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Postpartum Mothers' Attitudes Toward Breastfeeding

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This is to certify that the doctoral study by

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has been found to be complete and satisfactory in all respects,
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Walden University
2017

Abstract

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Jacquelyn D. Jones

MSN/Ed, University of Phoenix, 2006

BSN, Hampton University, 2002

Project Submitted in Partial Fulfillment

Of the Requirements for the Degree of

Doctor of Nursing Practice

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Abstract

Breast milk is the optimal source of nourishment for babies, providing positive nutritional and psychosocial benefits for infants' growth and development. Rates for initiation of breastfeeding and exclusive breastfeeding at 6 months in the United States are well below the target rates for the Healthy People 2020 Maternal, Infant, and Children's Health objectives. Using Ajzen's theory of planned behavior, the purpose of this project was to ascertain how knowledge and attitudes influenced a mother's intent to breastfeed during her hospital stay and the likelihood of exclusive breastfeeding continuing after discharge. A convenience sample of 68 postpartum mothers was recruited from women who delivered a viable infant between January and March 2017 at a large urban teaching hospital. Mothers completed the 17-question 5-point Likert scale instrument, the Iowa Infant Feeding Attitude Scale, and demographic information before discharge from the hospital. Mothers who planned to breastfeed and mothers who did not plan to breastfeed scored above the midpoint on the scale; however, women who intended to breastfeed after discharge scored significantly higher ($p < .001$). Demographic variables were not significant with the exception of education level. Women with higher education levels scored higher on the scale and were more likely to plan to breastfeed after discharge than women with lower levels of education. Findings may promote social change through development and implementation of tailored nursing interventions, such as community prenatal education and clinical reinforcement, which will support initiation of breastfeeding in the hospital setting and exclusivity of breastfeeding upon discharge.

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Dedication

I dedicate this capstone project to my family, especially my son-in-law, Kevin Parks, who would not let me give up when I wanted to quit; and my inspirational grandchildren, Genesis, Elijah, Xavier, and Sekhem, who inspired me to truly be a "grand-mother." To my awesome children, Fred and Tiffany, thanks for pushing me to the finish line. Finally, to Sheila, the best sister and part-time editor in the world; thanks for listening to me talk endlessly about my topic and asking the hard questions that challenged me to dig deeper into the literature to answer your questions and mine as well.

Acknowledgments

Sincere thanks and appreciation to my chair, Dr. Jennings-Sanders, for your support, kindness, and encouragement during my DNP journey, I could not have done this without you. The early morning phone calls to reassure me that I was on the right track when I felt derailed at every chapter in writing my capstone. Your candidness helped me to grow and find answers that were not staring me in the face. I am humble to have had you selected as my chair. I would also like to thank Dr. Behling, my mentor and PI for the project; without her guidance and expertise, I would not have chosen this amazing and profound concept of breastfeeding to explore. I learned more than I could have imagined not just about the topic but also about evidence-based practice and research. Your challenges pushed me beyond what I knew and helped me to understand more about what I know to be certain. I appreciate you giving of your time, energy, and talent to this endeavor. To the leadership team and staff at the Family Maternity Center for making me feel part of your team. I appreciate your kindness and support. To my second committee chair, Dr. J. Garber, thank you for helping me to grow in this process and more confident as a scholar in my role as a DNP. I would be remiss if I did not acknowledge the unwavering support and kindness of my colleagues from Walden's first DNP Intensive, "3T-The Talented Twelve." You all have become friends that I will cherish for life. To my Hampton University colleagues, thank you so much for all the knowledge and wisdom you have given me; for that I am grateful.

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Section 1: Nature of the Project

Introduction

Breastfeeding is the preferred method of providing infants the opportunity to receive a nutrient-rich, healthy diet at the beginning of their lives, a beginning that contributes to lifelong well-being. Human milk fulfills all nutritional requirements for the newborn child (Ismail, Muda, & Bakar, 2014). Breast milk (human milk) is a natural substance produced by the mother's mammary glands after she gives birth. The suckling of the infant on the mothers' breast initiates the process of lactation; lactation is the release of milk from the breast and helps foster a psychological bond between the mother and infant (Perry, Hockenberry, Lowdermilk, & Wilson, 2013). Human breast milk is naturally designed to meet the innate needs of the human species; although other ways exist to feed infants, including but not limited to mammal's milk to food pulp, the uncertainty of the properties of alternative foods make them less than ideal for desired nutritional value (Vari et al., 2013).

The mother's choice to breastfeed or bottle-feed is multi-factorial. This decision is not solely based on the mother's perception or attitude about breastfeeding, but also consideration for those in her immediate personal and social circle who play a vital role in her decision. Mothers who consider breastfeeding express concerns of perceived convenience, personal confinement, and the social stigma associated with breastfeeding in public, as well as the attitude of health professionals who are supposed to educate and provide them with support and encouragement to breastfeed. The spouse or significant other is to be considered in the declaration to breastfeed; their role and attitude can sway

the mothers' decision (Purdy, 2010). According to Jolly et al. (2013), men have a role in increasing the mothers' self-efficacy and attitude regarding breastfeeding, particularly African American women. Jolly et al. further identified that it is beneficial for health care providers to include both parents when discussing breastfeeding to increase the probability of initiation and assist with sustainability for at least 6 months of life.

Presently, many influences affect the mother's decision to breastfeed: cultural, social, financial, spiritual, and medical factors are common causes. Breastfeeding is common among Whites; however, women of various ethnicities find breastfeeding confusing because of the implications associated with the breast being of a personal matter and should not be exposed in public. Breastfeeding is also associated with Third World cultures (Purdy, 2010, p. 365) making it somewhat less desirable for Western culture. Exploring what influences a mother's decision to breastfeed or bottle-feed may reveal opportunities to increase initiation and sustainability rates as well as provide infants a start to optimal health and wellness into adulthood.

Problem Statement

In past generations, breastfeeding was a gold standard in providing nutrition for infants. However, in the 21st century, mothers are increasingly choosing not to breastfeed. The Healthy People 2020 objective for Maternal, Infant and Children's Health (MICH 21.1) is to increase the initiation rates of infants breastfeeding; the target is to increase rates from 74% to 81.9% by 2020 (U.S. Centers for Disease Control and Prevention [CDC], n.p.). This goal has yet to be met. Breastfeeding rates among American women at 6 months is 43.4% (Ahluwalia, Li, & Morrow, 2012). A plethora of

research indicates that breastfed infants experience more physiological and psychosocial benefits than infants who are not breastfed. Health care organizations and providers are partnering to develop a systematic and structural plan to increase education, support, and resources that encourage mothers to initiate breastfeeding immediately postpartum such as the skin to skin initiative and no separation for the first hour of life, which will encourage mothers to continue breastfeeding for the first 6 months of the infants' life.

The American Association of Family Physicians (AAFP) has long supported breastfeeding (AAFP, 2012) and understands that is has a unique opportunity to provide a continuum of care to the mother and infant dyad regarding breastfeeding. Education is provided prenatally emphasizing initiation, and again after delivery, to encourage sustainability for at least 6 months. The American Academy of Pediatrics (AAP) reiterates recommendations that mothers exclusively breastfeed for 6 months and, if possible, 1 year for optimal health benefits for the infant (AAP, 2012). The AAP cited pediatricians who play a critical role in their practice, and the community and must be advocates for breastfeeding and knowledgeable of the health benefits (AAP, 2012).

Purpose

The purpose of this doctor of nursing practice (DNP) project was to discover mothers' knowledge and attitudes toward breastfeeding and to determine whether mothers intending to breastfeed score higher on the Iowa Infant Feeding Attitude Scale (IIFAS) than mothers who do not intend to breastfeed. Parents may consider breastfeeding early during the pregnancy (Street & LeWallen, 2013); however, family,

cultural influences, personal biases, and support of the nursing staff affect the final decision on the nutritional modality for the infant (Purdy, 2010).

In this DNP project, I provided statistical data that compares the knowledge and attitudes of a high-risk obstetrical population with their likelihood to establish and continue breastfeeding. The project questions were:

1. What are the postpartum mother's knowledge and attitude toward breastfeeding?
2. Do mothers who identify as intending to breastfeed score significantly higher on the IIFAS than mothers who do not intend to breastfeed?

Nature of the Doctoral Proposal

The nature of this DNP project was to focus on mothers' knowledge and attitudes toward breastfeeding during the postpartum period and to identify whether social norms, beliefs, and family support influence their decision to breastfeed or bottle-feed. All mothers on the postpartum unit meeting the inclusion criteria were asked to voluntarily complete the paper and pencil survey tool before discharge. Completed surveys were placed in a locked box in the mother-baby unit and only research team members had a key to the locked box. The IIFAS data ascertain the mother's knowledge of breastfeeding, attitude toward breastfeeding and bottle-feeding, preference of feeding, infant nutrition, and spouse involvement; in addition, demographic, social, and economic information was collected. I compiled and organized the data according to commonalities received from completed surveys.

Surveys were distributed daily Monday through Friday from 9:00 a.m. to 2:00 p.m. because 2:00 p.m. to 4:00 p.m. was the designated quiet hours for mothers; visitors and unnecessary interruptions were minimized to promote rest and infant bonding during this time. The survey was assigned a number for tracking how many were distributed and returned using the month, date, and number sequence on the form given (e.g., 071003 means July 10, Survey 3 given). This code was explained to the mothers when given the survey tool to complete. The theory of planned behavior (TPB) was used to guide this DNP project.

Significance

Despite the documented, immediate nutritional benefits of breastfeeding and the long-term health benefits for newborns, the breastfeeding rates in the United States continues to fall below the recommended 82% by Healthy People 2020 (HHS, n.d.). To increase the number of infants being breastfed from birth through the first 6 months of life presents many challenges and concerns for global health care organizations, community programs, and maternity units where infants are delivered (Jefferson, 2014; Laanterä, Pölkki, Ekström, & Pietilä, 2010; Pandey et al., 2015). The BFHI is a global initiative sponsored by the United Nations Children's Fund (UNICEF) and the World Health Organization (WHO) to endorse breast milk fed (BMF) for all healthy, full-term infants during the postnatal hospital stay and until the infant reaches 6 months of age. This voluntary program provides each hospital with a certificate of designation indicating the institution met the requirements for promoting and implementing standards for promoting breastfeeding exclusivity among new mothers. Providing mothers with

evidence-based information about feeding choices for their infants assists in the decision-making process (Purdy, 2010). Breastfeeding is a key strategy for promoting optimal wellness and health for mothers, infants, and children through breastfeeding initiatives and community-based programs.

Summary

Breast milk is an optimal source of infant nutrition from the beginning of life and up to 6 months of age (Jefferson, 2014), with documented health benefits for the infant and mother dyad when breastfeeding occurs. Increased societal attention and knowledge are necessary to address the initiation, exclusivity, and duration of breastfeeding in contexts of cultural, ethnic, and social elements in families and communities. Although it is seemingly natural to breastfeed an infant, it is not an instinctive behavior; breastfeeding is a conscious decision made based on knowledge, attitude, and influences from family and the community where the mother lives.

Section 2: Background and Context

Introduction

Data have shown that if 90% of infants were breastfed for the first 6 months of life, the United States would save $13 billion annually in health care cost (Radzyminski & Callister, 2015). However, despite the ongoing data that have indicated that breastfeeding rates are increasing, the United States consistently falls below the desired objective set by the Healthy People 2020, which is 82% ever breastfed, 61% at 6 months, and 34% at 1 year (U.S. Department of Health and Human Services [USDHHS], 2016). Nevertheless, mothers have an attitude about breastfeeding but recognize it is as a better, natural, and inexpensive way to feed the infant (Laanterä et al., 2010).

The review of literature indicated a diminutive number of mothers understand the benefits of breastfeeding on various intellectual levels; however, their attitudes influence infant feeding preference (Purdy, 2010). Breastfeeding initiation suggests and indicates that the mother's intention to exclusively breastfeed is influenced by sociodemographic and social cultural factors. Breastfeeding up to 6 months of age is the recommendation of many national and international health and wellness sources (CDC, 2015; HHS, n.d.; Healthy People 2020, n.d.). However, the decision to breastfeed can be made before conception or during the antenatal period with the support of family, spouse, and the community.

Mothers with a higher education and who are socioeconomically stable who have a substantial amount of breastfeeding knowledge are more likely to breastfeed (Radzyminski & Callister, 2015). The decision to breastfeed must be a choice and not the

result of coercion or pressure from society or health care providers to meet goals set by health care organizations. Mothers who perceive breastfeeding as a chore or who are pressured during the antenatal period or postpartum period may choose not to breastfeed after delivery (Condon, Tiffany, Symes, & Bolgar, 2010; Jolly et al., 2013).

Concepts, Models, and Theories

Choosing an appropriate conceptual or theoretical framework provides a guide for developing and leading to the critical elements of the project (Moran, Conrad, & Burson, 2013). The use of Ajzen's TPB was the theoretical model for this DNP project (Figure 1). The foundation of the TPB is that perceived behavioral control and behavioral intention can be use directly to predict behavioral achievement (Ajzen, 1991, p.184). The model assumes that rational considerations govern the choices and behaviors of individuals and that people are not governed by not only their own personal attitudes, but also by social pressure and a sense of control. Behavior is challenging to assess because it is not tangible and varies from person to person. The TPB suggests people usually will do what they intend when they have control over their behavioral outcomes; however, other variables alter the person's intent or decision causing them to change their mind and not do what they intended to do.

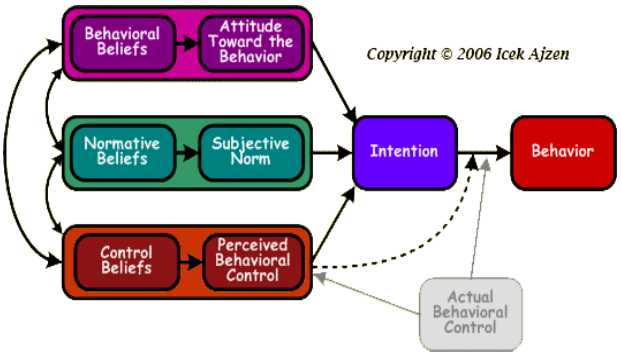

Figure 1. Ajzen theory of planned behavior; the theory depicts deliberate behavior, because behavior can be deliberative and planned.

Lawton et al. (2012) concurred with other researchers and revealed that breastfeeding provides a plethora of nutritional benefits for the newborn and mother. What are essential to the well-being of the infant is the mother's attitude toward breastfeeding and her ability to follow through on her intent to breastfeed after delivery.

The TPB suggests that the principal determinant of behavior is intentions that are predicted by three main constructs: attitudes (based on perceptions of the advantages and disadvantages of performing a behavior), subjective norms (perceptions of the approval of others or performing the behavior), and perceived behavioral control (perceptions about how much control a person feels they have to perform the behavior) (Lawton, Ashley, Dawson, Waiblinger, & Conner, 2012, p. 856). I used an assessment of the three constructs for this capstone project: attitude, determining the mothers' attitude regarding breastfeeding, and their perceived advantages and disadvantages to breastfeeding. It is important to understand if there is validity in the mother's perceived attitude, such as previous poor breastfeeding experience or lack of education and knowledge of breastfeeding practices and benefits the mother may deter from breastfeeding.

Subjective norms, or the approval of others, are an assessment of the immediate family and social circle, which may influence the mother intent to breastfeed. Old wives' tales and myths passed down among family members may influence the mothers' intention to breastfeed. Finally, the perceived control or behavior, self-efficacy, or lack of self-esteem may deter the mother from breastfeeding. Assessing the mother's cognitive and emotional abilities will provide information to support helping the mother with her intent to breastfeed. TPB is concerned with the prediction of intentions. Behavioral normative and control beliefs as well as attitudes, subjective norms, and perceptions of behavioral control are assumed to feed into and explain behavioral intentions. Whether intentions predict behavior depends in part on factors beyond the individual's control; for example, the strength of the intention–behavior relation is moderated by actual control over the behavior (Aizen, 2005, p. 1115).

Social Change

The social change implications related to increasing breastfeeding rates, exclusivity, and sustainability present challenges for health care staff, lactation consultants, and primary care providers. The long-term benefits of healthier infants and children outweigh the present challenges of low breastfeeding rates domestically and internationally.

Societal acceptance of breastfeeding mothers in public venues is shown to influence the mother's decision to initiate or exclusively breastfeed her infant. In 2011, the city of Seattle, Washington, with the passing of House Bill 1596, elevated breastfeeding to a civil right, making it illegal to ask mother's not to breastfeed in a

public location; in addition, there are 40 other states with laws protecting women breastfeeding in public (Mulready-Ward & Hackett, 2014).

Removing societal barriers and stigma regarding breastfeeding may increase initiation, exclusivity, and sustainability rates for the mother if there is a consensus among leading health care organizations, special interest groups, health care providers, and the general community. Breastfeeding is beneficial to the immediate and long-term well-being of all infants regardless of the duration of being breastfed.

Definitions

Breastfeeding: The transfer of human milk from the mother to the infant (Perry et al., 2013, p. 638).

Attitude: An individual's attitude is a response to a stimulus a bipolar concept that has clinical representation of cognitive, affective, and behavioral components (Laanterä et al., 2010, p. 1).

Postpartum: The term postpartum marks the 6- to 8-week period that begins an hour after the birth of the fetus and expulsion of the placenta. This period reflects the approximate time required for uterine involution and the return of the body's systems to a non-pregnant state (Fahey & Shenassa, 2013, p. 613).

Exclusivity: This term refers to exclusive rights or services (Merriam-Webster, n.d.). In this case, to breastfeed only; the infant receives no other liquid or solid food until 6 months of age (Perry et al., 2013, p. 638).

Sustainability: Able to last or continue for a long time (Merriam-Webster, n.d.).

Theory of planned behavior: The theory of planned behavior is an assumption that rational considerations govern an individual's choices and behaviors (Lange, Kruglanski, & Higgins, 2012).

Iowa Infant Feeding Attitude Scale: Tool to measure maternal attitudes toward infant feeding methods (e.g., breastfeeding, formula feeding; Mora, Russell, Dungy, Losch, & Dusdieker, 1999).

Relevance to Nurse Practice

Improving initiation rates of breastfeeding and exclusivity duration will assist in meeting the Healthy People 2020 goal of increasing proportion rate of infants ever breastfeed to 81.9% (U.S. Department of Health and Human Services, 2015). Mothers having their first baby or second or third child want the same health benefit for their infant, that is whatever is best for their newborn, and according to researchers, breastfeeding is best. Bai et al. (2011) posited that human milk fulfills all nutritional requirements for growth and development of an infant (p.1267). Although most mothers agreed that breastfeeding is better, personal and social barriers continue to influence their final decision to breast or bottle-feed their infant. Health care providers, nursing staff, and lactation consultants can be the conduit for which parents receive support and knowledge on the health benefits for mom and infant on breastfeeding. Nurses are key stakeholders in the implementation and initiation of breastfeeding mothers while in the hospital and encouraging sustainability upon discharge.

Breastfeeding is the preferred method for mothers to provide optimal nutrition for their infants having an immediate health effect for the mother after delivery, as well as

lifelong cognitive and health benefits for the infant. Nursing staff, health care providers, and lactation consultants must provide patients and families with current, evident-based information in support of breastfeeding; these specialists should advocate for and promote best practices in infant nutrition.

Local Background and Context

The WHO in conjunction with UNICEF, identified and support providing infants with optimal nutrition at birth, and identify breast milk is best due to the increase of health benefits throughout the lifespan. The social change implication related to increasing breastfeeding rates, exclusivity and sustainability may present challenges for health care staff, lactation consultants, and primary care providers; however, the long-term benefits of healthier infants and children outweigh the present change.

There are nutritional and sustainable health benefits for the newborn and mother from the initiation of breastfeeding to the cessation of this very important maternal act. The freedom of choice, allowing the mother the right to decide what is best for her moral, spiritual, economical, and personal preference and social norms may influence why she may or may not breastfeed. Providing support and resources to improve breastfeeding initiation rates and education, the Baby-Friendly USA, Inc. is the nonprofit national authority for WHO/UNICEF's BFHI. Their mission is to assess, accredit, and designate birthing facilities that meet the BFHI criteria for implementing the Ten Steps to Successful Breastfeeding and follow the International Code of Marketing of Breast-milk Substitutes (The Virginia Maternity Center Breastfeeding-Friendly Designation, VA MCBFD Program, n.d.).

Exclusivity and sustainability for the first 6 to 12 months of life provide infants with numerous physical, mental, and emotional benefits that last a lifetime (Bai, Wunderlich, & Fly, 2011). Health promotion efforts and support from the WHO, Healthy People 2020, the AAP, and the Centers for Disease Control, all promote and provide education for health care organizations and the community. This collaboration is done to encourage mothers to breastfeed their newborn for as long as feasibly possible in an effort to give every newborn the healthiest start in life.

Role of the DNP Student

As the DNP student, my responsibility was to gather and analyze the literature related to breastfeeding attitudes in post-partum women. I sought IRB approval from Walden University and IRB approval from the facility where the data were collected. I collected completed survey tools from the lock box on the women's health unit until the desired sample was obtained. I collaborated with the primary investigator and unit educator to ensure integrity of the data collection process, also scrutinized surveys received from the participants for completeness. Finally, I disseminated the final analysis of the DNP project to stakeholders, other members of the health care team, and the community.

Role of the Project Team

To ensure the project was successfully implemented and carried out in the specified timeframe without incident, the facility for the study requires the primary investigator (PI) be an employee of the facility; therefore, my mentor severed as PI for the capstone project, the women's health unit educator and I make up the additional

members of the project team. The PI role was to ensure compliance with system and unit policies, complete research project plan and letter for Nurse Executive, submit IRB application to facility, compile research notebook or maintain an electronic folder of all research documents, develop research protocol, and assisted with conducting analysis and dissemination project. The PI serves in the role as Manager of OB Safety Program for the health care system's 10 hospitals with women's health units. She has completed Collaborative Institutional Training Initiative (CITI); in addition she was the primary investigator of a quality improvement project recently implemented at the facility for her capstone project. The unit educator, also CITI certified, provided education to the staff regarding the capstone project, reviewed the survey tool with post-partum mothers meeting the criteria to participate in the survey, collected completed surveys and collaborated with unit manager on project progress as it pertains to staff involvement. I and the PI addressed any ethical concerns voiced by staff or patients. The PI, unit educator, and I were responsible for ensuring the participants surveys submitted in a timely manner and patient confidentiality was maintained during the survey period.

Summary

The PI will ensure system policies and guidelines are followed as established for the health care system; in addition, the project team made sure patient confidentially was maintained during the survey period. Members of the project team provided ongoing education and support to the nursing staff in an effort minimize apprehension patients may have regarding the project process.

Section 3: Collection and Analysis of Evidence

Introduction

Documented health benefits exist for the infant and mother dyad when breastfeeding occurs to increase immunization, promote infant growth, and cognitive development (Kornides & Kitsantas, 2013; Labarère et al., 2012; Purdy, 2010; Tenfeld, Finnegan, & Hill, 2011; Lutsiv et al., 2013). Increased societal attention and knowledge is necessary to address the initiation, exclusivity, and duration of breastfeeding in the contexts of cultural, ethnic, and social elements of communities. Although it is seemingly natural to breastfeed an infant, it is not an instinctive behavior; breastfeeding is a conscious decision made based on knowledge, attitude, and influences of family and community (Condon et al., 2010; Jolly et al., 2013).

Practice-Focused Questions

The mother's choice to breastfeed or bottle-feed is multi-factorial. This decision is based not only on the mother's perception knowledge or attitude about breastfeeding, but also on the consideration for those in her immediate personal and social circle who play a vital role in her decision making process. Mothers who consider breastfeeding express concerns of perceived convenience, personal confinement, and the social stigma associated with breastfeeding in public, as well as the attitude of health care professionals who are expected to educate and provide them with support and encouragement to breastfeed (Jolly et al., 2013).

I explored the following research questions (RQs) in this study:

RQ1: What are the postpartum mother's knowledge and attitude toward breastfeeding?

RQ2: Do mothers who identify as intending to breastfeed score significantly higher on the Iowa Infant Feeding Attitude Scale (IIFAS) than mothers who do not intend to breastfeed?

Sources of Evidence

An extensive search was conducted using EBSCOhost: Cumulative Index of Nursing and Allied Health Literature (CINHAL), MEDLINE, DARE, and PubMed databases available at Walden University, University of Phoenix, and Hampton University libraries. The research information used came from peer-reviewed articles, and from primary and secondary studies published between 2011 and 2016. The key words used to search for related materials included *breastfeeding, attitudes of breastfeeding, theory of planned behavior, breastfeeding behaviors, infant nutrition, lactation, and breast ever fed breastfeeding attitude tools,* and *breastfeeding knowledge.* Searches of websites related to breastfeeding initiatives and infant nutrition included the WHO, Healthy People 2020, Virginia Department of Health, AWHONN, and the CDC. A snowball search strategy was used to explore additional relevant articles. A total of 12,223 articles were retrieved; after scanning several of abstracts from the retrieved articles, I used the following key terms to narrow the search: *breastfeeding*, *attitudes*, and *knowledge*, and *age group 19-44*. The final reviews of 62 articles of documents were identified as relevant for this DNP project.

To explore the postpartum mother's knowledge and attitude of breastfeeding, several determinants are considered: family, ethnicity, knowledge, and age may influence their intent to breastfeed during the postpartum period.

Social/Culture

Street and LeWallen (2013) conducted a qualitative descriptive study to examine the effects of breastfeeding culture of African American and White women. *Culture* was defined as belief and traditions passed down by family and friends. There were 186 participants in the study, consisting of 119 Whites and 167 African Americans. The participants were 18 years or older and at least 28 week's gestation. Street and LeWallen indicated that participants stated their feeding decision is multifactorial, but family was consistent as the number one answer for all the participants. The majority of the participants stated they were aware of the breastfeeding benefits for the newborn but was not a factor in their decision. One participant cited everyone in her family used bottles so she wanted to try something different. Thirty-six percent of the of the participant's state culture had an influence on their feeding decision

Condon et al. (2010) suggested that breastfeeding is culturally driven activity; there are cultural differences that prevent mothers from initiating breastfeeding and sustaining breastfeeding after certain periods of time for various personal and socioeconomic reasons. To increase awareness of breastfeeding in public, large cardboard cutouts of women breastfeeding were used to draw attention of the public to breastfeeding. The public were asked to complete a questionnaire regarding their attitude about mothers' breastfeeding in public; 67% stated there was no change in their attitude

about women breastfeeding in public and 32% had a more positive attitude regarding women breastfeeding in public. This study supports why some mothers choose not to breastfeed because of public opinion that it is not acceptable to do in public and would be an inconvenience to working or busy mothers.

Breastfeeding Attitude

A cross-section study by Jolly et al. (2013) was conducted in Texas of 81 African American males to measure their knowledge and attitude toward breastfeeding. In this study, men were very supportive of breastfeeding; however, 43% did not support breastfeeding in public places. Consideration for the fathers' attitude is important for the reason that his role as a supporter of breastfeeding sway the mothers' decision to initiate breastfeeding(Chang, Valliant, & Bomba, 2012; Karande & Perkar, 2012; Street & Lewallen, 2013). Men play a significant role in increasing women's self-efficacy and improving their attitudes toward breastfeeding, particularly among African-American women (Jolly et al., 2013, p. 664). Inclusion of the father in the breastfeeding decision improves their attitude and support toward breastfeeding.

Social support and confidence are contributing factors on the mother's intention and attitude toward breastfeeding. In study using a cross-section survey, Brown (2014) explored if maternal personality trait and breastfeeding correlated with confidence and social support. A total of 602 mothers completed the self-report questionnaire examining their attitudes of breastfeeding with their personality and duration of breastfeeding. The survey identified understanding maternal personality may be useful during the antenatal person when teaching and providing educational support to the mother (Brown, 2014).

In a study by Oosterhoff, Hutter, and Haisma (2014), 81% of the women in the Netherlands initiated breastfeeding; however, after 1 month, the percentage dropped significantly, despite their intentions to breastfeed for an extended period of time. Using the TPB as the model, respondents were interviewed prenatally and postpartum. While there are studies that addressed a mother's postpartum, which is a retrospective look at their intent to breastfeed, wanted to have a prospective assessment of the mother's intention to breastfeed. Women in the Netherlands have an intention to breastfeed or bottle-feed long before childbirth (67%) or before the end of the first trimester (32%).

Laanterä et al. (2010) completed a cross sectional web-based survey design. The study was used to assess the prenatal breastfeeding attitudes of 172 Finnish people (123 females and 49 males) and their relationship to demographic characteristics. While the country has a high initiation rate (99%), 77% will receive donor milk or formula during their hospital stay, with the rate decreasing to 60% after discharge. It was noted that mothers were more supportive of breastfeeding than the fathers; however, the negative attitude and lack of spousal support affect the mother's attitude toward breastfeeding. Both parents were in support of breastfeeding, on the other hand, fathers who are involved in the nutritional decision for the child is more supportive of breastfeeding.

Chen et al. (2013) used a simplified IIFAS to survey 200 Chinese mothers living in Perth, Australia comparing the two groups' attitudes towards breastfeeding. There has not been a study to address the attitude of women in China on their attitude of breastfeeding. The total range of the scale was from 17 to 85; the highest scores reflect more positive attitude toward breastfeeding. The survey results suggested that the

mothers in China had a more positive attitude toward breastfeeding ($p<0.001$), there was no measurable difference in the mother's attitude among working and marital status. However, it was noted that in the Chinese culture, mothers indicated that formula-fed babies are more likely to be over fed because their culture suggests that gaining weight and being fat is associate with privileged circumstances.

Breastfeeding Knowledge

Chantry, Dewey, Peerson, Wagner, and Nommsen-Rivers, 2014 conducted a study of 768 women over a 24 month period to assess if providing mothers with in-hospital formula affected their decision to initiate breastfeeding during the post-partum period and diminish the amount of time they would breastfeed after discharge. In-hospital formula is usually provided by the milk companies for a nominal fee to the facility for promoting their product. Most facilities use a rotation cycle as not demonstrate a bias to one particular product. During the review period, 210 exclusively breastfed in the hospital and 183 received in-hospital formula, and 21 initiated in-hospital formula supplementation during the first, second, and third 24 hours after delivery. There were myriad reasons mothers chose to supplement with the most prevalent reason being perception of low milk supply. The recommendation in the study is to develop strategies to avoid in-hospital supplementation of formula. Of note, with more hospitals heeding the recommendation of WHO and UNICEF to increase initiation rates, the consideration is to require a physician order for formula by making it a medication and eliminating milk in discharge diaper bags.

Robinson and VandeVusse (2011) examined self-efficacy and infant feeding decisions among African American women using the Prenatal Breastfeeding Self-Efficacy Scale. The study was conducted at two intervals, third trimester and 3-4 weeks post delivery of 64 participants. The self-efficacy scale determines a mothers' confidence in her ability to initiate breastfeeding; self-efficacy is shown to have an effect on infant feeding choice. The follow up for participants at 3-4weeks indicate their feeding choices

were influence by family, friends, and their personal feelings regarding breastfeeding. Most followed through with their intent to bottle-feed; of those who chose to breastfeed, only one discontinue to breastfeed at 3 months. There were two negative themes identified in the study; social embarrassment was expressed among both groups, and regret was reported from the women who chose to bottle-feed

Tully and Ball (2013) conducted a study using a new conceptual model to address breastfeeding cost and benefit to the mother and infant. In multiple studies, breast milk is identified as the best source of nutrition citing as being superior to chemically enhanced formula (CDC 2014; Chantry et al., 2014; Laanterä et al., 2010). The human and financial cost of suboptimal infant feeding is enormous Tully and Ball assessed the infant and mother dyad and using the situation-specific theory of breastfeeding (STB) which addresses the balancing act between the mother and infant relationship. The mother must determine how she will incorporate breastfeeding into her lifestyle as well as meeting the needs of the infant. The infant strives to meet their needs without causing strain on their source of nutrition that is the mother. The mother is to determine the cost benefit to her and the infant, which may result in the mother choosing to bottle-feed instead of breastfeeding.

A cross-sectional study of 1,612 mothers using the breastfeeding Iowa Infant Feeding Attitudes Scale (IIFAS) was used in this study by Inoue et al. (2013), to access a mother's overall knowledge and attitude toward breastfeeding. A majority (94%) of the participants felt breast milk was not expensive, and 70% state it was better choice for working mothers. The study did suggest that cultural beliefs affect the mothers' decision

to breastfeed as well as family influence (p. 263). Inoue et al. concluded that Japanese mothers are not impressed with breastfeeding and instead prefer infant formula.

Participants

To obtain the information for the questions posed in this DNP project, a convenience sample of patients on the mother-baby unit during the research period from beginning January through March, 2017 in a hospital in the Commonwealth of Virginia were respondents for project. Polit and Beck (2014) posit convenience sampling is a selection of the most readily available persons as participants in a study (Polit & Beck, 2014, p. 377). The participants were able to read and comprehend the survey, English speaking mothers from 18-50 years of age who delivered a viable infant during the survey period for this DNP project. Mothers voluntarily completed the IIFAS survey on the mother-baby unit and returned the completed form to a member of the research team or placed in locked box on the unit before discharge. Mothers, who were not able to breastfeed due to medical reasons, were automatically excluded from participation in the DNP project.

Procedures

Participants admitted during the study period received a cover letter with information regarding the project. Mothers who agreed to participate received the IIFAS and demographic, socioeconomic form to complete that is a double sided to make it a one page document. Completion of the survey was considered consent to participate and was included in the cover letter for participates to read prior to completing the survey (Appendix C). The survey did not contain identifiable patient information so the

participants' anonymity was protected. All completed surveys were placed in a secure container on the mother-baby unit and picked up every Monday for review of completeness and usefulness in the DNP project. Incomplete survey or socio-demographic information on the forms were shredded and not used in the project data analysis. Patients had the option to decline participation in the project. Coercion or persuasion did not occur.

Approval was received from de la Mora (Appendix A) to use the IIFAS (Mora et al., 1999) for this capstone project. The IIFAS is a tool used to study the feeding attitude of mothers and measure maternal attitudes toward infant feeding methods (Mora et al., 1999). The IIFAS (Appendix B) is commonly used in breastfeeding research with proven reliability and validity with a Cronbach alpha ranging from .85 to .86.

The tool is designed to cover various aspects of the mother's attitude toward infants who are breast or bottle-fed. The survey is comprised of 17 questions regarding breastfeeding and bottle-feeding. The mother responded to each question on a 5 point Likert scale ranging from 1-5; 1-*strongly disagree* to 5-*strongly agree*. Half of the items are worded in favor to breastfeed and the remaining to formula feed. A question with an asterisk is reversed scored to favor formula feeding (e.g., 1-5, 2-4); all the numbers are then summed up for a total score. The total scores range from 17-85; the higher scores indicate more positive attitudes toward breastfeeding (Mora et al., 1999). The questions also address the mothers' attitude toward infant bonding, nutrition, nutritional aspects of a various populations, such as post-partum women, health visitors, fathers, pregnant women and students (Ho & McGraft, n.d., p. 73).

In addition to the IIFAS tool, demographic and socioeconomic information for each patient was obtained to include but not limited to age, race, annual income, highest educational level, marital status, first three digits of their zip code, and whether the mother had breastfed with previous pregnancies.

Protection

Approval from the IRB at Walden University and Eastern Virginia Medical School (EVMS) was obtained prior to initiating the study. The participants received a cover letter to review and provided details and explanation of the project at the beginning of the survey tool. The PI and designated members of the project team were available to answer questions the mother had regarding the survey tool or about the capstone project. All members of the research team have completed Collaborative IRB Training Initiative (CITI) training and are actively participating in the process for conducting this DNP project.

Analysis and Synthesis

Information collected from the survey tool and experiences were analyzed using inferential statistics methodology; inferential statistics help researchers draw conclusions about whether relationships and characteristics observed in a sample are likely to occur in the population (Polit & Beck, 2014 p.402). The data was explored to report the mothers' knowledge and attitude toward breastfeeding in comparison with the sociodemographic information using a two-way ANOVA test. To obtain analysis of the data collected from the IIFAS tool an independent samples t-test analysis was performed.

Summary

The capstone project provided information that will positively alter the mother's attitude toward breastfeeding by equipping them with evidence-based knowledge and information that will not interfere with their ethical, moral cultural or personal beliefs. Knowledge can change outcomes when it is clear, concise, and easily understood by the consumer. Mothers desire the best nutrition for their newborn and contemplate what that may entail sometimes long before they conceive based on family traditions, culture, associations, and society. For mothers who are ambivalent on the topic of breastfeeding, support, and understanding of health care providers, families, spouses, and the community can help with their decision to provide what researchers and other health organizations declare is best for a healthy newborn throughout their life span.

Data obtain from this DNP project provided documented evidence for educators, clinical nursing staff, health care providers, and lactation consultants a clearer perspective on how to better engage mothers, husbands, significant others, and families in the breastfeeding experience. Understanding the mother's knowledge and attitude toward breastfeeding while dispelling myths or misinformation will increase the exclusivity, initiation and sustainability of breastfeeding. In addition, intent for this DNP project is replication of the process for other patients in health care system that serves a very diverse population at each facility. Health care providers and nursing staff must provide ongoing knowledge, support, and community resources for mothers who chose to breastfeed during their hospital stay and upon discharge.

Engaging families, communities, and other disciplines will be the responsibility of those in health care to assist in garnering understanding and support for this worldwide initiative. How we approach this arduous task seems overwhelming from a social, political, emotional, and cultural perspective. Pressuring mothers or attempting to persuade mothers to do something they have definite feelings against or do not understand may create a ripple in an already fragile health care relationship regarding breastfeeding initiatives or practices.

Increasing breastfeeding rates and knowledge will require a multidisciplinary approach if there is to be sustainability in the future. The initiative to increase breastfeeding rates cannot be a fad or trend for this decade because doing so will cause breastfeeding rates to regress to its current state of urgency. Breast milk provides infants with optimal nutrition benefiting them throughout their life span; helping mothers and families with their decision is multi-factorial and health care team members must be leaders in this endeavor. Increased social attention and knowledge is necessary to address the initiation, exclusivity, and duration of breastfeeding in contexts of cultural, ethnic, and social elements in families and communities.

Section 4: Findings and Recommendations

Introduction

Breast milk is a standard that it is considered by the WHO, UNICEF, and the APA as the best nutritional method of providing infants a protective barrier against illnesses and health problems from birth through the first year of life compared with bottle-feeding. There is a litany of benefits to breastfeeding: breast milk is easily digested; decreases allergic reaction; and decreases ear infections, respiratory illness, and gastrointestinal diseases. There are equal benefits to mothers who chose to breastfeed: decrease postpartum depression, decrease postpartum bleeding and infection, increase mother infant bonding time, and a decrease in breast and ovarian cancer (Howe-Heyman & Lutenbacher, 2016). However, with all the known benefits to the mother-infant dyad, breastfeeding rates remain low in the United States.

According to the CDC (2013), 49.5% of mothers breastfed exclusively for 3 months and only 22% for 6 months in the state of Virginia. The goal of Healthy People 2020 is to increase the breastfeeding rate to 81.9 % and to engage hospitals in providing support, and encourage mothers to breastfeed. An evidence-based program, the BFHI was established. This is a 10-step system design as an intervention to improve breastfeeding outcomes at facilities (Howe-Heyman & Lutenbacher, 2016). When the facility has completed the 10 steps, a certificate is awarded, indicating they have met all the requirements to be deemed a baby-friendly hospital, which is important for the breastfeeding mother. At this facility for the DNP capstone, the staff received a pre-post survey to determine their knowledge and support of breastfeeding mothers. After staff

education an evaluation of breastfeeding knowledge and support, breastfeeding exclusivity rates of mothers not using formula during hospital stay increased to 68% from 35% before the education information was provided (Nicks, 2016).

Determining what affects a mother's decision to breastfeed or bottle-feed continues to be a focus for the health care team. The capstone project addressed the area of decrease outcomes and engages patients with initiating and exclusively breastfeeding during their hospital stay and continue upon discharge for 3 to 6 months after delivery.

The questions for this DNP project were as follows:

RQ1: What are the postpartum mother's knowledge and attitude toward breastfeeding?

RQ2: Do mothers who identify as intend to breastfeed score significantly higher on the Iowa Infant Feeding Attitude Scale (IIFAS) than mothers who do not intend to breastfeed?

Breastfeeding is noted as the healthiest, easiest, and safest nutritional food form a newborn infant can have to start their new life. However, the initiation rates, exclusivity rates, and sustainability rates of mothers choosing are low in most states. Understanding why breastfeeding is not the primary choice of feeding for new mothers as well as those who have other children is of concern for health care providers, national health care organizations and health care workers. Obtaining knowledge and understanding why mothers choose not to breastfeed may change the way health care organizations and health care workers approach the issue with patients and their families and hopefully

change the way we provide education and support to women who have an attitude or lack understanding about breastfeeding.

A tertiary care women's health population was designated for participation in the paper and pencil survey of Postpartum Mother's Attitude on Breastfeeding. Before collecting data for the survey, the exclusivity rate of mothers' breastfeeding during their hospital stay was the lowest in the health care system of the 10 hospitals providing postpartum care (Nicks, 2016). Free breastfeeding classes were offered to patients seen in the Maternal Fetal Medicine clinic (the only practicing OB physician group for the hospital) for any patient interested in breastfeeding. During a 6-month period, only one patient attended the free classes (MacDonald, 2016).

As part of my DNP clinical hours, I began to explore why mothers who were offered free breastfeeding classes choose not to attend and why this approach was chosen to address the low exclusivity breastfeeding rates, and did the mothers' attitude and knowledge regarding breastfeeding impact their feeding choice. A discovery made during one of the high-performance women's health team sessions was there was no clear data on the mothers' knowledge or attitude about breastfeeding, consequently, classes where offered based on what the team deemed was lacking in the mothers decision process.

The purpose of the project was to explore the attitude and knowledge of mothers feeding choice after delivery and what variables influence their decision. A paper and pencil attitude and knowledge survey tool (IIFAS) with demographic information was analyzed to see if there was any comparison in demographic and socioeconomic factors (Appendix B) with the IFFAS that impact or influence their decisions.

Findings and Implications

Breastfeeding Survey Tool

The survey tool (Appendix B) was given to all mothers meeting the inclusion criteria on the postpartum unit, beginning January 23 through March 23, 2017. A cover letter (Appendix C) detailing the purpose, confidentiality statement, and proposed benefits for participation was given to each patient to read prior to receiving the survey tool. Patients were able to decline to participate and no coercion tactics were used to encourage participation.

The survey was distributed Monday-Friday for the 7 weeks of the survey period. A total of 169 of 234 convenient sample patients agreed to participate and were given a survey tool to complete, patients were asked to return the completed survey tool to the assigned locked survey box on the postpartum unit. The potential patients (*n*=65) who did not receive the survey were those who had "Do Not Disturb" signs on their door, patients with a preterm loss, not in the room when passing out survey, uncontrolled pain and ask not to have visitors in room, and those off the unit for surgery. At the end of the Week 3, the return rate for the survey was 12.2% compared to the 48% from the previous week. It was noted that the unit is very busy in the morning with rounds from the pediatrician, vital statistics, dietary, and other ancillary support persons, it was determined this may not be the best time to distribute the survey.

An adjustment was made and the survey was distributed after quite hour which ended at 4 pm. The rates for returned surveys increased to 57% for the following weeks and remain at that level until the end of the survey period.

Findings

The following is based on my analyses. Personal characteristics (Table 1), there were 68 respondents; 52 (76.5%) who intend to breastfeed after they are discharged and 16 (23.5%) do not intend to breastfeed after they are discharge. The social aspects of the survey include age: the majority of both groups were 32 years old or younger and intend to breastfeed after discharge-38(73.1%), while 13 (81.3%) do not intend to breastfeed after discharge. Ethnicity: majority of the groups were African American/Black, of this group, 32 (61.5%) intend to breastfeed after discharge, while 14 (87.5%) do not intend to breastfeed after discharge. The next ethnic group was Caucasian/White, of this group 18 (34.6%) intend to breastfeed after discharge; 2 (12.5%) do not intend to breastfeed after discharge. There were only two (3.8%) women who identified themselves as Hispanic but read and spoke and English, plan to breastfeed after discharge.

Table 1

Sample Personal Characteristics by Breastfeeding Plans After Discharge

	Plans to breastfeed		Does not plan to breastfeed	
Variable	*n*	%[a]	*n*	%[b]
Age (years)				
19–22	10	66.7	5	33.3
23–27	14	87.5	2	12.5
28–32	14	70.0	6	30.0
33–35	8	72.7	3	27.3
36–40	6	100.0	0	0.0
Ethnicity				
Black	32	69.6	14	30.4
White	18	90.0	2	10.0
Hispanic	2	100	0	0.0
Marital status				
Single	25	65.8	13	34.2
Married	23	95.8	1	4.2
Separated	0	0.0	1	100
Divorced	2	66.7	1	33.3

[a]Percentages represent respective variable levels of those who plan to breastfeed.
[b]Percentages represent respective variable levels of those who do not plan to breastfeed.

Table 2

Sample Economic Characteristics by Breastfeeding Plans After Discharge

	Plans to breastfeed		Does not plan to breastfeed	
Variable	*n*	%[a]	*n*	%[b]
	Household income			
Less than $10,000	12	63.2	7	36.2
$10,000 to $24,999	13	81.3	3	12.8
$25,000 to $49,999	14	77.8	4	22.2
$50,000 to $74,999	4	100	0	0.0
$75,000 to $99,999	2	100	0	0.0
$100,000 to $124,999	4	100	0	0.0
$125,000 to $149,999	2	100	0	0.0
	Education			
Completed 8th grade	0	0.0	1	1.00
Some high school	6	54.5	5	45.5
Completed high school	15	62.5	9	37.5
Some college	15	93.8	1	6.2
Completed college	12	100.00	0	0.0
Some graduate school	1	100.00	0	0.0
Completed graduate school	3	100.0	0	0.0
	Employment			
Full-time	22	81.5	5	18.5
Part-time	9	90.0	1	10.0
Home-maker	8	88.9	1	11.1
Unemployed	12	60.0	8	40.0
Student	1	50.0	1	50.0

[a]Percentages represent respective variable levels of those who plan to breastfeed.
[b]Percentages represent respective variable levels of those who do not plan to breastfeed.

Marital status. The highest percentage of both groups were single, 25 (50%) and plan to breastfeed after discharge, two of the women did not answer the question regarding their marital status, but do not intend to breastfeed after discharge, 13 (81.3%) do not intend to breastfeed. A high percentage of those who intend to breastfeed after discharge were married 23(46.0%). Two (4%) of the women who intend to breastfeed after discharge were divorced. For those women who do not intend to breastfeed after discharge one (6.2%) was married, one (6.2%) was separated, and one (6.2%) was divorced.

Economic characteristics (Table 2) include household income: majority for both groups' income was $49,999 or less (intend to breastfeed after discharge-39 (76.5) one of the women did not want to respond to the income question, do not intend to breastfeed 14(100%)-two of the women did respond to the income question. Twelve (23.5%) of the women who intend to breastfeed after discharge have a household income of $50,000 or more.

Education. Majority of both groups had completed high school-some college and intend to breastfeed after college-36 (69.2%), 15 (93.8%) do not intend to breastfeed after discharge. Of the women who does not intend to breastfeed after discharge, one (6.2%), completed the eighth grade; sixteen (30.8%) of the women who intend to breastfeed after discharge completed college and graduate school.

Employment. Majority of the women who intend to breastfeed after discharge work fulltime-22 (42.3%). Five (31.3%) of the women who do not intend to breastfeed after discharge work fulltime; nine (17.3%) of the women who intend to breastfeed after

discharge work part-time and one (6.2%) of the women who does not intend to breastfeed after discharge works part-time. Twelve (23.1%) of the women who intend to breastfeed after discharge are unemployed, eight (15.4%) are homemakers, and one is a student (1.9%). Eight (50%) of the women who do not intend to breastfeed are unemployed, one (6.2%) is a homemaker, and one (6.2%) is a student.

Analysis: an independent t-test was used to determine if there was a difference in the IIFAS scores between the women who plan to breastfeed after discharge and those who do not plan to breastfeed after discharge, after discharge, the means and standard deviations were calculated for both groups.

Independent variable-Intention to breastfeed after discharge (yes/no)

Dependent variable –IIFAS score. There were 17 items on the IIFAS. The response scale is 1 = strongly disagree to 5 = strongly agree. The possible score and range from 17 to 85 with a midpoint of 51. Higher scores indicate more positive knowledge and attitude towards breastfeeding.

Results

There was a significant difference between the two groups, $t(56) = 3.91$, $p = .000$, $d = 1.05$. The effect size, *d*, of 1.05 is a large effect size. The women who plan to breastfeed after discharge scored higher ($M = 61.7$, $SD = 7.2$) than the women who do not intend to breastfeed after discharge ($M = 53.5$, $SD = 8.4$).

Table 3

Independent t Test Results for Differences in Iowa Infant Feeding Attitude Scale Due to Plans to Breastfeeding After Discharge

Breastfeed after discharge?	*n*	*M*	*SD*	*t*	*p*	*d*[a]
Yes	52	61.7	7.2	3.91**	.000	1.05
No	16	53.5	8.4			

[a]Cohen's *d* = effect size.
Note. *$p < .05$; **$p < .01$.

The answers to the research questions are as follows:

RQ1: What are the postpartum mother's knowledge and attitude toward breastfeeding? Both groups scored above the midpoint indicating they tend to agree with the statements and have a more positive knowledge/attitude toward breastfeeding.

RQ 2: Do mothers who identify as intending to breastfeed score significantly higher on the Iowa Infant Feeding Attitude Scale than mothers who do not intend to breastfeed? Yes, women who intend to breastfeed after discharge scored significantly higher on the IIFAS than mothers who do not intend to breastfeed after discharge.

A two-way ANOVA was used to test if demographic variables influenced the difference in the IIFAS scores between women who intend to breastfeed after discharge and those who do not intend to breastfeed after discharge. Individual two-way ANOVAs were calculated for all the demographic variables. Result (Table 4), breastfeeding after discharge was significant for all the demographic tests except education. There was a significant interaction between education and intention to breastfeed after discharge (Figure 1), for the higher levels of education. The women who intend to breastfeed after

discharge scored higher than the women who do not intend to breastfeed after discharge. For the lowest education level, women who do not intend to breastfeed scored higher on the IIFAS than the women who intend to breastfeed. After completing the analysis, it appeared the demographic variables do not influence the decision to breastfeed after discharge. The women who intend to breastfeed after discharge scored higher than the women who do not intend to breastfeed after discharge.

Table 4

Analysis of Variance Results for Iowa Infant Feeding Attitude Scale Score by Breastfeeding Plans After Discharge and Demographics

Demographics	Breastfeeding after discharge		Demographics	
	F	*p*	*F*	*p*
Age	8.96	.004	.87	.486
Ethnicity	9.44	.003	.067	.935
Marital status	6.23	.015	.21	.887
Education level[a]	3.35	.072	2.10	.109
Employment	7.96	.007	.11	.980
Household income	9.93	.003	.38	.886

[a]There was a significant interaction between education and intention to breastfeed on discharge ($F = 9.44$, $p = .003$). For the higher level of education, the women who intend to breastfeed after discharge scored higher than the women who do not intend to breastfeed after discharge. For the lowest education level, women who do not intend to breastfeed scored higher on the Iowa Infant Feeding Attitude Scale than the women who do intend to breastfeed.

Note. $*p < .05$;$**p < .01$.

For education, for the lowest educational level the women who do not intend to breastfeed after discharge, scored higher on the IIFAS than those women who do intend to breastfeed. For all the other education levels the women who intend to breastfeed after discharge scored higher that the women who do not intend to breastfeed.

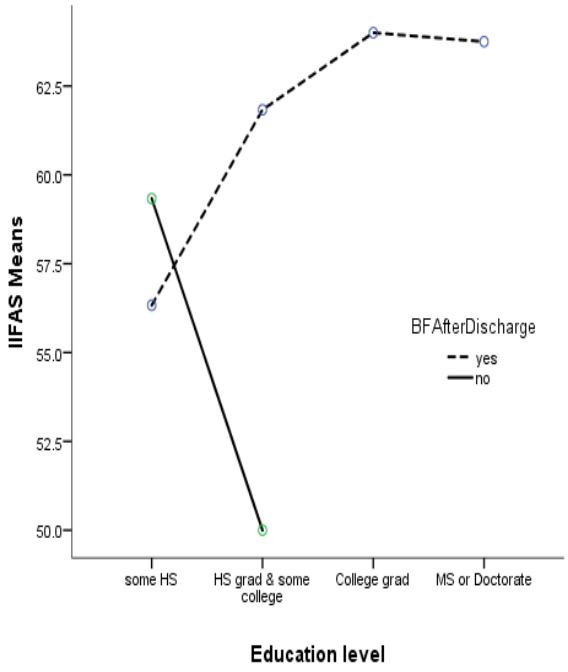

Figure 2. Interaction between education level and intention to breastfeed on discharge.

Limitations

At the beginning of the survey period, the tool was given to patients early in the morning when there were a lot of other patient activities going on. This resulted in patients not completing surveys because of all the other documents that needed to be complete such as vital statistic record, WIC forms, personal paperwork; so, the survey

tool became low priority and was not completed and returned before discharge. A time adjustment was made and the return rate increased (>50%) by Week 4 of the survey period. The hospital has a diverse population of patients that deliver at this facility, 19.2% were non-English speaking and were not able to participate; but, most had an interpreter who may have been able to assist them with the form. Another aspect that was not included were the mothers who delivered but were on the ante partum unit which is logistically in another location separate from the postpartum unit; so, they did not participate in the survey. It was also identified that mothers who were not breastfeeding did not complete the survey tool at the same rate as those who were breastfeeding, even though the cover letter stated their views were of value to the project.

According to the returned surveys the number of mothers who breastfed were significantly higher than those who did not breastfeed. The sample sizes where different and may skew the interpretation of the data results. In the future, breastfeeding mothers and bottle-feeding mothers should be identified when given the survey so there is an even distribution of survey tools for a more accurate collection of data instead of random selection.

Implications

Breastfeeding initiation and exclusivity during the hospital stay is increasingly important to the nutritional and physical development of newborns. Babies intuitively will nurse at the mother's breast when given the opportunity to do so during the first hour of life; the challenge is getting all mothers to understand this valuable asset they have that will impact their child's life forever. Engaging the nurses and providers supporting this

effort with improve initiation and exclusivity rates during the mother's hospital stay. The WHO and UNICEF initiative of the Baby Friendly Hospital provides education and training to health care professionals in supporting the mothers breastfeeding efforts and provide education guidance to mothers who have trouble deciding which method of feeding their infant will work for them.

The hospital for this project completed the Baby Friendly training and recognized a 5% improvement in their 4th quarter for exclusivity of breastfeeding mother. Continuing support of the nurses providing the care and support to the postpartum mothers and ongoing community education and resources will increase the awareness and number of mothers initiating and exclusively breastfeeding their infants. When presenting mothers with the cover letter and answering their questions regarding the survey, it was of note that some wanted to breastfeed but did not have enough information to make a conclusive decision, so the lactation consultant was made aware of the patients concern and in some instances the end result would be the mothers chose to initiate breastfeeding during their hospital stay with a commitment to breastfeed upon discharge.

Implications for Social Change

Ma, Brewere-Asling, and Mangnus (2013) conducted a case study in Louisiana and indicated that they would save $216,103,368 and prevent 18 infant deaths if 90% of the newborns were breastfeed exclusively. Breastfeeding is fundamentally a basic method of providing nutrition to the average newborn and with expressing milk, preterm infants as well. Creating this paradigm shift into the 21st century will be challenging but cost effective and beneficial to newborns delivered today. Promoting and providing ongoing

education on the cost and benefits to the mother, infant, family, and community will garner increase support and knowledge of the benefits of breastfeeding. The acceptance of breastfeeding in the work place with the implementation of lactation rooms and allocated time for mothers to breastfeed, as indicated as part of the 2013 Affordable Care Act Section 7 of the Fair Labor Standards Act (U.S. Department of Labor /wage and hour division), and continue support of mothers to breastfeed in public places being recognized as civil right, brings increase awareness and support of the importance and benefit this is for the newborn. As the communication between health care provider and patient is strengthened, the more likely will the medical community be able to encourage and support mothers in their breastfeeding efforts.

Recommendations

To increase the number of mothers who initiate and exclusively breastfeed during their hospital stay and after discharge, more community education and clinical support is needed before, during and after discharge. Patients did express the lack of known resources available to them in their community that will support them when they go home. I will acknowledge there are resources for the breastfeeding mother, but not all patients have the means or resources of getting to the classes or if there is a cost, paying for them. Breast pumps, although not required, certainly help encourage mothers to continue breastfeeding after discharge. Medicaid currently does not pay for breast pumps; so, mothers are given a manual pump during their hospital stay to help express milk if the infant is not feeding well nor has other medical concerns. It is noted that these patients become disenchanted with breastfeeding because of the time it takes to manually express

milk versus pumping when they have to return to work or have other children at home to care for. If this initiative is successful, breast pumps must be made available to all mothers wanting to breastfeed with a minimal or no cost for those with limited income. Establishing a pump exchange program, or a leasing program funded by the hospital in conjunction with a grant from formula companies and insurance companies may increase the mothers' willingness to breastfeed and meet the goal of 6 months to 1 year after birth.

I would also recommend a windshield assessment be done to determine what is needed in the community and develop programs specific to the needs of those patients; not all communities will need the same thing so we cannot promote or invent cookie cutter programs to address their need to increase breastfeeding initiation and exclusivity rates.

Contribution of the Doctoral Project Team

The project team consisted of me, the Primary Investigator, and the postpartum Unit Clinical Nurse Specialist. Each member of the project team played a critical role in the development, implementation, and completion of the project. The support and encouragement I received from the hospital nursing research department was instrumental in ensuring I remained within the guidelines. When conducting research in a large facility, it is important to have the support of the stakeholders. The Clinical Nurse Specialist was the liaison between the project team and the nursing research department; her role was to review the project with the research team and keep us abreast of any concerns or changes needed prior to implementation and completion of the project. The Principal Investigator (PI) ensured that all the necessary documents and forms were

completed and submitted to the IRB in a timely manner. In addition, she ensured compliance with the health care system and unit policies guidelines and protocols as they relate to patient safety and confidentiality. The PI invited the student to attend several meetings with the Nursing Research Team and the High Performance Women's Health Team to discuss the implementation and progress of the project.

The Primary Investigator and Clinical Nurse Specialist were very instrumental in assisting the student with collecting and reviewing the survey tools for completeness and compiling and interpreting the data. At the completion of the survey period, the project team agreed the project has value to the breastfeeding initiative and provides insight on how the facility can move forward in meeting their breastfeeding goals. The team would like to present the findings to the Women's Health Taskforce and recommend the survey be replicated at other 10 facilities with low breastfeeding initiation and exclusivity rates.

Strengths and Limitations of the Project

Strengths

When trying to discover and explore why mothers do what they do regarding breastfeed or bottle-feeding there are challenges because of seemingly invasion of their privacy or questioning their decisions. To minimize the stress or discomfort of completing the survey, no separate consent form was signed; completing the survey was used as consent to participate. Patients stated they were more willing to complete the survey because they are uncomfortable when they have to sign anything. The population of patients used for the survey was diverse so it does not focus on one group of patients; most couples that participated completed the form together and wanted to provide

additional feedback to the survey questions. Having the support of the clinical staff, managers, and administrators was vital to the success of the project. The lactation consultants who were not part of the research team provided feedback and support for the project that will be instrumental as I move forward in replication of the project at other facilities.

Limitations

The facility for the project was a tertiary women's health postpartum unit so some of the mothers had preterm infants and had not made a decision on how they were going to feed their infant, however they did meet the criteria so were approached to complete the survey; it is speculated they may have been those who did not return the survey or submitted incomplete surveys. The lowest return rate of surveys returned was at 12% on Week 3 which was of concern if the project was to be completed in a timely manner. The criteria did not include teenagers and non-English speaking patients which was 19% of the patients during the survey period so those were missed opportunities of getting their feedback on breastfeeding. Another limitation was the demographic information, some patients stated it was too much and did not want to provide income or family information, one client (n = 1), stated it required too much thought and not just yes or no answers which is what she preferred on a survey. Mothers who intended to breastfeed were majority of the survey participants; mothers intending to bottle-feed did not participate at the same level.

There is significant value in understanding the mother's knowledge and attitude towards breastfeeding and how that impacts their intent to breastfeed their infant.

Replication of this project will be conducted at the other facilities after an adjustment to the demographic component of the survey is reassessed based on feedback from the surveys. The IIFAS survey will remain the same because of the proven validity and credibility of the tool already established with a Cronbach alpha of .86. There will be expansion of the criteria for participation based on the facility in which the data will be collected.

Section 5: Dissemination Plan

Dissemination within the Organization

A complete report and results of the data will be presented at the High Performance Women's Health Team to include stakeholders that will benefit from the information obtained in collecting and analyzing the data. This information will be disseminated to the women's health system team for review and recommended for replication at the other facilities that have low initiation and exclusivity rates. The data will support the need to further understand and create programs addressing the mother's attitude and knowledge toward breastfeeding and how the health care team can assist with this initiative to meet the Health People goal of 81.9%

Post implementation information will be presented to the staff and administrative team at the facility where the data were collected to thank the staff and ancillary team members for their support and encouragement during the survey period and show them the results of the information and how their due diligence in supporting patients in their breastfeeding efforts are effective and appreciated.

Dissemination in the Field of Nursing

Health care staff and providers continue to ask what they can do better to assist mothers in the hospital and community with helping them with to choose breastfeeding instead of bottle-feeding or formula during their hospital stay and on discharge. This would meet the challenges identified health initiative set by the UNICEF and WHO in providing optimal nutrition for infants at birth through the first year of life. To assist with dissemination of this valuable information to the nursing community, a poster

presentation was presented at the Association of Women's Health, Obstetrical and Neonatal Nurses (AWHONN) Virginia Section Conference, March 25, 2017 in Fairfax, Virginia (Appendix D). The presentation sparked conversation from other members of the conference on the possible replication of the survey at their facilities so they can further understand the low initiation and exclusive breastfeeding rates among their patient population. This is only the beginning of many conversations among nurses and lactation consultants who want to delve more into the mother's attitude and knowledge of breastfeeding. The results of the survey indicate more research can be done to address this concern.

Analysis of Self

Breastfeeding was not what I initially would have thought as a topic that needed to be addressed in the 21st century. I thought everyone was knowledgeable and very in tuned to the benefits of breast milk and so it was a nonissue for our society. After discussing with my PI on topics for my capstone after attending a women's health forum meeting, I was focused on the data I had just learned about mothers who were undecided or just not choosing to breastfeed their infants. I began to do some research and found not only was it happening in my city and state, but many other states as well, so my journey began to discover why mothers where not choosing this best practice method of giving their child the best option for life decision.

While collecting data, reviewing the research, and talking with patients, it became evident that most mothers truly did not possess the knowledge I assumed they had about breastfeeding and some had a negative attitude about breastfeeding and thought bottle-

feeding was easier and they are given free milk at the hospital and upon discharge, with the old adage, if the hospital is giving it to a patient, it must be acceptable. This began my quest to explore what was the postpartum mother's attitude about breastfeeding.

This project challenged me in many ways as a scholar, project manager, and practitioner. As a scholar, I quickly had to learn how to research information and decide what was relevant and what I just like to read and found interesting but it did not have to be part of what I needed at that time. It took me a while to stop collecting articles and analyze the ones I selected that were worthy of the project. I feel more scholarly when talking about data and research; I have developed a comfort level among other colleagues who do research versus being intimidated by them. I am more evidence-based focus and seek to find what is the best outcome based on data and not just rhetoric.

As a project manager, it was important to keep my team members on task with the project and set timelines and accept setbacks when they happened and help the team regroup. It was always important to me to keep the team engaged in the process because it was getting lengthy at times. As a practitioner, I have gained a plethora of knowledge and experience in my role and eager to continue to move forward. I notice the respect the DNP role has at this facility so it has enhanced my confidence, skills, and ability to function at this level. My long term professional goal is to have a Chief Nursing Officer position in a multisystem health care organization; I would like the role of professor so I can assist other aspiring DNP students through their journey.

Project Completion

The project was completed in with only one adjustment of time, but otherwise successful. The patients were very engaging and ask questions about breastfeeding after reading the cover letter asking them to participate in the survey. There were questions and engagement from the nursing staff on how they could participate if I were to replicate the survey or repeat the same survey again. At the completion of the project, the members of the team met to review the results of the data that were collected, discuss what could be done differently, and next steps for replication of the project. The goal of the project was to determine if breastfeeding mothers scored higher on the IIFAS tool, indicating their attitude and knowledge, and to identify if those who bottle-feed have a different attitude and knowledge about breastfeeding. The data did indicate that the breastfeeding mother completed and returned the survey tool more often compared to the limited number of mothers who were bottle-feeding. The data from the project will provide further knowledge and insight to the health care team and lactation consults in assisting patients in their breastfeeding efforts.

Challenges

There were a few challenges identified during the survey period. It was noted that there is a lot of patient activity early in the morning impeding my ability to have an uninterrupted time to present the project to the patient and allow time for questions. I originally thought the morning would be convenient so I would not disturb the mothers during feeding time; however, this proved not to be best time to distribute the survey. The time was adjusted to after the quiet hour which was from 2 pm- 4pm. There was also a

decline in the number of surveys being returned on Week t3, from 54% to 12%. This was in relation to the time the surveys were distributed and the moms were overwhelmed with forms and papers so the survey tool was placed in the pile of papers to read at home. I was able to track the number of surveys per day by the date and number of the form distributed written at the top of the survey (0310-02), and a log was kept for the number of surveys given daily.

Another challenge was the number of patients who we were unable to receive a survey tool due to medical or personal reasons, they had "do not disturb" signs on their door their entire hospital stay and for various reason. There were also teen mothers, non-English speaking mothers who did not meet criteria for participation but had normal healthy babies, and mothers who spent most of the day in the special care nursery and not in their rooms. I was unable to capture those patients. The facility is a high-risk unit; it is a diverse socioeconomic population, while there was some full-term infants, most of the mothers were multiple gestations or less than full-term.

Though this was a great environment to begin this project in gaining a perspective on the mother's attitude and knowledge of breastfeeding, I learned and understand their challenge in making a decision on which to do because some come in with preterm labor and have other stressors that prohibit them from making that decision in advance. Family or significant other support is sometimes lacking and mothers are unsure on what is going to be best for their child at time of delivery. Creating a system to address breastfeeding in the community will have a better success than waiting for the patient to become pregnant and admitted to a high-risk facility. I believe this project has brought awareness to the

clinical team, lactation consultants, women's health educators, and the nursing administrators who are willing to rethink their approach in educating and support for moms in this environment.

Summary

Breastfeeding is the preferred method of providing infants the opportunity to receive a nutrient-rich, healthy diet at the beginning of their lives; a beginning that contributes to lifelong well-being. Human milk fulfills all nutritional requirements for the newborn child (Anatolitou, 2012:, Ismail et al.,2014.,). Infants will instinctively seek out the mothers' breast when placed skin to skin on the mothers' chest within 1 hour after delivery and begin to suckle. An innate skill that is interrupted by providers and health care staff that whisk the infant away and place under a warmer for drying instead of placing on the mother for natural heat. The concept of breastfeeding is sometimes misunderstood by mothers depending on their culture, religion, family values, or environment. It is important for health care staff, providers, and lactation consultants to first have a positive attitude regarding breastfeeding. Marks and O'Connor (2014), they Battersby (2009), although the knowledge of breastfeeding has been underlined, knowledge of the benefits of breastfeeding alone is not sufficient to provide breastfeeding support; a positive attitude is also essential.

Understanding the mother's attitude and knowledge toward breastfeeding does increase chances the mother will initiate breastfeeding during their postpartum stay. Support from the providers and the health care team play a vital role in the assisting mothers in making their decision, giving mothers the knowledge and education will increase the number of

infants who will breastfeed and reduce the number of infants not receiving optimal nutrition from birth and the first year of life.

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Appendix A: Permission to Use Iowa Infant Feeding Attitude Scale

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December 7, 2016

Jacquelyn Jones, MSN/Ed, RNC-OB
Walden University

Re: Permission to use IIFAS

Jacquelyn Jones has our permission to use the Iowa Infant Feeding Attitude Scale (IIFAS) in her DNP capstone project on Breastfeeding Attitudes of African American mothers.

Respectfully,

Arlene de la Mora, Ph.D.
Research Scientist
Research Institute for Studies in Education

Appendix B: Survey Tool

Breastfeeding Knowledge, Attitudes, and Beliefs Survey

Using pen or pencil, choose <u>one</u> answer that rates your agreement with the following statements. Use the scale described below: **Strongly Disagree(SD) Disagree (DA) Neutral/Don't Know (N) Agree (A) Strongly Agree (SA)**					
*The nutritional benefits of breast milk last only until the baby is weaned from breast milk	Strongly Disagree	Disagree	Neutral/ Don't Know	Agree	Strongly agree
*Formula-feeding is more convenient than breastfeeding	Strongly disagree	Disagree	Neutral/ Don't Know	Agree	Strongly agree
Breastfeeding increases mother-infant bonding	Strongly disagree	Disagree	Neutral/ Don't Know	Agree	Strongly agree
*Breast-milk is lacking in iron	Strongly disagree	Disagree	Neutral/ Don't Know	Agree	Strongly agree
Formula-fed babies are more likely to be overfed than are beast-fed babies	Strongly disagree	Disagree	Neutral/ Don't Know	Agree	Strongly agree
*Formula-feeding is the better choice if a mother plans to work outside the home	Strongly disagree	Disagree	Neutral/ Don't Know	Agree	Strongly agree
Mother who formula-feed miss one of the great joys of motherhood	Strongly disagree	Disagree	Neutral/ Don't Know	Agree	Strongly agree
*Women should not breastfeed in public places such as restaurants	Strongly disagree	Disagree	Neutral/ Don't Know	Agree	Strongly agree
Babies fed breast milk are healthier than babies who are fed	Strongly disagree	Disagree	Neutral/ Don't Know	Agree	Strongly agree

formula					
*Breastfed babies are more likely to be overfed than formula-fed babies	Strongly disagree	Disagree	Neutral/ Don't Know	Agree	Strongly agree
*Fathers feel left out if a mother breastfeeds	Strongly disagree	Disagree	Neutral/ Don't Know	Agree	Strongly agree
Breast milk is the ideal food for babies	Strongly disagree	Disagree	Neutral/ Don't Know	Agree	Strongly agree
Breast milk is more easily digested than formula	Strongly disagree	Disagree	Neutral/ Don't Know	Agree	Strongly agree
*Formula is a healthy for an infant as breast milk	Strongly disagree	Disagree	Neutral/ Don't Know	Agree	Strongly agree
Breastfeeding is more convenient than formula feeding	Strongly disagree	Disagree	Neutral/ Don't Know	Agree	Strongly agree
Breast milk is less expensive than formula	Strongly disagree	Disagree	Neutral/ Don't Know	Agree	Strongly agree
*A mother who occasionally drinks alcohol should not breastfeed her baby	Strongly disagree	Disagree	Neutral/ Don't Know	Agree	Strongly agree

Please Complete This Section About Your Background By Filling In-Checking Boxes As Indicated:	
What is your current age?	What is the last grade completed in school?
Are You Currently Employed? ☐ Full-Time □ Part-Time □ Home-Maker □ Not Employed □ Student ☐ Disabled	
What is Your Marital status? ☐ Single ☐Married ☐ Separated ☐ Divorced ☐ Widowed	
What are the first three digits of your zip code?	
What Is Your Approximate Annual Household Income? ☐Less than $10,000 ☐ $10,000 to $24,999 ☐$25,000 to $49,999 ☐$50,000 to $74,999 ☐$75,000 to $99,999 ☐ $100,000 to $124,999 ☐$125,000 to $149,999 ☐$150,000 or more	
What Is Your Race Or Ethnicity? ☐ American Indian/Native American ☐Asian ☐African American/Black ☐Caucasian/White ☐Hispanic or Latino ☐Native Hawaiian or Pacific Islander ☐ Other_____	
Breastfeeding History	
Did You Breastfeed Any Prior Children? ☐ Yes I breastfed another child ☐ No I have never breastfed my other children ☐ This is my first baby	
How long did you breastfeed in your prior pregnancies? _____ (months or years)	
Were you breastfed as a baby?	☐ Yes ☐ No
Were any of your siblings' breastfeed?	☐ Yes ☐ No
Were any family members' breastfed as babies?	
Do you have any friends who breastfed their babies?	☐ Yes ☐ No
Did you receive any information from your obstetric doctor or midwife during your pregnancy about breastfeeding?	☐ Yes ☐ No
Have you received any advice or pressure from family against breastfeeding?	☐ Yes ☐ No
Have you received any advice or pressure from friends against breastfeeding?	☐ Yes ☐ No
Have you received any advice or pressure from the father of the baby against breastfeeding?	☐ Yes ☐ No
Feeding in This Pregnancy	
Did You Breastfeed During This Hospital Stay?	☐ Yes ☐ No
If you decided to breastfeed this baby, what was your main reason for deciding to breastfeed? ☐ I believe it's the best food for my baby ☐My family encouraged me to breastfeed ☐ It's cheaper and more convenient than formula feeding ☐My healthcare provider encouraged me to breastfeed.	If you decided to formula feed this baby, what was your main reason for deciding to formula feed? ☐ I believe it's just as good as breastfeeding ☐ My family encouraged me to formula feed ☐ It is convenient

	☐ Anyone can feed the baby
Will You Breastfeed After Discharge? ☐ Yes ☐ No If Yes, how long do you plan to breastfeed? _____(months/years)	
Did You Use Formula During This Hospital Stay? ☐ Yes ☐ No If yes what was the reason for formula use?	

Thank you for completing the survey.
Your answers will help us better understand the factors that lead mothers to choose a feeding method.

Appendix C: Cover Letter

INTRODUCTION

I am Jackie Jones, a doctoral nursing student, along with Diana Behling, OB Right Manager, and Heike Nicks, Unit Educator for the Mother-Baby unit here on the Family Maternity Center. To complete my degree, I am working on a research project about how mothers choose their baby feeding method. We are hoping you will participate by filling out an anonymous and confidential survey, regarding attitudes and knowledge of breast and bottle-feeding along with demographic information; this is a paper and pencil survey tool.

WHO IS ELIGIBIBLE TO PARTICIPATE?

To be eligible, mothers must have delivered an infant and be admitted to the Mother-Baby Unit. Additionally, they must speak English and be between 18 to 50 years of age.

WHAT IS INVOLVED IN THE STUDY?

Should you decide to participate, you will be asked to complete a paper and pencil survey tool. You must choose one answer per question and you may use pen or pencil to complete the survey. This will take you 15 minutes to complete both sides of the survey tool. Please do not write your name or room number on the form.

BENEFITS TO PARTICIPATING IN THE STUDY

There are no direct benefits to you for participating in the survey; however, your information, along with all the other surveys, may help us better understand how to help mothers with their feeding decision. We will also explore what influences a mother's

decision to breast or bottle-feed as well as discovering ways to increase breastfeeding rates that will meet the Healthy People 2020 goal of 82%.

CONFIDENTIALITY:

The survey is completely anonymous and confidential. The survey will not contain identifiable patient information so anonymity is protected. All completed surveys will be placed in a secured locked container on the mother-baby unit and picked up every Monday for review of completeness and usefulness in the research project by a member of the research team. Only members of the research team have access to the locked container and will review completed surveys. Incomplete survey and sociodemographic information forms will be shredded and not used in the project data analysis. Individual information is confidential and not shared with any outside source. The Information from the paper and pencil survey will be transferred into a password protected SPSS-23 software file and then destroyed by shredding one year after the completion of the project. Neither the electronic file nor the paper and pencil survey tools will have any patient identifiers. The PI and DNP project student will be the only persons with access to the file. Once the study is completed the summary of all information collected may be used for staff education, published in a professional journal or presented at a conference.

CERTIFICATE OF CONSENT

I have read the above information provided and have had the opportunity to ask questions. The questions I had were answered appropriately. I understand that completing the survey is my consent to participate in the capstone project.

Appendix D: Poster Presentation Acceptance Letter

JACQUELYN D JONES

From: lisa klein <eak41762@gmail.com>
Sent: Tuesday, February 14, 2017 8:42 PM
Subject: Virginia Section AWHONN Poster Acceptance

Congratulations! I am pleased to notify you that your poster has been accepted for presentation at the 2017 Virginia Section AWHONN Conference.

A few guidelines for you:
Please have your poster in a design that will allow it to be displayed on an easel, e.g on a foamboard.
It is always helpful to have a paper copy of your poster to share with those who visit your poster.
Please be sure to register for the conference, if yo have not already done so.
You may set your post up on Friday evening and need to have it down by 4:30 on Saturday; any posters still up after that will be discarded.
Please try to be available at your poster to answer questions during at least one of the breaks.

Thank you for sharing your nursing knowledge with us! We look forward to your poster.
Please email me if you have any questions or concerns.

Sincerely,

Lisa Klein

Appendix E: Project Slides

Postpartum Mothers' Attitudes of Breastfeeding

Jackie Jones, DNPc, MSN/Ed, RNC-OB
Diana Behling, DNP, RN, MJ, CPPS
Heike Nicks, MSN, RNC-LRN

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Background

- The American Academy of Pediatrics recommends exclusive breastfeeding for the first six months of life. (American Academy of Pediatrics, 2012).
- Breastfeeding has many health benefits minimizing the infants' risk of gastrointestinal illness, ear infections, sudden infant death, and decreases risk of infections.
- The Centers for Disease Control and Prevention illustrate the public health issue for Virginia residents, reporting that although 80.5% initialize breastfeeding, only 38.3% of mothers exclusively breastfeed at 3 months, and 22.9% at 6 months-of-age (CDC, 2014).
- Improving initiation rates of breastfeeding and exclusivity duration supports the Healthy People 2020 goal to increase the proportion of infants that have ever breastfeed to 81.9 (HealthyPeople.gov, 2014).
- Common barriers to exclusive breastfeeding include:
    - lack of education
    - lack of cultural awareness
    - social norms
    - beliefs that influence attitudes towards breastfeeding (Bevan & Brown, 2014).

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Problem

- Sentara Norfolk General Hospital's Family Maternity Center has had historically low rates of breastfeeding initiation in its postpartum population.
- It is poorly understood if there are unique characteristics of this population that correlate with low breastfeeding rates.

sentara nurse | SENTARA

Sample

- Sentara Norfolk General Hospital's Family Maternity Center has approximately three thousand births-per-year and is the only quaternary maternity center in the Hampton Roads region of Southeastern Virginia.
- Postpartum mothers on the mother-baby unit who deliver during the study period meeting the inclusion criteria:18-50 years of age and English speaking.
- The mother is given a cover letter about the research project and asked to complete the paper and pencil survey tool and demographic information.

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Purpose of Study

The purpose of this study is to ascertain if knowledge, attitudes and beliefs about breastfeeding influence the mother's intent to breastfeed after delivery in a quaternary facility .

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Research Questions

- **RQ1: What are the quaternary postpartum mother's levels of knowledge, attitudes and beliefs toward breastfeeding?**
- **RQ2: Do quaternary postpartum mothers who identify as intending to breastfeed score significantly higher on the Iowa Infant Feeding Attitude Scale (IIFAS) than mothers who do not intend to breastfeed?**

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Instrument

- The Iowa Infant Feeding Attitude Scale (IIFAS) is commonly used for breastfeeding research due to proven reliability, with a Cronbach's alpha ranging from .85 to .86
- The IIFAS tool is designed to cover various aspects of the mother's attitude toward infant feeding, breast or bottle
- The survey tool consists of 17 questions on a five-point Likert scale ranging from strongly agree to strongly disagree
- High scores reflect a preference for breast-feeding

Preliminary Findings

Demographics			
Characteristic	**n (%)a/or mean ± SD**	**Characteristic**	**n (%)a/or mean ± SD**
Age	28.20 (± 5.787)	**Household Income**	
Education		Less than $10,000	19 (27.5)
Completed 8th Grade	1(1.4)	$10,000 to $24,999	16 (23.2)
Some High School	9 (18.4)	$25,000 to $49,999	19 (27.5)
Completed High School	15 (30.6)	$50,000 to $74,999	4 (5.8)
Some College	12 (24.5)	$75,000 to $99,999	2 (2.9)
Completed College	9 (18.4)	$100,000 to $124,999	4 (5.8)
Some Graduate School	1(2.0)	$125,000 to $149,999	2 (2.9)
Completed Graduate School	3 (6.1)	Missing	3 (4.3)
Employment		**Race**	
Full-time	28 (40.6)	African American	46 (66.7)
Part-time	10 (14.5)	Caucasian	21 (30.4)
Homemaker	9 (13.0)	Hispanic	2 (2.9)
Unemployed	20 (29.0)		
Student	2 (2.9)	**Marital Status**	
		Single	39 (56.5)
		Married	24 (34.8)
		Separated	1 (1.4)
		Divorced	3 (4.3)
		Missing	2 (2.9)

ANOVA IIFAS Score	**n**	**Mean (±SD)**	**P Value**
Race			.655
African American	46	59.26 (± 8.133)	
Caucasian	21	61.10 (± 8.590)	
Hispanic-Latino	2	62.00 (±4.24)	
Prior Breastfeeding			.047
Yes, I have breastfed another baby	27	61.26 (±5.668)	
No, I have not breastfed another baby	18	53.61 (±8.3671)	
This is my first baby	24	63.08 (±7.829)	
Educational Level			.912
Completed 8th Grade*	1	64.00	
Some High School	11	57.27 (± 6.262)	
High School Graduate	24	57.75 (±9.710)	
Some College	12	64.00 (± 6.983)	
Some Graduate School*	1	63.00	
Completed Graduate School	3	64.00 (±7.211)	
Age			.427
18-22	15	57.87 (±7.472)	
23-27	16	61.06(±7.945)	
28-32	21	58.76 (±10.089)	
33-37	11	60.45 (±5.067)	
38-42	6	64.83(±7.026)	
Employment Status			.647
Full-Time	28	60.82 (±6.864)	
Part-Time	10	61.80 (±10.315)	
Homemaker	9	60.33 (±8.124)	
Not Employed	20	57.70 (±9.108)	
Student	2	57.50 (±4.950)	
Household Income			.572
Less than $10,000	19	56.95 (± 8.759)	
$10,000 to $24,999	16	59.81 (± 7.609)	
$25,000 to $49,999	19	60.00 (±8.307)	
$50,000 to $74,999	4	61.50 (± 7.594)	
$75,000 to $99,999	2	62.50 (± 12.021)	
$100,000 to $124,999	4	65.50 (± 7.550)	
$125,000 to $149,999	2	62.50 (± .707)	

Preliminary Conclusions/Implications

- Data collection continues to strengthen the power of the analysis
- Preliminary analysis seems to indicate that knowledge is not the core reason for low breastfeeding rates in the quaternary population
- Prior breastfeeding is correlated with a higher IIFAS score

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Limitations

- Non English speaking patients not included
- Low number of patients completing and returning survey
- Mothers who intended to breastfeed were majority of survey participants; mothers intending to bottle feed did not participate at the same level

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References

American Academy of Pediatrics. (2012). Breastfeeding and the use of human milk. *Pediatrics, 129*(3), e827-e841. http://dx.doi.org/10.1542/peds.2011-3552

CDC. (2013). Breastfeeding report card. Retrieved from http://www.cdc.gov/breastfeeding/pdf/2013brestfeedingreportcard.pdf

HealthyPeople.gov. (2014). Maternal, infant and child health. Retrieved from https://www.healthypeople.gov/2020/topics-objectives/topic/materanl-infant-and-child-health/objectives

Contact Information

Jackie Jones, DNPc, MSN/Ed, RNC-OB

Sentara Norfolk General Hospital

jdjone11@sentara.com

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Appendix F: Institional Review Board Approval

EVMS
Eastern Virginia Medical School

January 18, 2017

Diana Behling, DNP, RN, MJ, CPPS
600 Gresham Drive
Norfolk, VA 23501

RE: IRB # 16-11-XX-0206

Dear Dr. Behling:

This form provides additional information to the *Application for Approval of Research Involving Human Subjects* form that accompanies this letter. The Application is the official document that confirms IRB review and type of approval and includes the IRB#, study title, summary of the proposal, and an appropriate chair, vice-chair or IRB member signature.

☒ IRB Study Title: POST PARTUM MOTHER'S ATTITUDE ON BREASTFEEDING

- Protocol: POST PARTUM MOTHER'S ATTITUDE ON BREASTFEEDING Version Date: December 7, 2016

☒ No sponsor has been identified as providing funding for this study or project.

☒ Instruments: Breastfeeding Knowledge, Attitudes, and Belief Survey

☒ Project Overview Cover Letter (Appendix C)

☒ Additional Materials: Letter to Nurse Executive at Sentara; Permission to use survey

Based on the finding that your research project provides minimal risk to subjects, this study has been granted exemption from IRB review under §45 CFR 46(b) in the following categories:

☒ 2. Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless:
(i) the information is recorded in such a manner that the subjects can be identified, directly or through identifiers; and
(ii) disclosure of the subject's responses places them at risk of civil or criminal liability or is damaging to their financial standing, employability, or reputation.

The Board reminds you that:

☒ A formal consent form is not required for studies deemed "exempt" from Board review, but If a potential subject declines to participate that "no" means "no" and such a subject should not be contacted again regarding participation in this study.

☒ This study was approved on **January 17, 2017** and may be initiated now that you are in receipt of Final Approval documents.
- IF YOU ARE CONDUCTING YOUR RESEARCH AT ONE OF THE LOCAL HOSPITALS, YOU MUST RECEIVE THE APPROPRIATE APPROVALS FROM THAT HOSPITAL BEFORE INITIATING YOUR STUDY.
- IF YOU ARE CONDUCTING YOUR RESEARCH AT A SITE OTHER THAN EVMS, YOU ARE RESPONSIBLE FOR OBTAINING ANY LOCAL REVIEW NECESSARY FOR THE CONDUCT OF THIS RESEARCH.

HUMAN SUBJECTS' PROTECTIONS PROGRAM
721 FAIRFAX AVENUE, ANDREWS HALL, SUITE 128
NORFOLK, VIRGINIA 23501
TEL 757.446.8423
FAX 757.624.2275
www.evms.edu

☒ An update on the progress of your study will be requested on **November 01, 2017.**
Exempt studies are maintained in the IRB's active files. If the protocol changes in the future, please submit the changes for IRB approval. In addition, we request that, at the conclusion of the project, you notify us and provide a brief summary of your findings.

Eastern Virginia Medical School (EVMS) has a Federalwide Assurance (FWA 00003956) from OHRP. The Human Research Review Boards (IRB 00000460 and IRB 00001345) are registered with OHRP and are in compliance with 45 CFR 46, 21 CFR 50, and 21 CFR 56.

Please reference the IRB number, principal investigator and study title in any correspondence regarding this protocol.

Thank you for your continued cooperation with the Institutional Review Board.

Sincerely,

Daniel Sullivan, Ph.D.
IRB Assistant Director

DMS/msm

FWA #00003956
July 2007

EASTERN VIRGINIA MEDICAL SCHOOL

APPLICATION FOR APPROVAL OF RESEARCH INVOLVING HUMAN SUBJECTS

EVMS Institutional Review Board

Instructions: Please submit this form to the IRB Office, attaching the IRB protocol, abstract, data collection instruments, consent forms and/or informational letters, letters of approval from agencies, hospital impact statement(s) and other supporting documents.

- ~ HANDWRITTEN DOCUMENTS WILL NOT BE ACCEPTED BY THE IRB OFFICE.
- ~ ALL DOCUMENTS INCLUDED IN THE SUBMISSION MUST BE PAGINATED.

HELP: If you are unsure how to complete a field, press F1 while on the field and a help box will appear.

IRB Number: (if assigned)	16-11-XX-0206

ADMINISTRATIVE INFORMATION

Study Title:	Post-Partum Mothers' Attitudes of Breastfeeding		**Date Submitted:** (IRB USE ONLY)
Principal Investigator:	Diana J Behling DNP, RN, MJ, CPPS		
PI Dept / Address	600 Greshem Drive		
City / State / Zip	Norfolk, Virginia		
Phone Number(s):	757-312-0905	**E-Mail:**	djcassel@sentara.com
Person Preparing This Submission			
Name:	Jacquelyn D. Jones, MSN/Ed, RNC-OB	**Role:**	Research Team Member
Address:	1114 Driver Pointe Court		
Phone Number(s):	757-589-7247	**E-Mail:**	jacquelyn.jones5@waldenu.edu

INVESTIGATORS AND/OR RESEARCH TEAM MEMBERS

Name	Department	Address	Status	HIPAA for Research Training Date	Human Subjects Protection Training Date
Heike Nicks	Women's Health	600 Greshem Drive Norfolk, Virginia	Research Team Member		July 2016
Jacquelyn Jones	DNP-Student	1114 Driver Pointe Ct Suffolk, Virginia	Trainee (Fellow, Resident, Student)		May 2014
Diana Behling	Women's Health	600 Greshem Drive Norfolk, Virginnia	Research Team Member		July 2017
			-- Choose One --		
			-- Choose One --		
			-- Choose One --		
			-- Choose One --		
			-- Choose One --		
			-- Choose One --		
			-- Choose One --		
			-- Choose One --		

1. TYPE OF REVIEW: Review the sub-categories and check the appropriate box (check only one)

☐ **FULL BOARD REVIEW:** (A $1,500 review fee is charged unless a "Wavier of IRB Fee" form is submitted with this application and approved by the Office of Research Subjects Protections.)
CLICK HERE AND PRESS F1 FOR NUMBER OF COPIES TO SUBMIT: ►

☐ **EXPEDITED REVIEW:** Insert the Category number below that supports the type of review: -- Choose One --
CLICK HERE AND PRESS F1 FOR NUMBER OF COPIES TO SUBMIT: ►

(1) Clinical Studies of drugs or devices when: [1a] Drugs: IND not required; [1b] Devices: IDE not required.
(2) Collection of blood samples. CLICK HERE AND PRESS F1 FOR GUIDANCE: ►
(3) Prospective collection of biological specimens for research purposes by noninvasive means.
(4) Collection of data through noninvasive procedures routinely employed in clinical practice, excluding procedures involving x-rays or microwaves.
(5) Research involving materials that have been collected, or will be collected solely for non-research purposes.
(6) Collection of data from voice, video, digital, or image recordings made for research purposes.
(7) Research on individual or group characteristics or behavior or research employing survey, interview, oral history, focus group, program evaluation human factors evaluation, or quality assurance methodologies.

☒ **EXEMPT REVIEW:** Insert the Category number below that supports the type of review: -- Choose One --2
CLICK HERE AND PRESS F1 FOR NUMBER OF COPIES TO SUBMIT: ► 8

(1) Research in Educational Setting involving normal educational practices.
(2) Educational Tests, Survey Procedures, Interview Procedures, or Observe Public Behavior unless subjects can be identified and disclosure place subjects at risk of criminal & civil liability. **[Does not apply to those <18 years old. Therefore, defaults to expedited or Full Board review.]**
(3) Educational Tests, Survey Procedures, Interview Procedures, or Observe Public Behavior unless subjects elected/appointed officials or candidates for public office and Federal statute requires maintenance of confidentiality. **[Does not apply to those <18 years old. Therefore, defaults to expedited or Full Board review.]**
(4) Collection/Study of Existing Data, Documents, Records, Pathological/Diagnostic Specimens and Subjects Cannot Be Identified. CLICK HERE AND PRESS F1 FOR GUIDANCE: ►
(5) Federal Dept/Agency Research & Demonstration projects.
(6) Taste & Food Quality Evaluation & Consumer Acceptance Studies.

2. REQUIRED TRAINING:

It is necessary for all investigators, co-investigators, and research team members to complete human subjects protection training in order to receive IRB approval to proceed with research using human subjects, their data, or biological samples. Training opportunities and requirements can be found on the Office of Research web site at http://www.evms.edu/research/office/index.html.

Contact the Office of Research at (757) 446-8480 for additional information on all research training requirements.

Please note that Bloodborne Pathogen Training is mandated annually for **EVMS faculty and staff** with potential exposure to blood/body fluid by the Occupational Safety and Health Administration (OSHA).

Contact the Occupational Health Department at 446-5870 for additional information.

3. FINANCIAL STATEMENT:

Have you, other family members or any other person responsible for the design, conduct, or reporting of this research received from the sponsor (or a subsidiary or parent company of the sponsor):	**Choose one answer in each row below:**	
Salary, other payments for services (e.g., consulting fees or honoraria), recruitment bonuses, trips, referral fees or other incentives **that are NOT covered by an EVMS grant, contract, or clinical agreement?**	☒ No	☐ Yes
Equity interests (e.g., stocks, stock options, or other ownership interests greater than 3% ownership or greater than $10, 000 per annum of salary, fees, or other continuing payments)?	☒ No	☐ Yes
Intellectual property rights (e.g., patents, copyrights and royalties from such rights)?	☒ No	☐ Yes

If "yes," to any of the above, please provide a written explanation of the situation in this box. You may also be required to submit information to the EVMS Conflict of Interest (COI) Committee through the Office of Research, 446-8480. Refer to Appendix C for Model Language to insert into the consent form.

N/A

4. THIS STUDY WILL BE ACTIVE AT THE FOLLOWING LOCAL SITES: (Be sure to list site for ALL phases of the research)

☐ Bon Secours DePaul Medical Center	☐ Bon Secours Maryview Hospital	☐ Children's Hospital of The King's Daughters
☐ Children's Specialty Group	☐ Devine Tidewater Urology	☐ Eastern Virginia Medical School
☐ Sentara Bayside Hospital	☐ Sentara CarePlex Hospital	☐ Sentara Leigh Memorial Hospital
☒ Sentara Norfolk General Hospital	☐ Shore Health Services	☐ Virginia Oncology Associates

[4a.] Other local or international site for this IRB application (specify name and include the complete address):	TYPE
	-- Choose One --
	-- Choose One --
	-- Choose One --
	-- Choose One --

5. OTHER SITES:

In addition to the local sites listed above, is this study also conducted at any national or international sites?	☒ No ☐ Yes

6. TYPES OF PARTICIPANTS (CHECK ALL THAT APPLY):

☐ Children [specify age range(s)]:	☒ Adults [specify age range(s)]: 18-50 (NOTE: Adults 90 or older must be grouped into one category per HIPAA regulations.	
☐ Students/Employees	☐ Healthy Volunteers	☐ Critically Ill Patients
☐ Cognitively Impaired Individuals	☐ Subjects in Emergency Conditions	☐ Economically Vulnerable Subjects
☐ Pregnant Women	☐ Fetus(es)	☐ In vitro fertilization
☐ Medical Records	☐ Specimens (blood, tissue)	
☒ Other: (specify): Post-partum mothers		

7. SOURCE OF SUBJECTS: (CHECK ALL THAT APPLY):

☐ My Practice	☐ Referral from Other Physicians	☐ Medical Records
☐ Outpatients/Clinics	☐ Stored/Banked Human Specimens	☒ Other, Explain in Protocol

NOTE: All advertisements or other materials used to recruit subjects must be submitted for IRB approval.

8. CONSENT PROCEDURES: (CHECK ALL THAT APPLY):

8a. CONSENT TO BE OBTAINED FROM:	8b. CONSENT TO BE OBTAINED BY:
☐ Patient/Subject	☐ Principal investigator
☐ Parent(s)/Guardian	☐ Co-investigator(s)

☐ Legally authorized representative	☐ Research Team Members not on protocol (list below)
☐ Assent to be obtained from subjects age to	

8c. List others not identified in the protocol who are qualified and authorized to obtain subject consent (e.g., study coordinators, clinical staff, etc.). Any individual listed in this section must meet all appropriate EVMS training requirements.

NAME:	RELATIONSHIP TO THE STUDY:	LIST ALL SPECIFIC QUALIFICATIONS TO CONDUCT THE INFORMED CONSENT PROCESS:
	-- Choose One --	
	-- Choose One --	
	-- Choose One --	
	-- Choose One --	
	-- Choose One --	
	-- Choose One --	

8d. **WITNESS:** In most cases, a witness signature is not required unless consent is obtained orally. If a witness signature is preferred by the investigator or sponsor, please explain below and include the appropriate signature box on the subject consent form(s).

9. WAIVER REQUESTS (CHECK ALL THAT APPLY):

Are you requesting that the IRB waive the requirements for obtaining subject consent for this study? If yes, an ***"Application for Waiver of Consent"*** must be completed and attached to ALL copies of the submission. **ALL REQUESTS FOR WAIVER OF SUBJECT CONSENT ARE REVIEWED BY THE FULL BOARD.**	☒ No	☐ Yes
Are you requesting that the IRB allow access to or the use of Protected Health Information (PHI) without obtaining subjects permission? If yes, an ***"Application for Waiver of Authorization for the Use of Protected Health Information (PHI)"*** must be completed and attached to ALL copies of the submission	☒ No	☐ Yes

10. SUBJECT PARTICIPATION: *All items must be answered. If applying for a medical record review, length of active participation and follow-up should be answered as "Not Applicable".*

ITEM	INSERT LENGTH OF TIME, NUMBER OR DATE
Length of time for active participation (as defined in protocol)	15 minutes
Follow-up (long-term follow-up after study completion)	N/A
Number of local subjects or medical records or samples	300
Total number of subjects or records or samples across all sites	300
Duration of study at this local site	7 months
Anticipated Start Date the proposed study will begin (be sure to allow time for IRB review and approval):	January 2017 **Month / Year**
Anticipated End Date of the proposed study	July/2017 **Month / Year**

11. ARE THE FOLLOWING ASSOCIATED WITH THE RESEARCH STUDY?				
11a. SUPPLEMENTARY DOCUMENTS INCLUDED:				
☐	Subject Diary	☒ No	☐ Yes	If Yes, insert identifier:
☐	Questionnaire or Psychological Instrument	☐ No	☒ Yes	If Yes, insert identifier: Iowa Infant Feeding Attitude Scale and Demographic Sheet
☐	Federal NIH Grant Application	☒ No	☐ Yes	If Yes, insert identifier:
☐	Investigator Brochure	☒ No	☐ Yes	If Yes, insert identifier:
☐	Drug Package Insert	☒ No	☐ Yes	If Yes, insert identifier:
☐	Data Collection Tool (with a key to all field headings)	☒ No	☐ Yes	If Yes, insert identifier:
☐	Advertisements / Flyers / Patient Information Sheets	☒ No	☐ Yes	If Yes, insert identifier:
☐	Other, Please Explain:	☒ No	☐ Yes	If Yes, insert identifier:
☐	Other, Please Explain:	☒ No	☐ Yes	If Yes, insert identifier:
11b. RESEARCH-RELATED USE OF ANY OF THE FOLLOWING:				
☐	Investigational Drugs/Biologics:	☒ No	☐ Yes	If Yes, insert IND#:
	FDA Approved Drug(s) for an Unapproved Use If Off-Label Use, an IND is not always required. If sponsor cooperating with goal of extending use of drug an IND is required	☒ No	☐ Yes	Comments:
	FDA Approved Drug(s) for an Unapproved Subject Group If Off-Label Use, an IND is not always required. If sponsor cooperating with goal of extending use of drug an IND is required	☒ No	☐ Yes	Comments:
☐	Investigational Devices:	☒ No	☐ Yes	IDE#: and Date:
	Risk Assessed by Sponsor			☐ Significant Risk (SR) ☐ Non-Significant Risk (NSR)
☐	Humanitarian Device Exemption:	☒ No	☐ Yes	HDE #:
11c. DESIGN OF STUDY:				
☐	Placebo Controlled	☒ No	☐ Yes	Comments:
☐	Blinded	☒ No	☐ Yes	If Yes, ☐ Double Blind or ☐ Single Blind
☐	Randomized	☒ No	☐ Yes	Comments:
☒	Anonymous Survey or Questionnaire	☐ No	☒ Yes	Comments: no identifiable patient information on form. Survey kept for one year and then shredded
☐	Banking of Tissue / Specimen / Data	☒ No	☐ Yes	Comments:
☐	Retrospective Review of Records or Information	☒ No	☐ Yes	Comments:
☐	Registry Study	☒ No	☐ Yes	Comments:
☐	Compassionate Use – Contact IRB office for guidance	☒ No	☐ Yes	Comments:
☐	Other:	☒ No	☐ Yes	Comments:
11d. SAFETY MEASURES:				
☒	Data/safety monitoring is included in the study.	☒ No	☐ Yes	If yes, details must be provided within the protocol or as an attachment.
Please specify the type of monitoring:				
☐	Local data and safety monitoring plan in place	☐ No	☐ Yes	Comments:
☐	Sponsor reviews adverse events, interim findings and	☐ No	☐ Yes	Comments:

	relevant literature			
☐	Data Safety Monitoring Board [DSMB], Data Monitoring Committee (DMC) or other similar body in place	☐ No	☐ Yes	Comments:
	Other measures:			
☐	Certificate of Confidentiality *(for genetic research involving identified samples)*	☐ No	☐ Yes	Comments:
☐	Other:	☐ No	☐ Yes	Comments:
	11e. USE OF SPECIMENS OR DATA: Tissue/data banking and genetic research require additional protections for subjects.			
☐	Genetic research will be done on biologic samples.	☒ No	☐ Yes	If Yes, ☐ Samples will be de-identified ☐ Samples will be identified
☐	Gene therapy vectors or recombinant DNA products will be used.	☒ No	☐ Yes	If Yes, EVMS Biosafety Committee Approval # on
☐	Cell lines will be developed	☒ No	☐ Yes	Comments:
☐	Cell lines from unidentified subjects will be used in this research study.	☒ No	☐ Yes	Comments:
☐	Samples/data will be used and kept for the use of **this study only.** The intent is NOT TO ESTABLISH a "tissue/data bank.	☐ No	☒ Yes	Comments:
☐	Samples/data will be stored/banked for the use of **the investigators OR others.** The intent is TO ESTABLISH a repository or bank.	☒ No	☐ Yes	Comments: ☐ Samples will be de-identified ☐ Samples will be identified
	If yes, provide the IRB # for protocol to govern collection and storage of samples:			IRB #:
☐	Certificate of Confidentiality *(for genetic research involving identified samples)*	☒ No	☐ Yes	Comments:
	11f. SPONSOR AND/OR GRANTING AGENCY:			
☐	Sponsor is a Federal granting agency. [If Federally funded by NIH, you must submit the entire grant with this application.]	☒ No	☐ Yes	Name of Sponsor:
☐	Sponsor is a commercial company.	☒ No	☐ Yes	Name of Sponsor:
☐	Sponsor is a non-profit granting entity.	☒ No	☐ Yes	Name of Sponsor:
☐	Sponsor is academic/hospital department or personal funds.	☒ No	☐ Yes	Name of Sponsor:
	IF YES TO ANY OF THE ABOVE, PLEASE ANSWER THE FOLLOWING QUESTIONS			
	Who is the Principal Investigator on the award?			
	To which entity/institution is the primary award made?			
☐	Unsupported, no funding	☐ No	☐ Yes	Comments:

12. TO THE BEST OF YOUR KNOWLEDGE, HAS THIS STUDY ALREADY BEEN APPROVED BY AN EVMS IRB UNDER ANOTHER INVESTIGATOR?

☒ No ☐ Yes If yes, provide: Investigator's Name: and IRB #:

13. VERIFICATION OF SCIENTIFIC REVIEW AND ACCEPTANCE STATEMENT:

It is necessary for each principal investigator to verify the scientific merit of a new study before submitting the study for IRB review. Based on information submitted by the principal investigator, the appropriate department chair (or designee), certifies the conduct of the study under his/her department.

By signing below, you confirm that you have sufficient staff and facilities to conduct this study

By signing below, you agree to abide by the EVMS IRB Assurance which specifies compliance with OHRP Regulations for Protection of Human Research Subjects, and you agree to conduct your research: 1) according to the guidelines of this statement, 2) according to human subjects regulations outlined in the human subjects training you have completed, and 3) according to the information you supplied in this Application.

BY SIGNING BELOW, YOU UNDERSTAND YOU MUST OBTAIN WRITTEN IRB APPROVAL BEFORE INITIATING ANY RESEARCH PROCEDURES OR ACTIVITY.

PRINCIPAL INVESTIGATOR SIGNATURE:	DATE OF SIGNATURE
Dana Bakley	12/23/16

14. DEPARTMENT CHAIR CERTIFICATION:

This protocol has been reviewed by me or an appropriate designee and I agree that this study has scientific merit.

DEPARTMENT CHAIR OR DESIGNEE OR SIGNATURE:			DATE OF SIGNATURE
Signature:			11 / 02 /2016
Printed Name:	Alfred Z. Abuhamad, MD	Department:	Obstetrics & Gynecology

THIS SECTION FOR IRB USE ONLY

FINAL DISPOSITION:

REVIEW CATEGORY	ACTION	CONTINUING REVIEW DEADLINE
1/9/17 ☒ Exempt	☒ Approved	11 / 01 / 17
☐ Expedited	☐ Disapproved	
☐ Full (Convened) Board		

IRB SIGNATURE:		DATE:	1 / 17 / 2017
SIGNED BY:	☐ IRB Chair ☒ IRB Vice Chair ☐ IRB Member		

IRB APPROVAL
DATE 01/17/17
EXPIRES
DATE N/A
IRB # 16-11-XX0266

Application for Approval of Research Involving Human Subjects

DO NOT EXCEED TWO (2) PAGES AND DO NOT INCLUDE EXTRA PAGES

Study Title:	Post-Partum Mothers' Attitudes of Breastfeeding	IRB Number:
Principal Investigator:	Diana Behling, DNP, RN, MJ, CPPS	16-11*XX-0206

1. CLEARLY STATE THE PURPOSE OF THE STUDY:

This study seeks to identify what interrupts the mothers' intent to exclusively breastfeed after delivery

2. PROVIDE A BRIEF DESCRIPTION OF DESIGN:

This study is a non-experimental quantitative descriptive design, using a convenience sample of post-partum mothers

3. PARTICIPANT INFORMATION:

Duration of individual subject's total involvement (provide all details – active; long-term follow-up, etc.):
The survey is a double sided form and is a paper and pencil tool that will take the respondent approximately 15 mintures to complete. The suvery is complete during the patient's post partum stay and no follow up is necessary after discharge from hospital

How will subjects be recruited? All post partum mothers who deliver and are admitted to the mother-baby unit at Sentara Norfolk General Hospital during the project period will be approached and given information regarding the research project and asked to complete the paper and pencil survey tool. No screening of patients will occu; all patients admitted to the mother-baby unit will receive the survey tool.

Inducements to participate: none

Inclusion Criteria: The participants will be able to read and comprehend survey, English speaking mothers greater than 18-50 years of age who deliver an infant and are admitted to the mother-baby unit of Sentara Norfolk General Hospital during the survey period for this DNP project. Mother's will voluntarily complete the survey (IIFAS) on and return the completed form to a member of the research team before discharge

Exclusion Criteria: Exclusion will be mothers who do not speak English, delivering a stillborn fetus, and those less than 18 years of age of over the age of 50.

4. BENEFITS TO SUBJECTS (DO NOT USE WORDING SUCH AS "YOU", "YOUR", ETC.):

There are not identified direct benefits to the subjects

5. RISKS TO SUBJECTS (DO NOT USE WORDING SUCH AS "YOU", "YOUR", ETC.):

There are not identified risk to the subjects

6. MEASURES TO MINIMIZE RISKS:

The form is anonymous, containing no identifiable patient information