend to indicate the highest intentions when indicating a moderate level of subjective norms, the low body satisfaction group appears to drop to the lowest level of intentions when reporting high levels of subjective norms while the others taper off less dramatically. This could explain the negative relationship between subjective norms and intentions previously found. Second, an interaction between attitude and pregnancy body satisfaction predicted six month breastfeeding intentions. As depicted in figure 5.9, the high body satisfaction group with low attitudes toward breastfeeding indicates the lowest likelihood to breastfeed exclusively for six months; however, as attitudes towards breastfeeding move to moderate and then to high, the same pregnancy body satisfaction group indicate a higher intention to breastfeed whereas the other body satisfaction groups do not change as much through the different attitude levels. Third, an interaction between pregnancy media genre use and pregnancy body satisfaction significantly predicted six month breastfeeding intentions. As figure 5.10 illustrates, those who reported more use of pregnancy media tended to increase in six month breastfeeding intention by levels of pregnancy body satisfaction where those with low body satisfaction reported the lowest intentions and those with high body satisfaction reported the highest intentions. For those who reported no or low use of pregnancy media, the relationship to six month breastfeeding intentions appears to be more of a u-shaped relationship with those in the moderate body satisfaction group reporting lower intentions than the other two body satisfaction groups.
For intentions to breastfeed for one year, there was one significant interaction between perceived behavioral control and pregnancy body satisfaction. As depicted in figure 5.11, all body satisfaction groups tend to group at the moderate perceived behavioral control group; however, the low body satisfaction group appears to have a negative linear relationship with perceived behavioral control. Those in the moderate body satisfaction group appear to have the lowest intentions when reporting low perceived control, but not much change between moderate and high perceived behavioral control. Those in the high body satisfaction group also do not demonstrate much change between the perceived control groups, but after a slight increase in intentions between low and moderate perceived control the group seems to drop in intentions at the high perceived control level.

**Discussion**

**Multi-Theoretical Findings**

Overall, the results of this multi-theoretical study demonstrated a few important findings. First, regarding the direct impacts on breastfeeding intention, for intentions to breastfeed for three months the path analysis demonstrated a direct impact of attitude, perceived behavioral control, pregnancy body satisfaction and pre-pregnancy body satisfaction. A higher attitude and a higher sense of perceived behavioral control significantly predicted a higher intention to exclusively breastfeed for three months. Second, for intentions to exclusively breastfeed for six months, attitudes toward breastfeeding was the only main direct path to breastfeeding intentions other than pre-pregnancy body satisfaction and three month breastfeeding intentions. Third, for intentions to breastfeed for one year, subjective norms and media diet 2, as well as previous intentions, were significant predictors.

The direct paths implicate interesting aspects of breastfeeding intentions. It appears
that perceived behavioral control matters more for the first level of breastfeeding intentions, but then becomes less important as durations get longer, perhaps being replaced by prior intentions. Attitudes toward breastfeeding are important predictors in three month and six month breastfeeding durations. More positive attitudes towards breastfeeding relates to higher intentions to exclusively breastfeed at both levels. At the one-year breastfeeding intention level, though, attitudes also drop as a significant predictor and subjective norms and media 2, as well as past intentions, become the important direct paths to intentions (see figures 5.2-5.6). Subjective norms have a negative impact on intentions, rather than a positive impact as would be predicted by the TPB. What do these findings mean? It is possible that in thinking about breastfeeding for that length of time, women think more about what they feel others believe they should do and that pressure, as Armitage & Conner (2001) describe it, ends up backfiring. Social pressures and expectations regarding breastfeeding have been of popular discussion (i.e., the documentary “Breastmilk”). In other areas of research, social pressure has been found to backfire in many cases, including politicians trying to mobilize voters (e.g. Matland & Murray, 2013) and community efforts to influence recycling behaviors (e.g. Schultz, Nolan, Cialdini, Goldstein, & Griskevicus, 2007). Social pressure, therefore, has had mixed results when it comes to encouraging behaviors, and the current study seems to indicate the same with a possible boomerang impact when one feels more pressure to perform a behavior. This type of social pressure regarding breastfeeding and the possible backfiring it might have should be an avenue for future research, which will be further discussed in Chapter 6.

One year breastfeeding intentions also includes the only direct path from a uses and gratifications variable: media diet of primarily traditional/less new media versus few
mentions of both traditional and new media. When compared to low traditional and low new media use, those reporting primarily traditional and less new media use were less likely to report intentions to breastfeed for one year, which is a similar finding from Chapter 4. It appears possible that relying on more traditional forms of media such as books or magazines and a lesser amount of new media such as online discussion forums, groups, and mobile applications results in a lower intention versus those who report low use of both types of media. Information from traditional sources is more likely to be less flexible and less likely to evolve and update than new media sources, unless a new version of the media was published. Therefore, it is quite possible that women relying more on traditional media forms are not receiving the most up-to-date information, which could be a reason for a difference between those reporting primarily use of traditional media and those not. Unfortunately, the current research cannot draw conclusions about the information gained from the sources, but it does point to the important differences in outcome.

Several indirect paths to breastfeeding intentions should also be highlighted, particularly as these paths work similarly in all three breastfeeding durations that were examined. As figures 5.1 through 5.3 illustrate and figure 5.4 highlights, the media use variables all impact gratifications, attitudes, and subjective norms similarly, while genre impacts gratifications and perceived behavioral control similarly in all three durations. Each media use measure positively impacted gratifications and subjective norms. Any high media use, either of new, traditional, or both, when compared to low use of both types of media, resulted in more non-instrumental gratifications sought. This makes sense, as those who use less of either form of media might only seek media out for specific reasons when they do, rather than using media to pass the time or browse. Further, the media use variables also
result in higher sense subjective norms—the more of these media were reportedly used, the stronger the perception that people think they should breastfeed. Any category of media diet compared to less traditional use mentions and less new media use mentions led to higher subjective norms. Media has been used as part of a measure of subjective norms in TPB studies, but it seems as though adding a few different items into the composite measure might not be sufficient, particularly if a goal of a study is to identify areas for behavioral change. In this case, any report of a primary media use (versus less use all around) allows us to see a connection to a higher sense of social pressure, which we know could be a negative contributor to intentions the longer someone is thinking about performing the behavior. Therefore, the separate media variables add to the overall understanding of how the TPB influences intentions.

Similar results are also apparent with gratifications and genre in all three models. Gratifications sought positively predicted attitudes—non-instrumental gratifications led to higher positive attitudes towards breastfeeding. Again, this points to the importance of how people use media. If one is utilizing media for specific purposes only, it might be that they are not running across as much about breastfeeding unless they are intentionally seeking it out. Non-instrumental users of media, through browsing and passing the time, for example, might be more likely to absorb information, given that they did not have a specific purpose for visiting the media source. Therefore, the non-instrumental users might come out with different knowledge and beliefs about breastfeeding than instrumental users of media.

Genre, measured here as pregnancy media use, was also negatively related to gratifications and positively related to perceived behavioral control. These relationships are also logical and telling. The negative relationship to gratifications indicates that more
pregnancy media use is related to instrumental use of media—going to this specifically-aimed type of media more than others results in seeking media out for more instrumental purposes. It makes sense that women might visit pregnancy media spaces for specific purposes—perhaps to find an answer to a question about their pregnancies or for interpersonal support from other pregnancy women and the more they seek out these spaces the more they end up visiting media for instrumental reasons. The connection to perceived behavioral control is also important and demonstrates an indirect path from genre to intentions to exclusively breastfeed for three months. More use of pregnancy media predicts a higher sense of perceived behavioral control and perceived behavioral control leads to a higher indication of intentions to exclusively breastfeed for three months. No other media use or gratifications measures are related to perceived behavioral control. Evidently, pregnancy media, in whatever form and sought out for whichever reasons, contributes some extent of breastfeeding efficacy, which is important in contributing to intentions to breastfeeding.

**Body satisfaction interactions.** Including pregnancy body satisfaction as a moderating variable further illustrated the relationships between the two theories’ variables and intentions to breastfeed for the studied durations of time. How one feels about her body during pregnancy changes the relationship between the variables and breastfeeding intentions. For intentions to exclusively breastfeed for three months, pregnancy body satisfaction has a direct and positive impact on intentions, as previously discussed; however, it also indicated a relationship between media diet and intentions. As figure 5.5 illustrates, in all media diet groups, those with a low sense of pregnancy body satisfaction indicate the lowest intention to breastfeed for three months while those with a sense high body satisfaction indicate the highest indications to breastfeed; however, this is not the case for the
primarily traditional/less new media group. In comparison to the few mentions of both traditional and new media group, the relationship becomes less linear wherein those with lower body satisfaction indicate a higher intention to exclusively breastfeed for three months, followed by the high satisfaction group and then the moderate satisfaction group. Something in the primary use of traditional media is resulting in different breastfeeding intentions among the different body satisfaction groups. It is possible that those with low body satisfaction are more confident or influenced by traditional media than the other groups, perhaps either from the content or the manner in which the media can be navigated. This type of use is another possibility for future research that will be discussed more in Chapter 6.

Other interactions were present for intentions to breastfeed for six months and one year. For the six month breastfeeding intentions, pregnancy body satisfaction interacted with attitudes in which those with high body satisfaction appeared to be more impacted by attitudes than those in the low or moderate body satisfaction groups. For those who did not indicate a high level of body satisfaction, the impact of attitudes on intentions was mostly unchanging, as figure 5.7 illustrates. Although intentions in general lie above the midpoint of the scale, attitudes towards breastfeeding has more of an impact on the one body satisfaction group. This might point to a type of confidence that could come from a higher sense of body satisfaction, in which those with a higher sense of body satisfaction are more impacted to engage in breastfeeding with their higher attitudes because they are satisfied and confident with their bodies in comparison with the other groups. For subjective norms, all body satisfaction groups appear to be at their highest levels of intentions at the moderate subjective norms level. Those in the low body satisfaction group then appear to drop the most in intentions, demonstrating, again, a possible backfire of subjective norms, particularly with
the low body satisfaction group who might react differently than the others.

**Implications**

**State and trait body satisfaction.** The results of this study also point to important implications regarding state and trait body satisfaction. Consistent with Thompson’s (2004) guidelines for state and trait body satisfaction, the current study’s utilization of both demonstrated important differences. On their own, the distinction between pre-pregnancy body satisfaction and pregnancy body satisfaction is important as each impacts breastfeeding intentions. The current analysis demonstrates different impacts of the two body satisfaction measures. The clearest example of the differences is looking at intentions to breastfeed for three months (see figure 5.3 and table 5.2) in which pre-pregnancy body satisfaction had a negative impact on breastfeeding intentions and pregnancy body satisfaction had a positive impact on breastfeeding intentions.

Although this result might seem strange, the possible difference in the two variables makes it seem less so. Pre-pregnancy body satisfaction measured how one felt prior to becoming pregnant—if one felt a high level of body satisfaction prior to pregnancy, then it is possible that with breastfeeding one was not so worried about a connection between breastfeeding and one’s weight or other bodily impacts of breastfeeding. Pregnancy body satisfaction measured how one felt about her body in this moment, while pregnant—if one felt a high level of body satisfaction in her pregnant body, it could be connected to a type of confidence in one’s new body that translates to a confidence and commitment to breastfeed. Those lower in pre-pregnancy body satisfaction might have felt more of a desire to breastfeed in order to lessen concern about post-pregnancy body weight and satisfaction, but if low in pregnancy body satisfaction, the lower body confidence might relate to a lower confidence in
one’s body to perform the way it should or comfort in the process of breastfeeding. This might also explain the significant and positive connection between pregnancy body satisfaction and perceived behavioral control that was present in all three breastfeeding duration outcomes. Satisfaction, then, might be related to a measure of confidence and this should be explored further in future research.

**TPB and uses and gratifications.** Overall, the TPB variables appeared to be the strongest direct predictors of breastfeeding intentions, with the exception of previous intentions. Clearly, the three TPB variables are important predictors of the behavioral intentions being studied, although they are not equally significant in each of the breastfeeding durations. Perceived behavioral control was significant on its own only in three month intention model, but once looking at six month and one year intentions, which added prior intentions into the model, pbc was no longer significant. Attitudes were significant in both the three month and six month durations. Subjective norms were significant only in the one year duration. With the long time frame the one year intention measured, perceptions of others’ beliefs and the importance placed on those beliefs ended up more important than attitudes or perceived control. When thinking as far out as a year or more away from the time an intention is being measured, which is what health practitioners concerned with breastfeeding would like women to do, subjective norms are important to consider, as is the finding that the relationship to intentions is not linear.

Generally, the uses and gratifications variables were not directly related to the breastfeeding outcomes, but there were interesting impacts of the variables on the TPB that point to the utility of uses and gratifications as part of an explanatory model and tell us more about the TPB variables themselves. The uses and gratifications variables were significant in
predicting subjective norms and attitudes. As previously discussed, the type of media one uses appears to impact attitudes towards breastfeeding and subjective norms. When compared to low new media and low traditional media use, each of the other media diet conditions results in lower attitudes towards breastfeeding and stronger subjective norms. For this reason and the interactions the variables have with body satisfaction on intentions, it will be important to further study what types of media women are using, how they are using them, and what information they are gaining, particularly given the varying impacts on attitudes and the interactions.

Gratifications results are also interesting on their own in that they are impacted by what people report using and use of pregnancy media, but they also impact subjective norms and attitudes, which is helpful in practical terms of increasing breastfeeding durations. The positive impact of non-instrumental media use on attitudes starts to demonstrate previous claims regarding uses and gratifications that no matter the audience members’ explicit reasons and motivations for using a Web site, learning in some form can occur whether users intend that to be their reason for visiting the site or not (LaRose & Eastin, 2004). It appears that not having a specific purpose for visiting a media space is resulting in more positive attitudes. An explanation for this could be that women browsing media end up learning more about breastfeeding in that process than those who are visiting the spaces with a specific intent. A different type of processing might be occurring with the non-instrumental gratifications. This particular finding demonstrates a manner in which uses and gratifications could be used as an explanatory model, although more work and clearer constructs are still desirable.

Although the TPB on its own should be sufficient enough to predict behavioral
intentions, in certain contexts adding additional variables can increase the variance explained and, in some cases, can be useful (Ajzen, 2011; Ajzen, 2014; Wolff et al, 2011). The uses and gratifications constructs, although seemingly very different from the TPB, worked together with the TPB in ways that illuminated more about what is going on in intentions regarding breastfeeding.

Measures of attitudes, subjective norms, and perceived behavioral control involve measuring beliefs that, in the case of subjective norms, even involve media, but they do not provide additional details about how the beliefs are formed that impact the constructs. Beliefs and evaluations are as far back as the theory goes in determining intentions. The uses and gratifications variables demonstrated some of the additional communication variables that impact the TPB. If a health goal is simply to understand behavioral intentions, then the TPB might be sufficient enough; however, if the goal is to then encourage stronger intentions or behavioral change, it is imperative to recognize areas that can help alter beliefs. In the current study focusing on breastfeeding intentions, the models first demonstrated the impact that new and traditional media differences can have on attitudes and subjective norms. Second, genre, in this case focused on pregnancy media, impacts perceived behavioral control regarding breastfeeding at all three durations. Perceptions of control over breastfeeding can be positively impacted through more use of pregnancy media. Third, each of these also impact gratifications, which ultimately impacts attitudes and subjective norms.

Overall, the multi-theoretical approach to understanding breastfeeding intentions was mostly successful. Being aware of the impacts of both the TPB and uses and gratifications variables can assist breastfeeding advocates, including health organizations, doctors, and lactations consultants as they attempt to increase breastfeeding rates and durations. With just
the TPB variables, practitioners are able to see what needs to be adjusted to impact intentions, but only in terms of where interventions might need to focus—altitudinal beliefs, normative beliefs, control beliefs. The addition of the uses and gratifications variables, as demonstrated in this study, provide possible areas that these practitioners could address in changing beliefs, such as the use of pregnancy media and the purposes of visiting media spaces. It adds an extra layer of understanding in addressing breastfeeding. Finally, body satisfaction appears to be an area which impacts variables from both theories and can have a direct impact on breastfeeding intentions. This adds to the literature regarding the connection between body satisfaction, pregnancy, and breastfeeding and begins to demonstrate what the connection might look like. It is also an area that practitioners, perhaps in one-on-one consultations, might find fruitful to address. Further considerations and conclusions are discussed in the following Chapter.
CHAPTER 6

Conclusions

This dissertation project began by asking a few seminal questions regarding breastfeeding intentions—what influences a woman’s intention to breastfeed for specific durations of time? What role do media play in influencing intentions and predictors of intentions? And, to begin clarifying previously mixed research, what role does body satisfaction have in influencing breastfeeding intentions? In order to answer these questions, a multi-theoretical approach was proposed. Results showed that this approach was necessary to reveal important conclusions about research on breastfeeding.

First, this approach did emphasize the importance of the TPB variables as predictors of intentions in this context. Given the available information and beliefs one has that contribute to attitudes, a sense of subjective norms, and behavioral control, these perceptions will impact intentions. Second, it demonstrates that although the TPB could stand on its own, as demonstrated in Chapter 3, the addition of uses and gratifications variables as well as other control variables are imperative to understanding what comes before the beliefs and evaluations of the TPB. The TPB alone assumes rationality on the part of the individual to the extent to which they have information and beliefs and use that to form intentions; however, the development of those beliefs are left out, assuming a sort of determinism regarding the three main variables. The addition of uses and gratifications in this multi-theoretical approach to breastfeeding demonstrates the importance of including choices one makes regarding media sources, which is necessary for practical purposes of breastfeeding advocacy. Third, this approach helped to clarify the influence of body satisfaction during pregnancy as it relates to intentions to breastfeed that had otherwise been mixed by
demonstrating the role of body satisfaction as more complicated as it works with the variables of the two models in predicting intentions.

**Limitations**

Before further discussing conclusions from this dissertation work, it is important to point out a few limitations regarding the studies. First, the sampling method is a limitation. Probability sampling methods were not possible for this research because of the special population. Due to this difficulty, representativeness of the sample is an issue. Racial and economic diversity of the sample was not representative of a realistic population. It also appears that the women in this sample indicate intentions to breastfeed at all durations studied above the midpoint of the intentions scale. It is possible that this is representative of intentions, but as far as actual behaviors, this is not reflective of behavioral findings outlined alongside the goals Healthy People 2020. Although more representativeness is desirable, the findings still show important impacts on intentions that should be helpful to researchers and practitioners.

Second, the cross-sectional nature of the study is a limitation. The cross-sectional design was necessary, but is restrictive. In this particular case, women might be encouraged to think about breastfeeding in advance, but how well that relates to actual breastfeeding behavior, which for the one year intention could be well over a year in advance, is not clear. This leads to the third limitation, which is the study of behavioral intentions versus actual behavior. Although it is claimed that intention is the best indicator of behavior, which is why the TPB is concerned with intentions (Ajzen, 1991; Ajzen, 2011; Ajzen & Fishbein, 1987), barriers that unfold when the time to act comes are unclear. Perceived behavioral control measures the perceptions of control that leads to intentions, but actual control might be
slightly different. Unfortunately, follow up with the participants was not possible, but future research should make this a goal. This will be discussed later in this Chapter.

Finally, another measurement could use improvement and might be considered a limitation. Pre-pregnancy body satisfaction, which was measured in the same data collection as pregnancy body satisfaction could be improved if it could be measured in advance. When measured at the same time, it seems possible that participants could have responded in a way that was not necessarily how they actually felt pre-pregnancy, but how they think they felt in comparison to their pregnant bodies. In other words, it could be measuring a more ideal version of body satisfaction than what participants actually felt.

**Overview of Studies and Comparisons**

The preceding three Chapters examined intentions to breastfeed for three months, six months, and one year using the TPB, uses and gratifications, and body satisfaction. These can be discussed and compared looking at the $R^2$ findings of each, as well as in terms of needs for other variables to be included. First, the amount of variance explained by each model does not vary widely. For three month breastfeeding intentions, the theory of planned behavior explained 20.5%, 28.1% when control variables and body satisfaction were added. Uses and gratifications, with the control and body satisfaction measures and without the TPB variables explained 20.5% of variance and the combined study explained 28%. The TPB model with the other variables added appears to explain just as much variance as the combined model. Importantly, uses and gratifications for three month intentions only adds 1.1% of variance to the predictive model and an additional 5.7% with the interaction variables included. The predictive strength of the theory’s variables are stronger with the TPB.
For six month intentions, previous behavioral intentions add a large amount of variance to the models. On its own, the TPB explained 21.7% of variance, but once the control variables were added, including previous intentions, it increased to 67.2%. For the uses and gratifications model (without the TPB) the R² was 69.1%, but only .6% of variance was added from the uses and gratifications variables and 3.3% added with the interactions of body satisfaction and the uses and gratifications variables. The combined model explained 68% of variance. Again, the TPB appears to explain the most amount of variance, as do the control variable and body satisfaction variables. In the combined model, it is continued that the uses and gratifications variables do not have a direct impact on behavioral intentions the way that the TPB variables do.

For one year breastfeeding intentions, the picture is similar to that of six month intentions. In Chapter 3, the TPB explained 15.1% of variance, but increased to 59.8% with the additional variables. In Chapter 4, uses and gratifications explained 62.7% with more added explained variance from the uses and gratifications variables than in the other two models: 4.7%. The combined model explained 62% of variance. The uses and gratifications variables appear to start adding more to the model in the one year duration, but still are not as strong as the TPB variables.

Second, comparing the TPB models from Chapter 3 and the uses and gratifications models from Chapter 4 can also be done regarding the addition of control variables and body satisfaction variables. Similar to what can be concluded based on the R² from the models, there is an obvious necessity for control variables more so in the uses and gratifications models than in the TPB models. This is most prominent in the three month models. Control variables and the body satisfaction variables add 8.1% total to the TPB explanation of
intentions, which is important; however, on its own the TPB still predicts 20.5% of variance. In the uses and gratifications model, the media variables only add 1.1% of variance to the predictive model and the interaction terms add another 5.7%.

The inclusion of body satisfaction as a moderating variable was evidently productive. In all three approaches to breastfeeding intentions, body satisfaction demonstrated a significant impact. In the TPB models, body satisfaction was individually related to breastfeeding intentions at the pre-pregnancy, or trait, satisfaction. Pregnancy body satisfaction, the state measure, moderated the influences of attitudes and subjective norms in the six month breastfeeding model, helping to explain their relationship more thoroughly. Similar findings were seen in the uses and gratifications model. In the combined models, pregnancy body satisfaction continued to moderate the impacts of the variables and, in the three month condition, had a direct impact on breastfeeding intentions, while pre-pregnancy body satisfaction had an impact on breastfeeding intentions at the three and six month outcomes.

**Theoretical Implications**

Overall, the uses and gratifications variables were not as strong in predicting intentions as the TPB, which cover more than media effects. The TPB is intended as a predictor of behavioral intentions and to cover all areas with the measures of attitudes, subjective norms, and behavioral intentions, so this is in line with what the TPB hypothesizes (Ajzen, 1991; Ajzen, 2011; Ajzen & Fishbein, 1987). Uses and gratifications was approached in more of an exploratory way, as it is a media effects theory, although it has not always been used in that way nor has it been used consistently. The multi-theoretical approach demonstrates the possibilities for productively understanding behavioral intentions.
in a manner useful for practitioners.

The claim that the TPB should be sufficient in explaining behavioral intentions was mostly supported in this study. The TPB variables tended to explain most of the variance in the models. In this study it demonstrated strong predictors of behavioral intentions and used measurement techniques recommended in the literature (i.e. Ajzen & Fishbein, 1987; Ajzen, 2002). Although more variance was explained by adding control variables, the three main were the variables usually significant and explained the most, with the exception of previous intentions in the six month and one year models. On the one hand, then, the TPB could be left as the three variables to predict behavioral intentions mostly effectively. On the other hand, the other variables provide more insight if a researcher or practitioner plans to use the findings for a further intervention study.

In general, the TPB’s strength compared to the others makes logical sense given the arguable clarity of constructs and the purpose of the TPB being to predict behavioral intentions. In the results from Chapter 3 and Chapter 5, the control variables helped explain some of the variance that the TPB variables do not. These might not seem especially helpful unless planning interventions. Given the specific context of breastfeeding intentions and the context of pregnancy, some of the external variables from the TPB should be considered. For example, first pregnancy was a significant variable in the three month model and prior intentions added a large amount of variance to the other two models. Ajzen (1991) argued that past behaviors would not impact a model because they should be accounted for in the three variables; however, in some situations they might be worth considering as additional variables (Ajzen, 2011). It appears that this context is one of those cases. Research regarding breastfeeding interventions and advocacy should consider these external variables,
particularly as they might influence beliefs regarding breastfeeding, which in turn influence intentions. This is similar to why the uses and gratifications data can be helpful.

As previously pointed out, the uses and gratifications data does not appear quite as helpful as the TPB in understanding breastfeeding intentions when looking just at the amount of variance explained; however, uses and gratifications was still a helpful way to begin understanding a larger picture of breastfeeding intentions. Uses and gratifications has not been used as much in an explanatory manner and past research demonstrates a wide variety of applications and conceptualizations of constructs (Rubin, 2009). The research presented in Chapters 4 and 5 supports the idea that uses and gratifications might have a future in explanatory research. Chapter 4 is not as quantitatively strong—in determining breastfeeding intentions the variables made a small, but significant impact on decisions, which might actually point to the specific context and exploratory nature of the research and the manner in which uses and gratifications data were coded. In Chapter 5, though, the relationship is clarified because it is in impacting variables like attitudes, subjective norms, and perceived behavioral control that uses and gratifications appear to make a consistent and significant impact. Media diets and the gratifications sought from the media might not directly impact this particular behavior, but these choices do impact how women seem to think about breastfeeding. The theory shows promise in understanding context-specific choices and the impacts these might have; in the present case the context being pregnancy. In this way, the multi-theoretical approach to breastfeeding intentions was successful.

Examined in combination, the multi-theoretical approach to this research demonstrates the importance of the purpose of taking a multi-theory approach. If the goal of this research was only to understand impacts on intentions, then the TPB might have been
sufficient, perhaps with the control variables included. One of the goals of this dissertation, though, was to start developing a more thorough understanding of impacts on intentions and to make practical recommendations for breastfeeding advocates. In this case, the addition of control variables and the uses and gratifications variables to the model provide important information. If taking only a TPB or only a uses and gratifications approach, the more thorough understanding of breastfeeding perceptions that came from the combined study would not have been discovered; and the more exploratory nature of this dissertation was helpful in beginning to uncover those relationships.

Health research has emphasized the importance of multi-theoretical approaches in order to create effective health messages (Myers, 2010). Although Myers (2010) was reviewing framing effects, the suggestion that a multi-theoretical approach would provide a richer understanding of messages and assist in creating effective messages is telling for the current study. Understanding other impacts on the TPB variables is more helpful for creating interventions for increased breastfeeding durations, a goal of WHO (2015), than only knowing the impacts of attitudes, subjective norms, and perceived behavioral control. This is discussed more thoroughly in practical implications.

**Body Satisfaction**

These studies also demonstrate the importance of distinguishing state and trait body satisfaction. Importantly, as evidenced by this research, state and trait body satisfaction are distinct constructs that are not often used in the same research, but should be if it is expected to make a difference (Thompson, 2004). The pre-pregnancy trait measure was related to breastfeeding intentions in the opposite direction as the pregnancy state measure. This finding is telling as it illustrates the important ways in which a general satisfaction with one’s
body is distinct and acts distinctly from a more transitory or in-the-moment satisfaction. In this particularly instance, the “state” of pregnancy might be longer than the fluctuating nature and exact momentary measure usually discussed in terms of state satisfaction (Cash, Fleming, Alindogan, Steadman, & Whitehead, 2002; Thompson, 2004); however, the previous trait and current state is still an important distinction and the current research emphasizes that in addition to the importance of body satisfaction during pregnancy.

Body satisfaction during pregnancy appears to impact the manner in which women think about and make decisions regarding breastfeeding. This has not been researched much in the past and when it was it ended up with differing results (Foster, Slade & Wilson, 1996; Walker & Freeland-Graves, 1998). The current study demonstrates that one of the issues could be that pre-pregnancy and pregnancy body satisfaction are different and, as such, impact behavioral intentions differently. Further, the impact of body satisfaction might not be directly related to breastfeeding, but could impact other variables as they predict intentions.

Finally, this work demonstrates the importance of adding to the call of body image researchers for the need to examine body image in other stages of life beyond college students and adolescents (Tiggemann, 2011). This particular study does not examine issues such as diet and exercise or post-partum behaviors that might be impacted by body satisfaction and results of the impact of media on satisfaction was limited (Chapter 4), but it does examine an important health issue that involves the body. In this way it speaks to the other methods in which body satisfaction can be of importance in different stages of life. Responses to breastfeeding intentions varied between pre-pregnancy and pregnancy body satisfaction. Looking at the combined study’s model of three month breastfeeding, pre-pregnancy body satisfaction had a negative impact on intentions and pregnancy body
satisfaction had a positive impact. Possible explanations for these variations were previously discussed, but it is important to emphasize that body satisfaction can have real consequences in how a woman approaches pregnancy decisions, at least when it comes to breastfeeding intentions.

**Practical Implications**

Although all three breastfeeding durations measured have a lower range that is still about the midpoint of the scale, the public health goal is to get more women breastfeeding and the current findings can still be of use to those in the public health field when it comes to interventions. In this sample there is generally an inclination towards breastfeeding, although the intention is lower as the durations increase, the lowest being at one year. Three main practical implications should be discussed in regards to: the TPB variables, body satisfaction, and how media fit into the picture.

First, practitioners should consider the importance of attitudes, perceived behavioral control, and subjective norms. Attitudes towards breastfeeding demonstrated a consistent relationship to intentions to breastfeed, particularly at the three month and six month measures. As health practitioners consider how to prevent early cessation of breastfeeding and address breastfeeding intentions in advance, beliefs regarding breastfeeding and the importance women place on these beliefs should be addressed. This is something that doctors, both OBGYNs and pediatricians, and nurses can think about addressing during one-on-one consultations—what women believe that breastfeeding will do for the health of the baby, for the bond between baby and mother, and how one might approach social situations while breastfeeding, and how to handle work. On a larger intervention level, these are issues that could be emphasized in larger communication campaign materials.
Perceived behavioral control might be approached similarly, as the intent to breastfeed exclusively for just three months is impacted by perceived control. One-on-one, doctors, nurses, and lactation consultants should discuss barriers and perceived barriers with mothers. For example, discussions should include what to realistically expect from one’s workplace and how to approach breastfeeding with one’s employer. Lactation consultants and other breastfeeding advocates should also consider talking to mothers in advance about what to expect in terms of difficulties that could arise, such as the concern over not producing enough milk or options regarding breast pump purchasing and what to realistically expect from time commitments. Larger communication campaigns should address these issues and direct mothers to helpful resources. As mothers should think about breastfeeding in advance of the baby being born, it is necessary to speak to these possible issues that mothers might be considering. Importantly, of course, this study does not account for women who run into problems or perceived problems (like low milk supply) later, but addressing perceived problems in advance might encourage women who are concerned, particularly in light of research that shows women tend to stop breastfeeding if they believe something like supply is an issue (Li, Fein, Chen, & Grummer-Strawn, 2008; Scott & Colin, 2002).

Subjective norms, although not as strong of a predictor until the longer one year duration intention, is also something practitioners should both be aware of and address. When thinking as far out as a year in advance, which is what health organizations should want women to do in order to make those decisions and set goals, subjective norms becomes more important than attitudes and perceived behavioral control, which might be connected to the significance of previous intentions. If subjective norms are understood as a type of social pressure one feels to engage in a behavior (Armitage & Conner, 2001), this is something that
interventions can address. Importantly, though, the negative relationship of subjective norms demonstrates that a high sense of subjective norms actually appears to backfire and reduce intentions. Therefore, practitioners should consider addressing the mother’s partner with this information, but perhaps more importantly, should address the mother regarding the pressure she feels from others to breastfeed and encourage her for reasons beyond what she perceives others want her to do. Future research should then address the effectiveness of this type of approach to the findings.

Second, this research points to the necessity for practitioners to address body satisfaction during pregnancy. The connection of body satisfaction to breastfeeding found in this research leads to one solid reason to be concerned with body satisfaction. Importantly, if a doctor or other practitioner discusses or evaluates body satisfaction, it should be recognized that pre-pregnancy body satisfaction and pregnancy body satisfaction do not impact intentions in the same way. Although related (for example, see table 5.2), the two variables are separate and act distinctly. Taking into account the differences and the possible connection to something like confidence, practitioners should attempt to discuss these matters in order to overcome any negative impacts on decisions. Future research will, of course, need to look into intervention plans more thoroughly.

Third, the impacts on the TPB variables from the uses and gratifications and the control variables should be considered by practitioners in attempting to change beliefs regarding breastfeeding. For the most part, the uses and gratifications variables did not impact breastfeeding intentions directly, but they did predict the TPB variables. Therefore, what media women are attending to and what they are learning from them should also be addressed during more interpersonal interventions. Negative findings, such as the media diet
variables on attitudes and the positive impact on subjective norms, which then negatively impacts intentions, should be addressed. Given the positive connection of pregnancy media use on perceived behavioral control, practitioners could encourage or recommend certain types of media that could have a positive impact on perceptions and subsequent intentions. Larger communication campaigns concerned with encouraging breastfeeding should also be aware of some of these findings, and more research should be conducted regarding the type of information and information processing that occurs in the non-instrumental use of media to understand these connections more and to conduct more appropriate intervention materials.

**Directions for Future Research**

Several areas for future research stemming from these studies are worth noting. First, in regards to methodology, other body image measures other than satisfaction might produce different or more revealing results. For example, given the possible connection between body satisfaction and confidence that could be present in regards to breastfeeding decisions, a measure that is more directly related to confidence could be important. Further exploration of the trait and state variables used here might also be important for this population of interest, but also should be examined in conjunction when looking at other populations and compared, which is one of the suggestions Thompson (2004) made when discussing issues with body image measurement.

Second, the uses and gratifications measures were coded from open-ended questions. Although the coding scheme and decisions made sense for the data, there might be other ways to approach uses and gratifications. For this particular sample, the distinctions were logical from the inductive process. Having this qualitative information might allow for
quantitative measures that can look at uses and gratifications in a more complex manner. In general, this is also a drawback of uses and gratifications not having clear constructs or measurement guidelines that need to be addressed in the field overall.

Third, related to measures of uses and gratifications, further study regarding what women are actually learning from the sources the visit and how they are interacting with the media will be important. As the uses and gratifications findings demonstrates impacts of the type of media, genre of media, and reasons for seeking out the media on the TPB measures, a more in-depth understanding of those spaces and how women are using them would allow for more impactful interventions and discussions. This might take the form of observational or other qualitative work that investigates what women look for in different media spaces, how they are interacting or not interacting with the spaces (such as new media), and what they are then taking away from it. This would begin to answer some of the questions regarding the differences found between the media types and could allow for improvements to be made in some media to encourage breastfeeding.

Fourth, regarding the TPB, future work seems fruitful in this particular area of study as well as in general. For this area regarding breastfeeding, it might be useful to separate social and injunctive norms the way it has been recommended in the past (Ajzen, 2011; Rivis & Sheeran, 2003). As some additional variables added in the current study are context-specific, such as first pregnancy and trimester, it might be fruitful to continue researching with other health outcomes. Although the arguments over TPB measurement and additions have been occurring, the purpose of one’s research should also be considered—can findings from a TPB study alone assist with actually developing intervention techniques or are the additional variables helpful?
Finally, additional work regarding breastfeeding and communication should be conducted; for example, communication between lactation consultants, nurses, and patients. Lactation consultants and nurses are generally the first people women see after giving birth to help with breastfeeding. Observational and interview work might examine how these conversations and interactions develop, patients’ perceptions, and ultimately, how these interactions influence behaviors. Additionally, longitudinal work could examine expectations and intentions during pregnancy and then follow up to see how women actually behaved and why. Other maternal health issues should also continue to be examined, such as exercise intentions during and after pregnancy, as well as nutritional health for the mother and the baby, when the time is appropriate, which could also have a body satisfaction component that is important.

Overall, this dissertation has explored the important maternal health issue of breastfeeding in three different ways to gain a more in-depth understanding of influences on intentions to breastfeed for three months, six months, and one year. Although there were limitations and paths for future research, important conclusions have been made for both researchers and practitioners. For researchers, the multi-theoretical approach to breastfeeding intentions proved useful if the goal is to help develop future campaigns and interventions. Otherwise, the TPB on its own was generally a strong model for predicting intentions. Uses and gratifications contributed to a combined model by providing additional explanation of the development of the TPB variables, which can be especially useful when trying to change beliefs that lead to behavioral decisions. On its own, uses and gratifications demonstrated some promise as an explanatory model, but continued work is needed. For maternal health and breastfeeding researchers, this work adds compelling evidence to the literature regarding
the impact body satisfaction might have during pregnancy, particularly regarding breastfeeding and minor support to a media impact on pregnancy body satisfaction.

Practitioners should be able to draw on the findings of this research to identify some of the areas to focus on regarding breastfeeding intentions. This includes the TPB variables and how they operate at each of the durations studied, as well as the media variables that impact the TPB variables.
REFERENCES


Banister, E. M. (1999). Women’s midlife experience of their changing bodies. *Qualitative


Dennis, C. L., & McQueen, K. (2009). The relationship between infant-feeding outcomes


Jones, D. C. (2011). Interpersonal and familial influences on the development of body


social pressure techniques used to mobilize voters. *American Politics Research, 41*(3), 359-386.


Sandberg, T., & Conner, M. (2008). Anticipated regret as an additional predictor in the


APPENDICES
Appendix A

Survey Measures

a. Pre-Pregnancy Body Dissatisfaction

With the first set of questions, I’m interested in your feelings about your body before your current pregnancy. Think about your body prior to becoming pregnant and please indicate your feelings towards each item listed below.
1. My lips
2. My bust
3. My face
4. My appetite
5. My waist
6. My thighs
7. My buttocks
8. My hips
9. My abdomen
10. My legs
11. My figure
12. My weight

b. Pre-Pregnancy Behaviors

I’d also like you to think about your lifestyle before your current pregnancy. Please indicate how often you generally engaged in the listed behaviors.
1. Exercise at least 30 minutes
2. Weigh myself
3. Restrict my calories
4. Visit the gym

c. Perfectionism

Now I’d like to know some general things about you. Please indicate the extent to which you agree or disagree to the following statements as they concern you:
1. If I do not set the highest standards for myself, I am likely to become a second-rate person
2. It is important to me that I be thoroughly competent in everything I do.
3. I set higher goals for most people
4. I am very good at focusing my efforts on attaining a goal
5. I expect higher performance in my daily tasks than most people.
6. If someone does a task at work or school better than I, then I feel like I failed the whole task
7. I hate being less than the best at things
8. If I do not do as well as other people, it means I am an inferior person
9. If I do not do well all the time, people will not respect me.
d. Uses and Gratifications

1. The next few items ask about your media use since becoming pregnant. In the space below, please name one type of media or genre of media that you have frequently used since becoming pregnant. Try to be as specific as possible. For example: pregnancy magazines, social networking sites, television shows, online pregnancy forums.

2. Thinking about the media you indicated above, please describe your reason for turning to this source. For example, information about your pregnancy, just for entertainment, etc.

3. In the space below, please name one other type of media or genre of media that you have frequently used since becoming pregnant. Try to be as specific as possible.

4. Thinking about the media you indicated above, please describe your reason for turning to this source.

5. In the space below, please name one other type of media or genre of media that you have frequently used since becoming pregnant. Try to be as specific as possible.

6. Thinking about the media you indicated above, please describe your reason for turning to this source.

7. In the space below, please name one other type of media or genre of media that you have frequently used since becoming pregnant. Try to be as specific as possible. If there is no other type of media that you use, then in the box below please type: Done

8. Thinking about the media you indicated above, please describe your reason for turning to this source.

9. In the space below, please name one other type of media or genre of media that you have frequently used since becoming pregnant. Try to be as specific as possible. If there is no other type of media that you use, then in the box below please type: Done

10. Thinking about the media you indicated above, please describe your reason for turning to this source.

Breastfeeding Attitudes

e. This next set of questions focuses on decisions about breastfeeding. First, there are many different views people hold about this, and I’m interested in knowing your thoughts. How likely do you think it is that...

1. Breastfeeding establishes a close bond between mother and baby
2. Breastfeeding is embarrassing for a mother
3. Breastfeeding is good for a mother’s figure
4. Breastfeeding will limit a mother’s social life
5. Breastfeeding provides the best nourishment for baby
6. Breastfeeding protects against infection

f. Regardless of how you responded to the previous items, how good or bad is...

1. Having a close bond with my baby
2. Avoiding embarrassment
3. Having a good figure
4. Having an active social life
5. Providing the best nourishment for my baby
6. Protecting my baby against infection

**Breastfeeding Subjective Norms**

g. **How much do you agree or disagree with the following statement?**
Most people would approve of breastfeeding exclusively for at least the first three months of a baby’s life.

**h. What about specific people you know? What do they think you should do about breastfeeding?**
1. My spouse/partner thinks I should…
2. My mother thinks I should…
3. My OBGYN, nurse, and/or midwife think I should…
4. My friends think I should
5. Pregnancy media (like magazines and Web sites) think I should…
6. Television programs indicate that I should…
7. People in online discussion forums think I should…

**i. Now, please indicate how important the following people’s thoughts are to you regarding breastfeeding**
1. My spouse’s/partner’s views on breastfeeding are…
2. My mother’s views on breastfeeding are…
3. My OBGYN’s, nurse’s or midwife’s views on breastfeeding are…
4. My friends’ views on breastfeeding are…
5. Pregnancy media views on breastfeeding are…
6. Television programs’ views on breastfeeding are…
7. People in online discussion forums views on breastfeeding are…

**Breastfeeding Control**

j. **These next questions are about the resources or other necessities you would require if you choose to breastfeed your baby. First, how much do you agree or disagree with the following statement?**
I can easily breastfeed my baby

**k. And how much do you agree or disagree with the following statements about certain resources or necessities?**
1. I have the necessary resources to breastfeed (i.e. classes, access to a lactation specialist, accessories)
2. My workplace will make it easy for me to breastfeed (i.e. provides a lactation room)
3. I should have the physical ability to breastfeed (i.e. producing enough milk)
4. I might not have the time to breastfeed
5. I can afford or my insurance will cover a breast pump
1. Finally, how important do you think each of the following factors is in your ability to breastfeed your baby?
   1. Having extra resources (i.e. classes, access to a lactation specialist, accessories)
   2. Having a workplace that enables breastfeeding (i.e. provides a lactation room)
   3. Having the physical ability to breastfeed (i.e. producing enough milk)
   4. Having ample time
   5. Affording or having insurance coverage for a breast pump

m. Body Dissatisfaction During Pregnancy
I have just a few more questions about your pregnancy and your plans. Thinking about your pregnant body now, please indicate your feelings towards each item listed below.

   1. My feet
   2. My lips
   3. My bust
   4. My face
   5. My appetite
   6. My waist
   7. My thighs
   8. My buttocks
   9. My belly
   10. My hips
   11. My legs
   12. My figure
   13. My weight

Behavioral Intentions

n. There are various methods of feeding your baby that you might choose. As of now, how do you intend to feed your baby?
   1. Exclusive breastfeeding for 3 months
   2. Exclusive breastfeeding for 6 months
   3. Exclusive bottle feeding
   4. Combination feeding

o. Still thinking about feeding your baby, please indicate the likelihood of breastfeeding your baby as described in the following statements
   1. I intend to breastfeed my baby exclusively for 3 months
   2. I intend to breastfeed exclusively for 6 months
   3. I intend to breastfeed my baby for 1 year, even after introducing solids

p. Control Measures

   1. Finally, I'd like to know just a few things about you. What is your age?

   2. What is your ethnicity?
a. White
b. Black
c. Middle Eastern/Arabic
d. Indian Subcontinent
e. Asian
f. Hispanic/Latino
g. Pacific Islander
h. Other

3. What was your estimated household income for 2013?
   a. Under $10,000
   b. $10,000 to under $20,000
   c. $30,000 to under $40,000
   d. $50,000 to under $75,000
   e. $75,000 to under $100,000
   f. $100,000 to under $150,000
   g. $150,000 or more

4. What is the highest education level you have achieved?
   a. Some high school
   b. High school degree
   c. Some college (including 2-year college)
   d. College degree
   e. Graduate degree
   f. Other

5. What is your current employment status?
   a. Work out of home full time
   b. Work out of home part time
   c. Stay at home mom
   d. Temporarily unemployed

6. Is this your first pregnancy?
   a. Yes
   b. No

7. What trimester are you currently in?
   a. First
   b. Second
   c. Third

8. Please provide your height:

9. Please indicate your average weight (in pounds) in the year prior to your current pregnancy
10. Please indicate your **current weight:**
Table 3.1. Multiple Regression Predicting Intentions to Breastfeed Exclusively for 3 Months with Theory of Planned Behavior Variables Only

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<td>Perceived Behavioral Control</td>
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<td>.20**</td>
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<td>(R^2) (%)</td>
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*Notes: N = 155. Cell entries are bivariate correlations in the left column and standardized regression coefficients in the right column. \#p < .10, \(*p < .05, \,**p < .01, \,**\,*p < .001*
Table 3.2. Theory of Planned Behavior Variables Predicting Intentions to Breastfeed Exclusively for 6 Months

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Notes: $N = 155$. Cell entries are bivariate correlations in the left column and standardized regression coefficients in the right column. #$p < .10$, $*p < .05$, $**p < .01$, $***p < .001$
Table 3.3. Theory of Planned Behavior Variables Predicting Intentions to Breastfeed Exclusively for 1 Year

<table>
<thead>
<tr>
<th></th>
<th>Zero-Order</th>
<th>β</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes</td>
<td>.31***</td>
<td>.28***</td>
</tr>
<tr>
<td>Subjective Norms</td>
<td>.01</td>
<td>-.07</td>
</tr>
<tr>
<td>Perceived Behavioral Control</td>
<td>.28**</td>
<td>.23**</td>
</tr>
<tr>
<td>$R^2$ (%)</td>
<td></td>
<td>15.1%</td>
</tr>
</tbody>
</table>

Notes: $N = 155$. Cell entries are bivariate correlations in the left column and standardized regression coefficients in the right column. #$p < .10$, *$p < .05$, **$p < .01$, ***$p < .001$
Table 3.4. Dependent Variable of Intentions to Exclusively Breastfeed for 3 months

<table>
<thead>
<tr>
<th>Block 1: Demographics</th>
<th>Zero-Order</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>-.08</td>
<td>-.06</td>
<td>.03</td>
<td>.04</td>
<td>-.05</td>
</tr>
<tr>
<td>Race (non-white)</td>
<td>.09</td>
<td>.09</td>
<td>.05</td>
<td>.04</td>
<td>.02</td>
</tr>
<tr>
<td>Income</td>
<td>-.03</td>
<td>.02</td>
<td>-.04</td>
<td>-.04</td>
<td>-.01</td>
</tr>
<tr>
<td>Block R² (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.1%</td>
</tr>
</tbody>
</table>

**Block 2: Pregnancy Changes**

| Weight Change         | -.03       | .03     | .08     | .10     |
| First Pregnancy (“yes”) | .28***    | .31***  | .32***  | .24**   |
| Trimester 1           | -.08       | -.03    | -.06    | -.01    |
| Trimester 3           | .04        | .05     | .06     | .11     |
| Block R² Change (%)   |            |         | 9.3%    |         |

**Block 3: Psychological Variables**

| Pre-Pregnancy Body Satisfaction | .02 | -.16 | -.16# |
| Perfectionism                  | .08 | -.11 | -.07  |
| Pregnancy Body Satisfaction   | .10 | .21* | .16   |
| Block R² Change (%)            |     | 2.8% |

**Block 4: TPB**

| Attitude           | .39*** | .28**  |
| Subjective Norms   | .18**  | .11    |
| Perceived Behavioral Control | .25*** | .19*   |
| Attitude X Pregnancy Body Satisfaction |         | -.04  |
| Sub. Norms X Pregnancy Body Satisfaction |         | .04   |
| PBC X Pregnancy Body Satisfaction |         | -.07  |
| Block R² Change (%) |       | 14.1%  |
| Total R² (%)        |       | 28.1%  |

*Notes: N = 155. Cell entries are bivariate correlations in the left column and standardized regression coefficients in the other columns, trimester 2 was omitted as the reference category, #p < .10, *p < .05, **p < .01, ***p < .001*
Table 3.5. Dependent Variable of Intentions to Exclusively Breastfeed for 6 months

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<th>Model 3</th>
<th>Model 4</th>
</tr>
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<td>-.09</td>
<td>-.03</td>
<td>-.04</td>
<td>-.07</td>
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<tr>
<td>Race (non-white)</td>
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<td>.02</td>
<td>.02</td>
<td>.01</td>
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<tr>
<td>Income</td>
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<td>-.05</td>
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<td>-.03</td>
</tr>
<tr>
<td>Block R² (%)</td>
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<td></td>
<td></td>
<td></td>
<td>1.8%</td>
</tr>
<tr>
<td><strong>Block 2: Pregnancy Changes</strong></td>
<td></td>
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<td></td>
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<tr>
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<td>-.11</td>
<td>-.08</td>
<td>-.08</td>
<td></td>
</tr>
<tr>
<td>First Pregnancy</td>
<td>.23**</td>
<td>.00</td>
<td>.01</td>
<td>.00</td>
<td></td>
</tr>
<tr>
<td>Trimester 1</td>
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<td>.02</td>
<td>.02</td>
<td>.04</td>
<td></td>
</tr>
<tr>
<td>Trimester 3</td>
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<td>-.11#</td>
<td>-.10</td>
<td>-.08</td>
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<td>.80***</td>
<td>.78**</td>
<td>.72***</td>
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<td>-.12#</td>
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<td>-.03</td>
<td>-.04</td>
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<tr>
<td>Pregnancy Body Satisfaction</td>
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<td>.09</td>
<td>.07</td>
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</tr>
<tr>
<td>Block R² Change (%)</td>
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<td></td>
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<td></td>
<td>.9%</td>
</tr>
<tr>
<td><strong>Block 4: TPB</strong></td>
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<td></td>
<td></td>
</tr>
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<td>.10#</td>
<td>.10#</td>
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<td>Subjective Norms</td>
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<td>.00</td>
<td>.00</td>
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<td>Perceived Behavioral Control</td>
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<td>.10#</td>
<td>.10#</td>
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</tr>
<tr>
<td>Attitude X Pregnancy Body Satisfaction</td>
<td>.16**</td>
<td></td>
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<tr>
<td>Subjective Norms X Pregnancy Body Satisfaction</td>
<td>.12*</td>
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<tr>
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<tr>
<td>Block R² Change (%)</td>
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<td>5.8%</td>
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<tr>
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Notes: N = 155. Cell entries are bivariate correlations in the left column and standardized regression coefficients in the other columns, trimester 2 was omitted as the reference category, #p < .10, *p < .05, **p < .01, ***p < .001
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<th>Model 4</th>
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<td>.05</td>
<td>.00</td>
<td>.01</td>
<td>.02</td>
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<tr>
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<td>-.17#</td>
<td>-.15*</td>
<td>-.14#</td>
<td>-.14#</td>
</tr>
<tr>
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<td>2.9%</td>
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<table>
<thead>
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<th>Model 4</th>
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<tr>
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<td>-.09</td>
<td>-.08</td>
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</tr>
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<td>.04</td>
<td>.05</td>
<td>.10#</td>
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<tr>
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<td>-.13#</td>
<td>-.12#</td>
<td>-.11</td>
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<td>3 and 6 Month BF Intentions</td>
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<td>.74***</td>
<td>.73***</td>
<td>.70***</td>
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<td>51.9%</td>
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<th>Model 3</th>
<th>Model 4</th>
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<tbody>
<tr>
<td>Pre-Pregnancy Body Satisfaction</td>
<td>-.18*</td>
<td>-.10</td>
<td>-.09</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perfectionism</td>
<td>-.04</td>
<td>-.01</td>
<td>.02</td>
<td></td>
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<tr>
<td>Pregnancy Body Satisfaction</td>
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<td>Block R² Change (%)</td>
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<td></td>
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<table>
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<th>Model 4</th>
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<tr>
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<td>.31***</td>
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<td>.12#</td>
<td></td>
<td></td>
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<tr>
<td>Subjective Norms</td>
<td>.01</td>
<td></td>
<td>-.17*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived Behavioral Control</td>
<td>.27**</td>
<td></td>
<td>.06</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitude X Pregnancy Body Satisfaction</td>
<td></td>
<td></td>
<td>.06</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subjective Norms X Pregnancy Body Satisfaction</td>
<td></td>
<td></td>
<td>-.06</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PBC X Pregnancy Body Satisfaction</td>
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<td></td>
<td>.04</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Block R² Change (%)</td>
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<td></td>
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<td>3.8%</td>
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</tr>
<tr>
<td>Total R² (%)</td>
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<td></td>
<td></td>
<td>59.8%</td>
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Table 3.6. Continued

Notes: $N = 155$. Cell entries are bivariate correlations in the left column and standardized regression coefficients in the other columns, trimester 2 was omitted as the reference category, $\# p < .10$, $^* p < .05$, $^{**} p < .01$, $^{***} p < .001$
Table 3.7 Correlation matrix among independent variables in model predicting six months breastfeeding

<table>
<thead>
<tr>
<th></th>
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<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude (1)</td>
<td>Pearson’s $r$</td>
<td>1</td>
<td>.17*</td>
<td>.17*</td>
<td>.03</td>
<td>.12</td>
<td>-.01</td>
<td>-.09</td>
<td>-.09</td>
<td>-.20*</td>
<td>-.06</td>
<td>.03</td>
<td>.04</td>
</tr>
<tr>
<td>Subjective Norms (2)</td>
<td>Pearson’s $r$</td>
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<td>1</td>
<td>.10</td>
<td>.06</td>
<td>.28***</td>
<td>-.06</td>
<td>.01</td>
<td>-.04</td>
<td>.08</td>
<td>-.05</td>
<td>-.01</td>
<td>.02</td>
</tr>
<tr>
<td>PBC (3)</td>
<td>Pearson’s $r$</td>
<td>.17*</td>
<td>.10</td>
<td>1</td>
<td>.12</td>
<td>.05</td>
<td>.25**</td>
<td>.14#</td>
<td>-.20*</td>
<td>.08</td>
<td>-.01</td>
<td>.13</td>
<td>.08</td>
</tr>
<tr>
<td>Pre-Body Satisfaction (4)</td>
<td>Pearson’s $r$</td>
<td>.03</td>
<td>.06</td>
<td>.12</td>
<td>1</td>
<td>.07</td>
<td>.59***</td>
<td>.04</td>
<td>-.16*</td>
<td>.10</td>
<td>.01</td>
<td>-.09</td>
<td>.18*</td>
</tr>
<tr>
<td>Perfectionism (5)</td>
<td>Pearson’s $r$</td>
<td>.12</td>
<td>.28***</td>
<td>.05</td>
<td>.07</td>
<td>1</td>
<td>.03</td>
<td>.00</td>
<td>-.18*</td>
<td>-.13</td>
<td>.03</td>
<td>-.00</td>
<td>-.04</td>
</tr>
<tr>
<td>Pregnancy Body Satisfaction (6)</td>
<td>Pearson’s $r$</td>
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<td>-.06</td>
<td>.24**</td>
<td>.59***</td>
<td>.03</td>
<td>1</td>
<td>-.20*</td>
<td>-.08</td>
<td>.10</td>
<td>.08</td>
<td>-.07</td>
<td>.14#</td>
</tr>
<tr>
<td>Weight Change (7)</td>
<td>Pearson’s $r$</td>
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<td>.01</td>
<td>.14#</td>
<td>-.04</td>
<td>.00</td>
<td>-.20*</td>
<td>1</td>
<td>-.03</td>
<td>.45***</td>
<td>-.56***</td>
<td>1.16#</td>
<td>.03</td>
</tr>
<tr>
<td>First Pregnancy (8)</td>
<td>Pearson’s $r$</td>
<td>-.09</td>
<td>-.04</td>
<td>-.20*</td>
<td>-.16*</td>
<td>-.18*</td>
<td>-.08</td>
<td>-.03</td>
<td>1</td>
<td>.03</td>
<td>-.02</td>
<td>.19*</td>
<td>-.14#</td>
</tr>
<tr>
<td>Trimester 1 (9)</td>
<td>Pearson’s $r$</td>
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<td>.08</td>
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<td>.10</td>
<td>.45***</td>
<td>.03</td>
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<td>-.37***</td>
<td>.16#</td>
<td>.08</td>
<td>.15#</td>
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<tr>
<td>Trimester 2 (10)</td>
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<td>-.08</td>
<td>-.02</td>
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<td>-.01</td>
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<td>-.09</td>
<td>-.00</td>
<td>-.07</td>
<td>.17#</td>
<td>.19*</td>
<td>.16#</td>
<td>-.08</td>
<td>1</td>
<td>-.10</td>
</tr>
<tr>
<td>Race (12)</td>
<td>Pearson’s $r$</td>
<td>.04</td>
<td>.02</td>
<td>.08</td>
<td>.18*</td>
<td>-.04</td>
<td>.14#</td>
<td>-.14#</td>
<td>.08</td>
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<td>-.10</td>
<td>1</td>
<td>-.05</td>
</tr>
<tr>
<td>Income (13)</td>
<td>Pearson’s $r$</td>
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<td>.04</td>
<td>.06</td>
<td>.09</td>
<td>.17*</td>
<td>.08</td>
<td>.06</td>
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<td>.15#</td>
<td>-.11</td>
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Table 4.1 Correlation matrix among independent variables in model predicting three months breastfeeding

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<th>6</th>
<th>7</th>
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<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Media Diet 2 (1) Pearson’s $r$</td>
<td>1</td>
<td>.37***</td>
<td>.65***</td>
<td>-.18*$*$</td>
<td>-.16*$*$</td>
<td>-.067</td>
<td>.05</td>
<td>-.065</td>
<td>-.05</td>
<td>-.06</td>
<td>-.00</td>
<td>.10</td>
<td>-.02</td>
<td>-.14$^g$</td>
<td>.04</td>
</tr>
<tr>
<td>Media Diet 3 (2) Pearson’s $r$</td>
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<td>-.32***</td>
<td>-.08</td>
<td>.03</td>
<td>-.06</td>
<td>.07</td>
<td>.01</td>
<td>-.02</td>
<td>.16*$*$</td>
<td>-.12</td>
<td>-.01</td>
<td>.12</td>
<td>.00</td>
<td>-.05</td>
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<td>-32***</td>
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<td>.37***</td>
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<td>.11</td>
<td>-.17*$*$</td>
<td>.05</td>
<td>.07</td>
<td>-.06</td>
<td>.08</td>
<td>-.18*$*$</td>
<td>-.04</td>
<td>.22**</td>
<td>.02</td>
</tr>
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<td>Pregnancy Media (4) Pearson’s $r$</td>
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<td>-.08</td>
<td>.37***</td>
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<td>-.22**</td>
<td>.05</td>
<td>.03</td>
<td>-.02</td>
<td>.02</td>
<td>.04</td>
<td>.09</td>
<td>-.16*$*$</td>
<td>.19$^*$</td>
<td>.18$^*$</td>
<td>.14$^g$</td>
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<tr>
<td>Gratifications (5) Pearson’s $r$</td>
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<td>.03</td>
<td>.20*$*$</td>
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<td>.11</td>
<td>-.05</td>
<td>-.24**</td>
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<td>.06</td>
<td>-.10</td>
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<td>Age (6) Pearson’s $r$</td>
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<td>-.05</td>
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<td>.54***</td>
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<td>-.19$^*$</td>
<td>.16$^g$</td>
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<td>.09</td>
<td>.17$^*$</td>
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<td>.18$^*$</td>
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<td>.15$^g$</td>
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<th>Perfectionism (14)</th>
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<td>-.04</td>
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<td>-.08</td>
<td>.18*</td>
<td>-.10</td>
<td>.17*</td>
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<td>-.09</td>
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<td>.09</td>
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<td>.18*</td>
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<td>.04</td>
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<td>.03</td>
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<td>.07</td>
<td>.59***</td>
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# $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$
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<tr>
<th>Gratifications</th>
<th>Less Traditional Media Use</th>
<th>Heavy Traditional Media Use</th>
<th>Total</th>
<th>$\chi^2$</th>
</tr>
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<tbody>
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<td>Instrumental</td>
<td>Count</td>
<td>53</td>
<td>42</td>
<td>95</td>
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<td></td>
<td>% Total</td>
<td>55.8%</td>
<td>44.2%</td>
<td>100%</td>
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<tr>
<td>Non-Instrumental</td>
<td>Count</td>
<td>20</td>
<td>39</td>
<td>59</td>
</tr>
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<td></td>
<td>% Total</td>
<td>33.9%</td>
<td>66.1%</td>
<td>100%</td>
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<tr>
<td>Total</td>
<td></td>
<td>73</td>
<td>81</td>
<td>154</td>
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</tbody>
</table>

*p < .10, *p < .05, **p < .01, ***p < .001
Table 4.3. Crosstabulation of gratifications sought by new media use

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<th>New Media Use</th>
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<th></th>
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<tbody>
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<td></td>
<td>Less New Media Use</td>
<td>Heavy New Media Use</td>
<td>Total</td>
<td>$\chi^2$</td>
</tr>
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<td>Instrumental</td>
<td>Count</td>
<td>21</td>
<td>74</td>
<td>95</td>
<td>.27</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>22.1%</td>
<td>77.9%</td>
<td>100%</td>
<td></td>
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<tr>
<td>Non-Instrumental</td>
<td>Count</td>
<td>11</td>
<td>48</td>
<td>59</td>
<td></td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>18.6%</td>
<td>81.4%</td>
<td>100%</td>
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<td>Total</td>
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<td>122</td>
<td>154</td>
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$#p < .10, *p < .05, **p < .01, ***p < .001$
Table 4.4. Crosstabulation of gratifications sought by pregnancy media use

<table>
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<th>Gratifications</th>
<th>Pregnancy Media Use</th>
<th>Total</th>
<th>$\chi^2$</th>
</tr>
</thead>
<tbody>
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<td>No Pregnancy Media Use</td>
<td>Some Pregnancy Media Use</td>
<td>More Pregnancy Media Use</td>
</tr>
<tr>
<td>Instrumental</td>
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<td>66</td>
<td>24</td>
</tr>
<tr>
<td>Non-Instrumental</td>
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<td>46</td>
<td>5</td>
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<tr>
<td>Total</td>
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#p < .10, *p < .05, **p < .01, ***p < .001
Table 4.5. Multiple regression predicting intentions to exclusively breastfeed for three months.

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<th>Zero-Order</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
</tr>
</thead>
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<td><strong>Block 1: Demographics</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
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<td>-.06</td>
<td>.04</td>
<td>.04</td>
<td>.05</td>
</tr>
<tr>
<td>Race (non-white)</td>
<td>.09</td>
<td>.09</td>
<td>.05</td>
<td>.04</td>
<td>.02</td>
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<tr>
<td>Income</td>
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<td>.02</td>
<td>-.05</td>
<td>-.05</td>
<td>-.06</td>
</tr>
<tr>
<td>Block R² (%)</td>
<td></td>
<td></td>
<td></td>
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<td>1.1%</td>
</tr>
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<td>.07</td>
<td>.07</td>
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<td>.33***</td>
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<td>Block R² Change (%)</td>
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<td>-.17</td>
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<td>Perfectionism</td>
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<th>Pregnancy Media X Pregnancy Body Satisfaction</th>
<th>Gratifications X Pregnancy Body Satisfaction</th>
<th>Block R² Change (%)</th>
<th>Total R² (%)</th>
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Notes: N = 155. Cell entries are bivariate correlations in the left column and standardized regression coefficients in the other columns, trimester 2 was omitted as the reference category, #p < .10, *p < .05, **p < .01, ***p < .001
Table 4.6. Multiple regression predicting intentions to exclusively breastfeed for six months.

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*Notes: N = 155. Cell entries are bivariate correlations in the left column and standardized regression coefficients in the other columns, trimester 2 was omitted as the reference category, $\#p < .10$, $*p < .05$, $**p < .01$, $***p < .001$*
<table>
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<tr>
<th>Block 1: Demographics</th>
<th>Zero-Order</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
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<td>.04</td>
<td>.03</td>
<td>.02</td>
</tr>
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<td>.03</td>
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Notes: $N = 155$. Cell entries are bivariate correlations in the left column and standardized regression coefficients in the other columns, trimester 2 was omitted as the reference category, $# p < .10$, $* p < .05$, $** p < .01$, $*** p < .001$
Table 5.1 Beta weights for three month breastfeeding path analysis

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<th>Trimester 3</th>
<th>Weight Change</th>
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<td>-.25*</td>
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#p < .10, *p < .05, **p < .01, ***p < .001
Table 5.2 Beta weights for three month breastfeeding path analysis

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<td>.44*</td>
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*p < .10, **p < .05, ***p < .01, ****p < .001
Table 5.3 Beta weights for six month breastfeeding path analysis

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<th>Weight Change</th>
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#p < .10, *p < .05, **p < .01, ***p < .001
**Table 5.4 Beta weight for six month breastfeeding path analysis**

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*p < .10, *p < .05, **p < .01, ***p < .001
Table 5.5 Beta weights for one year breastfeeding path analysis

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# p < .10, *p < .05, **p < .01, ***p < .001
Table 5.6 Beta weights for one year breastfeeding path analysis

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Table 5.7 Beta weights of interactions on intentions for three months, six months, and one year breastfeeding

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<th>Six Month Breastfeeding Intentions</th>
<th>One Year Breastfeeding Intentions</th>
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<td>.18**</td>
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<td>Subjective Norms*Pregnancy Body Satisfaction</td>
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<td>.13*</td>
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<tr>
<td>PBC*Pregnancy Body Satisfaction</td>
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<td>Gratifications*Pregnancy Body Satisfaction</td>
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*p < .10, *p < .05, **p < .01, ***p < .001
Table 5.8 Beta weights of interactions on intentions for three months, six months, and one year breastfeeding

<table>
<thead>
<tr>
<th></th>
<th>Three Month breastfeeding intentions</th>
<th>Six Month Breastfeeding Intentions</th>
<th>One Year Breastfeeding Intentions</th>
</tr>
</thead>
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<td>Media Diet 2*Pregnancy Body Satisfaction</td>
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<td>-.05</td>
<td>-.09</td>
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<tr>
<td>Media Diet 3*Pregnancy Body Satisfaction</td>
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*p < .10, *p < .05, **p < .01, ***p < .001
Figure 3.1 Graph demonstrating intentions to breastfeed exclusively for six months as a product of attitudes towards breastfeeding and pregnancy body satisfaction.
Figure 3.2 Graph demonstrating intentions to breastfeed exclusively for six months as a product of subjective norms and pregnancy body satisfaction.
<table>
<thead>
<tr>
<th>Less New Media</th>
<th>Less Traditional</th>
<th>Primarily Traditional</th>
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<tr>
<td>Media Diet 1, <em>Abstainers</em></td>
<td>• Very few media mentions</td>
<td>Media Diet 3, <em>Traditionalists</em></td>
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<tr>
<td></td>
<td>• Mention of 1 new media and/or no traditional media</td>
<td>• Mostly mentions of traditional media</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• One-way communication media</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 0 to 1 mentions of new media</td>
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<tr>
<td>Primarily New Media</td>
<td>Media Diet 2, <em>Digital Users</em></td>
<td>Media Diet 4, <em>Multimedialists</em></td>
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<td></td>
<td>• Primarily mentions of new media</td>
<td>• Generally equal mentions of traditional and new media</td>
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<td></td>
<td>• Media with digital, interactive, or control components</td>
<td>• One-way communication</td>
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<tr>
<td></td>
<td>• 0 to 1 mentions of traditional media</td>
<td>• Interactive, digital, control components</td>
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Figure 4.1. Media diet variables and brief descriptions
Figure 4.2. Intention to exclusively breastfeed for three months as a result of pregnancy body satisfaction and media diet
Figure 4.3 Intention to breastfeed exclusively for six months as a product of pregnancy body satisfaction and pregnancy media use.
Figure 4.4 Graph illustrating intentions to breastfeed one year as a result of media gratifications.

Covariates include demographic variables, pregnancy variables, psychological variables, and other uses and gratifications variables.
Covariates include demographic variables, pregnancy variables, psychological variables, and other uses and gratifications variables.

Figure 4.5 Graph demonstrating intentions to breastfeed exclusively one year.
Figure 5.1 Conceptual model combining the TPB and uses and gratifications.
Figure 5.2 Conceptual model combining the TPB and uses and gratifications with body satisfaction moderating variable.
Figure 5.3 Path Analysis Predicting Intentions to Exclusively Breastfeed for Three Months
#p < .10, *p < .05, **p < .01, ***p < .001

Figure 5.4 Path Analysis Predicting Intentions to Exclusively Breastfeed for Six Months
Figure 5.5 Path Analysis Predicting Intentions to Breastfeed for One Year

#p < .10, *p < .05, **p < .01, ***p < .001
Figure 5.6 Comparisons of Path Analyses Predicting Breastfeeding Intentions
Figure 5.7 Intentions to Exclusively Breastfeed for Three Months as a Product of Media Diet and Pregnancy Body Satisfaction
Figure 5.8 Graph demonstrating intentions to breastfeed exclusively for six months as a product of subjective norms and pregnancy body satisfaction.
Figure 5.9 Graph demonstrating intentions to breastfeed exclusively for six months as a product of attitudes towards breastfeeding and pregnancy body satisfaction.
Figure 5.10 Intention to exclusively breastfeed for six months as a result of pregnancy body satisfaction and pregnancy media use
Figure 5.11 Graph demonstrating intentions to breastfeed for one year as a product of perceived behavioral control and pregnancy body satisfaction.