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Seeking to Do What's Best for Baby: A Grounded Theory

Karen P. Jagiello

Dissertation submitted to the
School of Nursing at West Virginia University
in partial fulfillment of the requirements for the degree of

Doctor of Philosophy

In

Nursing

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2018

Keywords: exclusive breastfeeding, rural, basic social processes, grounded theory

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Abstract

Seeking to Do What's Best for Baby: A Grounded Theory

Karen P. Jagiello

BACKGROUND: Human breastmilk is considered the ideal form of infant nutrition. The American Academy of Pediatrics and the World Health Organization officials recommend breastfeeding exclusively for the first six months of life and continued breastfeeding for at least the first year of life. Despite these recommendations and increased promotion of exclusive breastfeeding through six months by the American Academy of Pediatrics and the Centers for Disease Control, new mothers living in rural U.S. communities have lower incidence of breastfeeding as compared to their urban counterparts. Little is known about the experience that fosters success or failure to exclusively breastfeed to six months. **PURPOSE:** The purpose of this study was to develop a substantive theory that describes the decision-making process for women in a rural population to exclusively breastfeed. Decision-making did not emerge as a construct by participants of the study. **METHODS:** Nineteen participants who reported a desire to exclusively breastfeed were recruited using both purposive and theoretical sampling. The research employed classic grounded theory method to understand the meaning and experiences of exclusive breastfeeding. **FINDINGS:** The theory of *seeking to do what's best for baby* emerged from the data. It consists of a temporal three-stage process. The stages are 1) *pre-pregnancy nescience*, 2) *working through*, and 3) *succeeding or surrendering*. The process is influenced by evolving internal conditions identified as *enculturating*, *believing*, and *lacking knowledge*. Also identified are basic social processes and conditions that influence the core category of *working through* and affect the three-stage process. The basic social psychological processes that impact working through are *struggling*, *needing support*, *winging it*, and *admitting fed is best*. The basic social structural processes that impact the core category of working through are *health care*, *family structure*, *customs*, *hierarchy*, and *social media*. **CONCLUSIONS:** The theory *seeking to do what's best for baby* explores how rural mothers attempting to exclusively breastfeed for the first six months, navigate the basic social processes encountered and resolve their main concern of doing what is best for their baby. The theory is supported by both the theory of planned behavior and symbolic interactionism. This new grounded theory has pertinent implications for research, nursing and clinical practice, breastfeeding policy, and education that may promote healthy outcomes for infants living in rural communities.

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Dedication

To my husband, Walter, who has said every day, "You can do this – I believe in you."

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Seeking to Do What's Best for Baby: A Grounded Theory Research Approach

Chapter 1: Introduction

Exclusive breastfeeding is considered the healthiest source of nutrition for infants from birth through age six months (American Academy of Pediatrics [AAP], 2012; Center for Disease Control and Prevention [CDC], 2014a; World Health Organization [WHO], 2015a). Exclusive breastfeeding is defined as giving a baby no food or drink other than breastmilk (WHO, 2015). Included in the definition is the exclusion of water (WHO, 2015). Despite public awareness of the benefits of exclusive breastfeeding for both mother and infant, many new mothers in the United States (U.S.) do not practice exclusive breastfeeding beyond the first few weeks following delivery (CDC, 2014a; Ryan, Wenjun & Acosta, 2002). This is especially concerning for new mothers who live in rural areas since rural residence is associated with negative health outcomes for all rural residents (Fahs et al, 2012; McElroy et al, 2012; U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau, 2013).

The purposes of this chapter are to:

- provide an overview of the problem of limited numbers of new mothers who exclusively breastfeed who also live in rural areas;
- describe the significance of the research;
- provide the research question; and
- discuss the classic grounded theory method that will be employed to organize and structure the dissertation study.

Overview of the Problem

Human breastmilk is considered the ideal form of infant nutrition for at least the first year by the AAP (2012) and WHO (2013). The WHO recommends exclusive breastfeeding for the

first six months of life (WHO, 2015a). The U.S. Department of Health and Human Services [HHS] officials recommended increasing the promotion of exclusive breastfeeding as a Healthy People 2020 goal (2012). They recommend that all new mothers in the U.S. should initiate and continue breastfeeding until the child is at least age one year (Gartner, et al. 2007; Hunt & Schuller, 2007; Ryan et al., 2002). Nurses, midwives, physicians and other health care professionals involved in prenatal care work toward those goals and discuss the benefits of breastfeeding to infants and new mothers. Researchers have documented specific factors that impact successful breastfeeding. They have also identified the characteristics of women who were either successful or unsuccessful in breastfeeding (Brand, Kothari, Stark, 2011; Chertok, Luo, Culp & Mullett, 2011; McDowell, Wang, & Kennedy-Stephenson, 2008; Santo, de Oliveira, & Giugliani, 2007; Thulier & Mercer, 2009; Whalen & Cramton, 2010). The researchers at the CDC queried women about breastfeeding (CDC, 2014a). The questions addressed breastfeeding in categories of “at all” and “exclusively.” They also collected evidence of a large number of women who did not exclusively breastfeed or failed to continue the practice through the first six months after delivery, despite the known benefits (CDC, 2014a, Ryan et al., 2002).

In comparison to urban populations, there are limited data available on exclusive breastfeeding in new mothers who live in rural locations (Li, Odgen, Ballew, Gillespie, & Grummer-Strawn, 2002; Lynch, Bethel, Chowdhury, & Moore, 2011; Jacobson et al., 2014; Sparks, 2010; Weiner & Weiner, 2011). However, of the available data, new mothers in rural U.S. areas are less likely to breastfeed when compared to their urban counterparts (Jacobson et al., 2014; Li et al., 2002; Sparks, 2010; Wiener & Wiener, 2011). The rationale for failure to initiate breastfeeding are similar between women living in urban and rural areas. One significant difference is the increased use of tobacco by rural women (Flower, Willoughby, Cadigan, Perrin,

Randolph, & The Family Life Project Investigative Team, 2007). Beyond this information, little is known about the characteristics of new mothers living in rural areas who successfully initiate and then continue breastfeeding for six months (Flower et al., 2007).

New mothers usually make the decision to exclusively breastfeed during pregnancy (DiGirolamo, Grummer-Strawn, & Fein, 2008; Donath, Amir, & ALSPAC Study Team, 2003). However, research into the decision-making process new mothers use to decide to exclusively breastfeed is limited (Sheehan, Schmied, & Barclay, 2010; Sheehan, Schmied, & Barclay, 2013; Wambach & Koehn, 2004), especially regarding the choice to do so for six months (Bai, Middlestadt, Peng, & Fly, 2009; Bai, Shala, Wunderlich, & Fly, 2011). Moreover, there is no existing research on the decision-making process for women living in rural U.S. communities.

Problem Statement

New mothers living in rural U.S. communities have a lower incidence of exclusive breastfeeding compared to their urban counterparts. Many of the mother and child benefits that are derived from breastfeeding are lost when the new mother does not practice exclusive breastfeeding for the first six months of the infant's life. Additionally, there is little known of the decision-making processes that rural new mothers use during the breastfeeding experience that fosters success or failure to exclusively breastfeed to six months.

Prevalence of the Problem

While researchers on exclusive breastfeeding have provided evidence that there are numerous health advantages to breastfeeding, most new mothers in the U.S. do not practice exclusive breastfeeding through the recommended six-month period. Researchers have reported that health promotion and education initiatives have increased the number of new mothers initiating breastfeeding in the U.S. (Ryan et al., 2002). Unfortunately, despite stressing the message of short and long-term benefits of exclusive breastfeeding, most new mothers who

initiated exclusive breastfeeding after delivery discontinued the practice before six months (CDC, 2014a). Rates of breastfeeding initiation in the U.S have risen to 79.2%, yet only 18.8% of new mothers continue to breastfeed for six months (CDC, 2014a). Further analysis from the U.S. 2011-2012 National Survey of Children's Health database reveals that no regions within the nation have met the Healthy People 2020 goals, and that new mothers in rural areas were significantly less likely to breastfeed or exclusively breastfeed for the first six months compared to their urban counterparts (U.S. Department of Health and Human Services, Maternal and Child Health Bureau, 2015).

Impact of the Problem

The choice to not breastfeed impacts the health of mother and infant and creates economic and environmental disadvantages for the family and community. For women, failure to breastfeed is associated with an increased risk of breast cancer, ovarian cancer, cardiovascular disease, metabolic syndrome, and type 2 diabetes (Faupel-Badger et al. 2012; Figueroa et al. 2011; Loof-Johansonm, Brudin, Sundquist, Thorstenson, & Rudebeck, 2010; Ip, Chung, & Raman, 2007; Jordan, S. J., Siskind, Green, Whiteman, & Webb, 2010; McClure, Matov, Ness, & Bimla Schwarz, 2012; Stuebe, 2009; Stuebe & Schwarz, 2010; Trout, Averbach, & Barowski, 2011). The benefits of exclusive breastfeeding for infants are dose dependent (Kramer and Kakuma, 2012). There is an increased odds of disease as the duration and intensity of breastfeeding decreases (Kramer & Kakuma, 2012). Infants never breastfed or having limited breastfeeding exposure also have an increased odds of infection-related mortality, childhood obesity, type 1 and type 2 diabetes, leukemia, sudden infant death syndrome (SIDS), gastrointestinal infection, upper and lower respiratory disease, and otitis media (Ip et al. 2007; Owen, 2006; Taylor, Kacmar, & Nothngle, 2005).

Along with the incidence of poor health outcomes for mother and infant related to suboptimal breastfeeding, there is also an impact on the cost of health care. The speculated financial burden of failure to exclusively breastfeed for the first six months of a child's life is \$13 billion per year for the U.S. pediatric population (Bartick & Reinhold, 2010). Additionally, the cost to society caused by limited or no breastfeeding for women is \$17 billion from resulting premature deaths (Bartick, Stuebe, Bimla Schwarz, Luongo, Reinhold, & Foster, 2013). While the financial burden is startling, it is insignificant when considering the preventable infant or maternal deaths attributed to suboptimal breastfeeding practices in the U.S. (Bartick & Reinhold, 2010; Bartock et al., 2013; Ma, Brewer-Asling, & Magnus, 2012).

Another factor that impacts poor health outcomes for mothers is the disparity based on rural versus urban designation. Women in rural areas are less educated, have lower incomes, and have decreased access to health care than women living in urban settings (Befort, Nazir, & Perri, 2012; HHS, 2013). They are also more likely to be overweight or obese, to smoke, to have chronic respiratory disease, cervical cancer, and ischemic heart disease than their urban counterparts (American College of Obstetricians and Gynecologists [ACOG], 2014; Befort et al., 2012; Bennet, Lopes, Spencer, & Hecke, 2013; HHS, 2013a). Potential barriers to successful breastfeeding following initiation of breastfeeding include low income or poverty, inadequate social support, and limited health care support (Flower et al., 2007; Gaston, 2001; Sparks, 2010; Wiener & Wiener, 2011). Other than these potential factors, little is known about the characteristics of new mothers living in rural areas who successfully breastfeed (Flower et al., 2007).

Rural infants have poorer health outcomes than infants living in urban communities. For example, rural infants have an increased incidence of low birth weight, preterm birth, and infant

mortality (HHS, 2013b). Moreover, the postnatal mortality rate is 27% higher than the urban mortality rate and includes SIDS deaths occurring during the first year of life (HHS, 2013b).

In summary, the negative impact of failure to exclusively breastfeed, particularly in the rural population, cannot be overstated. Research is lacking in this phenomenon and in this population. Further study into how rural mothers decide to breastfeed from initiation to six months is warranted.

Major Constituents of the Study

Purpose

The purpose of this study was to develop a substantive theory that describes the decision-making process for women in a rural population to exclusively breastfeed.

Research Question

The initial research question was “what is the decision-making process for new mothers who live in a rural area to exclusively breastfeed?” But as is characteristic of classic grounded theory, the research question changed during the data analysis process. The question that was revealed during analysis was: “What is the main concern of rural new mothers who are breastfeeding and how do they continually resolve that concern?”

Definition of Terms Used in This Study

Exclusive breastfeeding: “the infant receives only breastmilk. No other liquids or solids are given – not even water – with the exception of oral rehydration solution, or drops/syrups of vitamins, minerals or medicines” (WHO, 2015a). For the purpose of this study, mothers who provide breastmilk to their infant via a bottle are considered to be exclusively breastfeeding.

Suboptimal breastfeeding practices: practices that impede exclusive breastfeeding including failure to initiate breastfeeding within the first hour after birth, exclusive breastfeeding for the first six months of life, and “continued breastfeeding for two years or more, together with

safe, nutritionally adequate, age appropriate, responsive complementary feeding starting in the sixth month” (United Nations Children’s Fund [UNICEF], 2015; WHO 2015a)

Rural: “encompassing all population, housing, and territory not included within an urban area” (United States Census Bureau, 2015). More specifically (for this study), any area with fewer than 50,000 people is designated as rural.

Method

Using a qualitative research approach, this study was conducted using classic grounded theory to develop a substantive theory to help understand the basic processes that occur when new mothers who live in rural areas exclusively breastfeed their infants for the first six months of life. Classic grounded theory was chosen for this research method as it is suitable for the investigation of complex phenomena (Glaser and Strauss, 1967). The theory is particularly useful in exploring social-related issues such as breastfeeding (Glaser & Strauss, 1967). This study employed classic grounded theory to “generate a theory that accounts for a pattern of behavior which is relevant and problematic for those involved” (Glaser, 1978, p. 93).

Classic grounded theory is used to determine what occurs to a substantive population that has not been previously discovered or understood (Glaser, 1978). Through utilizing this theory the researcher strives to explain a situation by identifying the social and psychosocial processes that occur during the event (Baker, Wuest, & Noerager Stern, 1995). In the instance of the decision-making process for women to exclusively breastfeed, the researcher desired to understand what transpires following birth through six months that promotes the practice of exclusive breastfeeding. To accomplish this, the researcher used an inductive approach to review the data acquired from interviews and participant observations to develop themes and categories that generate a substantive theory rooted in the data (Glaser, 1978). Therefore, based on the tenets of classic grounded theory, this approach can be employed to explore the basic social

processes surrounding breastfeeding, to generate a theory that can explain why or why not exclusive breastfeeding occurs, to predict suboptimal breastfeeding, and to account for and interpret variation in breastfeeding behavior (Glaser, 1978).

Theoretical Underpinnings

Guba and Lincoln (1985) wrote that the researcher's philosophy influences his or her choice of research method and explains his or her view of the world. Grounded theory is considered to be "philosophically unbiased" (Holton & Walsh, 2017) but no research can be completely neutral as the researcher's own personal philosophies influence how the data are viewed and interpreted. A careful introspection identified the ontological and epistemological assumptions, and theoretical perspective of this researcher to be that of symbolic interactionism; therefore, this grounded theory research may be influenced by that perspective.

Symbolic interactionism evolved as a social theory influenced by the early work of several social scientists, the most noteworthy being George Herbert Mead (Aksan, Kisac, Aydin, & Demirbukan, 2009). Mead wrote that symbols are developed by humans as a method to think, communicate, and to create order and meaning in their lives (Korgen & White, 2008). Herbert Blumer, a student of Mead's, expanded on the concept by identifying basic assumptions and called the theory symbolic interactionism (Aksan et al., 2009). In the theory, social behavior is explained in terms of how humans interact with each other. People are thought to use a complex set of symbols for objects, events, and behaviors that they encounter. These symbols provide meaning to the world. People using symbolic interactionism view the individual during small scale interactions to explain the individual in society, their interactions with others, and to rationalize social order and change as a whole (Aksan et al., 2009). The theory is based on three core assumptions: 1) human actions are based upon the meaning of the symbols that they have ascribed to those objects, events, ideas, and other human interactions; 2) the meaning of the

objects is influenced by interactions with others and with society; and, 3) the meaning of symbols is interpreted by humans based on their experiences dealing with specific events and are subject to change (Blumer, 1969).

Symbolic interactionism is frequently used as a philosophical foundation by grounded theory researchers. Symbolic interactionism focuses on the relationships among individuals within a society and aligns smoothly with the “grounded theory premise that social processes can be identified in human behavior” (Barton-Caro, 2013, p. 7). Indeed, researchers who consider themselves symbolic interactionists will look for patterns of interaction between individuals (Cunningham, 2014). Conversely, Hernandez (2008) wrote that the deductive nature of symbolic interactionism is better suited for the modified grounded theory proposed by Straus and Corbin when compared to the inductive nature of classic grounded theory. Further, Hernandez (2008) suggested that the researcher must put aside any association with the symbolic interactionism framework and allow the grounded theory method to guide the research.

Significance of the Study

Many of the benefits of breastfeeding are lost on new mothers and infants who have suboptimal breastfeeding beyond the first days postpartum. Despite the knowledge that breastfeeding is beneficial, many new mothers across the nation are not meeting the Healthy People 2020 goals (CDC, 2014a; Ryan, Wenjun & Acosta, 2002). In particular, rural new mothers are even more unlikely to meet the recommended standard (Jacobson et al., 2014; Li et al., 2002; Sparks, 2010; Wiener & Wiener, 2011). This disparity impacts short and long-term health outcomes for both new mother and infant (ACOG, 2014; HHS 2013a; HHS 2013b). Yet there is a dearth of research that examines why this inconsistency exists (Flower et al., 2007). There is no research that delves into what is really occurring in the life of a rural new mother who successfully breastfeeds. This study will allow the researcher to better understand the

common problems identified by rural new mothers in their exclusive breastfeeding journey. Specifically, it will allow the researcher to identify the common concerns that rural women encounter and the methods they use to resolve them as they attempt to exclusively breastfeed their infants through six months. This information will add to the knowledge base of the discipline of nursing while shedding light onto how nurses can promote and support rural mothers in their efforts to exclusively breastfeed.

Negative consequences will continue if exclusive breastfeeding rates do not increase, particularly in rural areas. If breastfeeding rates in rural America remain at suboptimal levels, the U.S will continue to pay the price in greater health care costs and poorer maternal and child health outcomes. In order to affect change and improve the health outcomes of women and infants in rural communities, there must be a better understanding of the process that occurs with women to successfully breastfeed to the six-month goal.

Summary

Human breastmilk is considered the ideal form of infant nutrition for the first year of life or longer, with exclusive breastfeeding for the first six months of life promoted by the AAP, the CDC, and the WHO. Breastfeeding positively impacts the health of the mother and infant while providing economic and environmental advantages to the family and community. These effects are dose dependent. Despite the benefits of breastfeeding, the national average of breastfeeding initiation and exclusive breastfeeding to six months does not meet the Healthy People 2020 goals. Differences in breastfeeding and exclusive breastfeeding rates are noted by state; however, as a whole, rural new mothers are less likely to breastfeed or practice exclusive breastfeeding than new mothers in urban regions. Little is known about the barriers to exclusive breastfeeding for women in rural areas or about the reasoning behind infant nutrition choices for rural women. The lack of insight into what is actually occurring in the lives of new mothers who breastfeed

requires a classic grounded theory approach to explore the meaning and experiences of individuals who are undergoing similar events (Glaser, 1998). Such an approach will allow a researcher to find commonalties that become a core concept (Glaser, 1998). In this case, the results of the proposed research will further the knowledge regarding the main concern of rural new mothers who are breastfeeding and how they continually resolve that concern.

Chapter 2: Review of the Literature

Introduction

The traditional literature review that accompanies quantitative and qualitative research is a thorough and comprehensive accumulation of current literature that is used by an author to identify gaps in knowledge, familiarize himself or herself with the current knowledge, and serve as a foundation for continued research (Polit & Beck, 2012). Conversely, when using classic grounded theory as the framework for research, the researcher is encouraged to refrain from an in-depth review of the literature to prevent the development of bias or preconceived notions that may distort the “concepts, problems, and interpretations” that emerge from the data (Glaser, 1989, p. 67). In this instance, the researcher entered into this project with an existing expansive knowledge of breastfeeding and cannot approach the topic with the naiveté suggested by Glaser (1989). In fact, previous knowledge has prompted the direction of this research. The researcher was curious as to why, despite the literature and education programs addressing the benefits of breastfeeding for mother and infant, new mothers in rural populations continue to cease the practice of exclusive breastfeeding well before the recommended six months (CDC, 2014b; Wiener, & Wiener, 2011). It was necessary for the researcher to return to the basic question of “what was happening” in order to gain insight into the process that is occurring.

The literature review that follows begins with a brief historical overview of breastfeeding in the U.S. Following the historical overview, in line with the focus upon rural women exclusively breastfeeding beyond six months, the literature review will progress to identify what is known in relation to the rural population, exclusive breastfeeding, and the decision-making process used by mothers when deciding to breastfeed or practice exclusive breastfeeding.

Literature Search Process

A search of the literature was conducted using combinations of the key words breastfeed*, rural, decision* and grounded theory in Academic Search Complete, CINAHL, PsycINFO, and PubMed. The search was limited to peer-reviewed, full text articles from human subject studies published in English from January 2011 to 2018. Research articles were excluded if the author(s) focused on (a) pregnancy; (b) breastfeeding as other than a source of infant nutrition; (c) breastfeeding grouped into multiple postpartum assessments; (d) breastfeeding in non-rural populations; (e) features which did not include a new mother's attitude or decision in the breastfeeding experience, or (f) opinion or concept. In addition, studies referenced in relevant articles and reviews were assessed for inclusion using the same criteria.

The initial search yielded only one title. The search was conducted a second time eliminating the word grounded theory and a total of 32 publications were identified. Three of those publications were repeated in the search and an additional 15 were excluded by title or after reviewing the abstract. Each remaining article was read. Three additional publications were rejected based on the above requirements. However, 12 studies referenced in relevant articles were identified and added to the review. There were 23 articles included in the literature review and are summarized in Appendix H: Table A.2.

Historical Overview of Breastfeeding in the U.S.

Breastfeeding as the primary source for infant nutrition began to diminish as a practice in the U.S. during the late nineteenth century (Walker, 2007). The trend for women to limit or abstain from breastfeeding was influenced by multiple factors. However, one notable impact occurred with the public advertisement of commercially prepared infant formula (Fomon, 2001; Greer & Apple, 1991). In the late twentieth century there was a dramatic decline in new mothers in the U.S. who chose to breastfeed due in part to the availability of multiple varieties of infant

formula and the increasing numbers of women in the workforce who did not have the opportunity to breastfeed at work (Hirschman & Butler, 1981.) An all-time low occurred in 1972 with only 22% of infants having been breastfed at age one week and 14% having been breastfed at age 10 weeks (Eckhardt & Hendershot, 1984; Hirschman & Butler, 1981).

Since 1972, many strategies to improve the initiation of breastfeeding have been employed. Action by different grassroots support groups like the Infant Formula Action Coalition and La Leche League International focus on education of health care professionals, the enactment of the Family and Medical Leave Act, the inclusion of breastfeeding goals through Healthy People, and program changes supporting breastfeeding by the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) (Fomon, 2001; Lawrence, 1982; Stevens, Patrick, & Pickler, 2009; Walker, 2007; Wright & Schanler, 2001). Ongoing promotion and education highlighting the benefits of breastfeeding have produced a noted increase in the initiation of breastfeeding after delivery; however, the rate of exclusive breastfeeding for the first six months of life continues to be below levels set by Healthy People campaigns (CDC, 2016a). In 2004, the percentage of infants in the U.S. who were exclusively breastfed during the first six months of life was 12.1% (CDC, 2016a). By 2015 it had nearly doubled to 22%; however, it remains below the Healthy People 2020 goal of 25.5% and well below the 50% target of the 2025 World Health Organization (WHO) (CDC, 2016a; Office of Disease Prevention and Health Promotion, 2016; WHO, 2016a).

Worldwide breastfeeding promotion efforts are underway to ensure that all hospitals and birthing centers become “centers of breastfeeding support” (WHO, 2016a; UNICEF, 2005). The Baby-Friendly Hospital Initiative, a program designed to promote and support exclusive breastfeeding by identifying hospitals that meet the Baby-Friendly criteria, was launched globally in 1991 (Baby-Friendly USA, 2012; UNICEF, 2005). The Baby-Friendly Hospital

Initiative was slow to arrive in the U.S.: there are fewer than 17% of hospitals in the U.S. having attained a Baby-Friendly designation (Baby-Friendly. USA, 2018). Many hospital officials are now working to achieve the Baby-Friendly designation by implementing the Ten Steps to Successful Breastfeeding endorsed by the U.S. Surgeon General, the American Academy of Family Physicians, the AAP, and the American College of Nurse-Midwives (Baby-Friendly USA, 2012). The Ten Steps require organizations to have a policy to support breastfeeding, provide evidence-based education for staff and other health care professionals, provide consistent education for the mother and her family, encourage the abstinence of the use of formula and pacifiers, encourage rooming-in of the infant with the mother 24 hours per day, have the new mother and infant initiate skin to skin contact immediately after delivery, and to encourage on-demand breastfeeding (Baby Friendly USA, 2012).

Despite the ongoing breastfeeding promotion and educational programs that have been initiated, there continues to be misinformation about breastfeeding throughout the health care system, and exclusive breastfeeding is often not promoted as an important health goal (Holmes, Chin, Kaczorowski, & Howard, 2009). The encouragement of breastfeeding by health care providers is important for new mothers to successfully adopt exclusive breastfeeding (Weddig, Baker, & Auld, 2011). Unfortunately, in some facilities that are designated as “baby-friendly,” policies may be out-of-date, or not based upon evidence, and nurses may not be following current best practices for breastfeeding initiation (Weddig et al., 2011).

Additionally, despite national initiatives, multiple factors have been identified as barriers to successful breastfeeding. These include maternal age, ethnicity, level of maternal and paternal education, early prenatal care, enrollment in Medicaid health insurance during pregnancy, enrollment in WIC, method of delivery, maternal tobacco use, and living in rural areas, which is the focus of this study (Amir & Donath, 2007; CED, 2014; Grajeda & Perez-Escamilla, 2002;

Heck, Braveman, Cubbin, Chavez, & Kiely, 2006; Lin et al., 2008; McDowell, Wang, & Kennedy-Stephenson, 2008; Wiener, & Wiener, 2011; Whalen & Cramton, 2011).

Literature Review

Conceptual and Theoretical Frameworks

Several theories have been employed as frameworks to guide studies of breastfeeding including the theory of reasoned action (Ajzen & Fishbein, 1980), the theory of planned behavior (Ajzen, 1991), the health belief model (Janz, Champion, & Strecher, 2002), the theory of self-efficacy (Resnick, 2009), breastfeeding self-efficacy (Dennis, 1999), and the social cognitive theory (Bandura, 1989). Using a theory's constructs, researchers seek to predict maternal outcomes based on attitudes, behaviors, beliefs, and outside influences (social or formal) that are experienced.

Grounded theory is another method used to guide studies of breastfeeding (Glaser, 1978). In using grounded theory, a researcher seeks to explore the meaning and experiences of individuals who are undergoing similar events to find commonalities that become a core concept without focusing on ideation to predict a behavior (Glaser, 1998). In the studies included within this literature review, the theory of planned behavior, the social cognitive theory, and grounded theory were used as frameworks to support the research. Of note, the breastfeeding self-efficacy scale, an instrument developed by Dennis (1977, 2003) to accompany her theory and measure the maternal self-efficacy associated with breastfeeding, was the most commonly used instrument in the studies reviewed. While the instrument was employed, researchers did not use the theory to explain the findings.

Method

A number of qualitative studies were found, though few used a theoretical foundation to guide the research. Similar findings were noted for quantitative studies. One mixed-method study

is included. For the purpose of this review, results will be divided into quantitative and qualitative sections.

Qualitative Methods

Of the qualitative studies that met the criteria for selection for the literature review, most did not include a discussion of a theoretical foundation used to support the research. The two theories that were identified in the qualitative studies were the theory of planned behavior and grounded theory.

Theory of planned behavior. Bowman (2013) conducted a research project for her dissertation with a focus on the maternal decision-making process using the theory of planned behavior (Ajzen, 1991) as a framework. The theory of planned behavior links beliefs to behavior and proposes that an individual's attitude toward behavior, subjective norms, and perceived behavioral control combine to influence an individual's behavioral intentions and behaviors (Ajzen, 1991). Using this theory, Bowman (2013) conducted focus group interviews with a subset of the sample from a mixed-methods study. In keeping with the theory of planned behavior, participants reported that knowledge of the health benefits for the infant supported their decision to breastfeed.

Unfortunately, there were also negative messages received by the participants from both their extended family and the general public that also influenced their decision to continue breastfeeding after initiation. This negative subjective norm created an environment where breastfeeding became uncomfortable (Bowman, 2013). Positive peer support outweighed the negative messages and supported the participants' breastfeeding effort (Bowman, 2013). This implied that a woman's attitude, knowledge, and beliefs influence her decision to breastfeed; yet, after initiating the practice, outside critique from family, friends, and community swayed the decision to continue to breastfeed (Bowman, 2013). In this study, Bowman (2013) additionally

found that health care professionals had a significant impact on the feeding choices made by parents. Therefore, consistency in breastfeeding education and ongoing support beyond discharge from the hospital may also negate the disparaging messages received from a mother's social support system and promote long-term breastfeeding.

Grounded theory. Social support was also identified as necessary for successful breastfeeding in two separate studies which employed grounded theory. One explored decision-making during the first six weeks following birth (Sheehan, Schmied, & Barclay, 2013), while the second explored the experience of being at home with a newborn (Hjalmhult, & Lomborg, 2012).

The Australian Government Health Department (2014) reported that while 98% of infants in Australia are breastfed following birth, only 15% are exclusively breastfed through age six months. In an attempt to discover “what was going on” Sheehan, Schmied, and Barclay (2013) used grounded theory method to explore the experience of breastfeeding and the decision-making process used by mothers during the first six weeks following delivery. The core category entitled “Deconstructing Best” explains the social process that occurs prior to birth and then during the first six weeks following delivery (Sheehan, Schmied, & Barclay, 2013).

Deconstructing Best has seven phases (planning, expecting, realizing, questioning, “getting on with it”, defending, and qualifying) which detail a nonlinear decision-making process that a woman experiences when making infant feeding choices (Sheehan et al., 2013). The majority of this decision-making occurs during the realizing and questioning stages when the new mother begins breastfeeding (Sheehan et al., 2013). Experiences during the realization phase heavily influence the maternal decision to continue breastfeeding and are impacted by pain (from breastfeeding or from delivery), fatigue, and the newness of the situation (Sheehan et al., 2013). During the questioning phase, the woman examines her ability to successfully breastfeed and she

also examines her ability to fulfill the commitment required to breastfeed (Sheehan et al., 2013). External resources that provide support and education during the early postpartum period were found to influence the maternal decision to continue or discontinue breastfeeding (Sheehan et al., 2013). This aligns with the identified need for social support found in the previous study, with health professionals providing a sound source of needed guidance.

Health care professionals must be aware of the needs of the individual and provide support for breastfeeding during the phases of “Deconstructing Best” to positively impact breastfeeding by helping the mother through any negative experiences. Conversely, a mother who lacks a maternal identity with breastfeeding may choose to cease. The impact of the social belief that the “breast is best,” however, may encourage breastfeeding despite the maternal decision to cease the practice. This knowledge is imperative to promoting healthy outcomes through breastfeeding, as any breastmilk is better than none (Kramer & Kakuma, 2012).

Another grounded theory study by Hjalmlhult and Lomborg (2012) also explored the early postpartum period to determine “what happened” after a mother was discharged from the hospital with her newborn. This study was conducted in Norway where there is a very high breastfeeding rate, with 99% of new mothers initiating breastfeeding after delivery and 50% of new mothers practicing exclusive breastfeeding four months after delivery (Australian Government Department of Health [AGDH], 2012). Changes in the length of time that mothers are hospitalized following birth (5 days or more to 1-3 days) resulted in the decreased frequency of home health visits to the new mother and an increased amount of time between hospital discharge and first home visit by a public health nurse, prompting this study (Hjalmlhult & Lomborg, 2012). The core category of “preserving control and integrity in their new situation” was identified, with mothers seeking to do this by prioritizing newborn care (Hjalmlhult & Lomborg, 2012). Prioritizing newborn care was completed through four parallel processes that

are both interconnected and sometimes conflicting: developing competence as a mother; changing focus in the partner's relationship; seeking recognition; and stretching to the critical level (Hjalmlhult & Lomborg, 2012). Focusing on prioritization of newborn care assists the mothers to discover methods of dealing with periods of conflict and stress (Hjalmlhult & Lomborg, 2012). Again, as in the previous studies reported here, support and education by health care professionals were significant sources of encouragement during the hospital stay and afterwards during home care visits following discharge (Hjalmlhult & Lomborg, 2012).

Notably, the impacts of late or no home visits following discharge are a cause of real stress. New mothers may feel let down by the health care professionals, and the feeling may influence the mothers in their ability to feel in control and competent in the care of their newborns (Hjalmlhult & Lomborg, 2012). This theme of unpredictable care is one that is noted in other studies, especially where breastfeeding education is inconsistent (Ahluwalia, Morrow, D'Angelo, & Li, 2012; MacVicar, Kirkpatrick, Humphrey, & Forbes-McKay, 2015).

In this study, an identified need for continued social support to promote knowledge and continued breastfeeding impacted the mothers' ability to successfully breastfeed their infants. This implied that despite the successful rate of breastfeeding reported in Norway, changes in policy eliminating or delaying home nurse visits after delivery led to inconsistent support and education for mothers, and was identified by the authors as the primary limitation to the study. The standard length of hospital stay post-delivery in the U.S. is 48 hours post vaginal delivery and 96 hours post cesarean section delivery (National Conference of State Legislations, 2016). As the policy change aligns with current U.S. standards, one could speculate that breastfeeding initiation and especially exclusive breastfeeding rates in Norway could potentially decrease in the future.

Quantitative Methods

The theory of planned behavior was the mostly commonly used theoretical framework employed in the quantitative studies included in this literature review, and is frequently used to explain maternal intention to breastfeed and continuation of breastfeeding in other studies not included herein (Dodgson, Henly, Duckett, & Tarrant, 2003; Lawton, Ashley, Dawson, Maiblinger, & Conner, 2012; Swanson, & Power, 2005). The perceived influence of other people's views (subjective norms), including those of a significant other, family, and/or health care professional, can positively or negatively impact a mother's ability to successfully breastfeed her infant (Dodgson et al., 2003). Three of the four following studies employed the theory of planned behavior to predict breastfeeding success. The fourth study employed Bandura's social cognitive theory (1977), which proposes that knowledge is gained through direct observation of others within the context of social interactions, experiences, and outside media influences (Bandura, 1977). The self-efficacy construct is a cognitive dynamics process that is described as one's beliefs in their ability to succeed in a specific situation (Bandura, 1977). An example of this is the belief that one can succeed at breastfeeding despite the barriers encountered.

Theory of planned behavior. Bowman (2013) conducted a mixed-method study to determine the role of breastfeeding intention, self-efficacy, and support on the duration of exclusive breastfeeding. Using the theory of planned behavior as a framework for the research, Bowman employed several instruments to measure intention, self-efficacy, and support (Bowman, 2013), including the Breastfeeding Self-Efficacy Scale-Short Form (BSES-SF) designed by Dennis (2003) to support the breastfeeding self-efficacy theory. The BSES-SF is used to predict the maternal risk of early cessation of breastfeeding (Dennis, 2003). The Infant Feeding Intentions Scale (Nommsen-Rivers, & Dewey, 2009) was employed to measure

maternal intention to exclusively breastfeed. Two instruments were used to gauge social support. The antenatal measure used was the Social Support Inventory (Timmerman, Emanuels-Zuurveen, & Emmelkamp, 2000), and the post-delivery measure was the Hughes Breastfeeding Support Scale (HBSS) (Hughes, 1984). Bowman found that mothers with higher baseline infant feeding intention scores and BSES-SF scores were more likely to continue to practice exclusive breastfeeding at 16 weeks after delivery (2013).

Unlike the qualitative portion of her mixed-method study in which participants reported that social support was invaluable, social support was not a significant predictor for exclusive breastfeeding in the quantitative portion of this study (Bowman, 2013). The theory of planned behavior proposes that social influences play a major role in predicting achievement of a goal (Bandura, 1977) and this is corroborated by other research (Ahluwalia et al., 2012; Cross-Barnet, Augustyn, Gross, Resnik, & Paige, 2012; Flower et al., 2008). However, there was no consensus between the qualitative and quantitative portions of the study. It is possible that the HBSS was worded poorly, causing confusion. The author also reported that it was difficult to score. The use of two different instruments to measure the before and after effects of social support is likely to have impacted the findings, yet was not included as a limitation of the study. Finally, the sample itself may have been a limitation, as the sample population was predominantly Caucasian (70.9%), married (63%), educated at or beyond a high school degree (96.4%), did not use WIC (69%), and had a household income equal or greater than \$50,000 (56%). These are historically predictors of successful breastfeeding initiation and continuation (Flower et al., 2008; Meedya, Fahy, & Kable, 2010; Santo de Oliveira, & Giugliani, 2007; Scott, Binns, Oddy, & Graham, 2015) and may not have been generalizable to populations in other areas.

Another dissertation included in this review is by Herndon (2014) who also utilized the theory of planned behavior to determine intention and initiation of breastfeeding. In this study,

rather than the largely middle-class, educated, Caucasian population that Bowman (2013) sampled, the participants were from low-income, Native American and African American adolescent mothers living in rural North Carolina (Herndon, 2014). Maternal attitude, subjective norms, perceived control, self-efficacy, and breastfeeding knowledge were measured using the Infant Feeding Intentions Scale (IFIS) (Nommsen-Rivers, & Dewey, 2009), the Breastfeeding Attrition Prediction Tool (BAPT) (Janke, 1994), and the Breast-Feeding Knowledge Scale, (created by combining two known scales that measured knowledge) (Giles, et al., 2007; Ratananugool, 2001). The IFIS and the BAPT are well-known instruments that have been found to be valid, reliable, and used by other researchers (Evans, Dick, Lewallen, & Jeffrey, 2004; Newby, Brodribb, Ware, & Davies, 2014; Ryser, 2004). Of note, the BAPT includes questions designed to determine social and professional support (Janke, 1994). Herndon found that the constructs of the theory of planned behavior significantly predicted the probability of breastfeeding intention and initiation in this rural population (2014). Not surprisingly, confidence and self-efficacy were high predictors of breastfeeding intent and initiation for the adolescent mothers (Herndon, 2014).

Social support measuring the views of others (subjective norm) was also found to be predictive of intention and initiation. This finding was unlike the study by Bowman (2014), but similar to other studies (Meedya, et al., 2010, Wambach & Koehn, 2004). Interestingly, the created instrument, the Breastfeeding Knowledge Scale, was predictive of breastfeeding initiation in this sample (Herndon, 2014). The instrument is potentially one that, with further testing and validation, may be employed for future research. The author suggested the use of this instrument as an educational tool to assess breastfeeding knowledge in preparation for education offered to adolescent mothers to promote breastfeeding. Promotion of breastfeeding supported through both formal and informal learning was identified by Herndon as being necessary to

influence increased breastfeeding rates in this young, at-risk population of rural mothers (2014). Limitations to this study include its lack of generalizability. However, the population studied did in fact have similar results to other adolescent groups (Meedya, et al., 2010, Wambach & Koehn, 2004). The author did not consider the untested Breastfeeding Knowledge Scale to be a limitation.

One final study conducted by Ismail, Muda, and Backer (2014) used the theory of planned behavior to help explain the role of beliefs in the intention of women to exclusively breastfeed. The study was conducted in Malaysia where breastfeeding promotion is employed to narrow the disparity between initiation of breastfeeding and exclusive breastfeeding with 94.7% of women reporting having 'ever breastfed' their infants but only 14.5% practicing exclusive breastfeeding when the infant was age six months (Suleiman, & Abdul Moin, 2015). The sample was selected from pregnant women in both rural and urban areas with 57.6% reporting they did not work and 62.9% having delivered and breastfed previous children (Ismail, Muda, & Bakar, 2014). Previous research has been conducted showing an increased risk of failure to initiate breastfeeding when the mother is experiencing motherhood for the first time (Bai et al., 2009: Bai et al., 2011; Chertok, et al., 2011: Flower et al., 2007). While the combined measures of the constructs (behavioral beliefs, injunctive normative beliefs, descriptive normative beliefs, and perceived control) were all significantly correlated with intention, only injunctive normative belief and behavioral belief were significant after regression analysis (Ismail et al., 2014). Although the participants reported that they understood the benefits for the infant as well as cost savings of exclusive breastfeeding, the intent to do so was hampered by the belief that exclusive breastfeeding would make separation from the infant more difficult (Ismail et al., 2014). The authors identified the need to provide education to the mothers that described how they could

continue to practice exclusive breastfeeding even though separated from their infants (Ismail et al., 2014) but did not suggest what that education would entail.

In addition to personal beliefs, outside influences impacted the mothers' decision to practice exclusive breastfeeding (Ismail et al., 2014). Injunctive normative belief was described as the participants' belief that their referents (mother, husband, nurses and mother-in-law) would or would not be supportive of their choice to practice exclusive breastfeeding (Ismail et al., 2014). The support of the family was found to be important in this study – the author suggested that future breastfeeding promotion be directed not only towards the mothers, but also toward the spouse and grandmothers (Ismail et al., 2014). Hospital nurses were found to be highly respected, and the belief that the nurse did not support exclusive breastfeeding influenced the mothers' choice not to do so (Ismail et al., 2014). This belief supported the premise that nurses must be educated to provide consistent and current education (Baby-Friendly. USA, 2012).

The belief that the participant would not have enough milk to feed her infant was another concern that negatively impacted the mothers' decision to exclusively breastfeed (Ismail et al., 2014). In this population, the introduction of mixed feeding (both formula and breastmilk) as well as water supplements was noted. This piece of cultural influence combined with the respondents' intention to only breastfeed their child for the first 14 weeks of life is important, as it is one that is repeated later in this literature review. Moreover, the early introduction of non-breastmilk substances was often a barrier to exclusive breastfeeding (Arts et al., 2011; Gewa & Chepkenboi, 2016; Helps & Barclay, 2016; Thet et al., 2016) and was noted in many of the studies included in this report.

Social cognitive theory. Social cognitive theory is a framework that can be used for designing, implementing, and evaluating programs intended to promote health changes (Bandura, 1997). Concepts of the social cognitive theory include self-efficacy and reciprocal

determinism described as the interaction of the person, the behavior, and the environment in which the behavior is performed (Bandura, 2002). Self-efficacy describes the individual's belief that he or she can complete or achieve a goal (Bandura, 2002). Environment is defined in this study as the factors that can affect a person's behavior, including personal and social influences (Bandura, 2002). The premise of the social cognitive theory is that direct observation of modeled behavior is learned, and the reproduction of the observed behavior is influenced by the interaction of the three determinants (Bandura, 2002).

A researcher conducting a dissertation study in Canada employed social cognitive theory to determine predictors of women's choices in breastfeeding initiation, and breastfeeding exclusivity until her child was age six months (Colledge, 2011). The author categorized the predictors of exclusive breastfeeding by one of the three social cognitive theory concepts to identify the impact each had on breastfeeding initiation and exclusive breastfeeding until her child was age six months (Colledge, 2011). The predictor variables were identified through a literature review. Independent predictors for exclusive breastfeeding were: adequate information received about formula feeding/pacifier use; contact made by a health care provider after the birth; marital status; province of birth; mother's return to work; maternal smoking; timing until first breastfeeding; maternal breast pain; maternal age; and pre-pregnancy body mass index (Colledge, 2011). These findings aligned with previously reported research of factors predicating initiation of breastfeeding (Flower et al., 2008; Kehler, Chaput & Tough, 2009; Meedya, Fahy & Kable, 2010; Santo de Oliveira & Giugliani, 2007; Scott, Binns, Oddy & Graham, 2015). The sample was conducted in both urban and rural locations throughout Canada and the data suggested that as the size of the town or city increased, the rate of breastfeeding initiation also increased (OR, 1.11; CI95, 1.01 to 1.21) (Colledge, 2011). Neither rural nor urban designation was predicative of exclusive breastfeeding until a child was age six months. Conclusions from

this study supported the need for further research and interventions to promote exclusive breastfeeding in Canada (Colledge, 2011). Although 90.9% of the sample initiated breastfeeding, only 16.9% exclusively breastfed until the child was age six months (Colledge, 2011).

Limitations identified by the author involved the sample, specifically the exclusion of Aboriginal women living on reservations, the exclusion of multiparous mothers, and a lower limit on the age category. Unfortunately, demographic data for the sample was not included in the publication, hampering the reader's understanding of the characteristics that may have impacted the findings. Another limitation noted was the potential for recall bias, as the surveys were conducted up to 14 months postpartum.

Empirical Studies

A number of qualitative studies were found, with the majority of researchers focusing on the impact of culture and social support on breastfeeding and exclusive breastfeeding. A larger number of quantitative studies were located in which the researchers explored factors that influenced or predicted breastfeeding intention and exclusive breastfeeding in different populations, geographical regions, and sociodemographic characteristics. This included four studies in which researchers conducted secondary analysis of large national and regional data collections, and one study in which the researchers used mixed method research. For the purpose of this review, the mixed method studies were divided into quantitative and qualitative results.

Qualitative Studies

Qualitative studies were conducted to determine influences and characteristics of the breastfeeding experience that personalized and presented the data to the researcher in a more meaningful way. Most of the qualitative researchers found that culture, family, and community influenced breastfeeding success.

Culture and the decision-making process. There are multiple factors that guide a new mother's decision regarding the method of infant nutrition. The advice offered by family and friends can provide positive or negative influences. It is beneficial for a new mother to receive a recommendation to breastfeed from a trusted source who has herself breastfed. This is particularly true if the recommendation is from the woman's mother.

However, a report of a negative experience from a trusted source may influence a new mother to not breastfeed. The opinion of the father of the infant and of the grandmothers have been noted to be strong, independent predictors of maternal intention to breastfeed (Bentley et al., 1999). Intention to breastfeed was strongly related to initiation (Bentley et al., 1999).

The hierarchy of family structure in some cultures is very distinctive. The following studies examined how cultural beliefs influence breastfeeding decisions while capturing the level of family influence.

A study by Arts et al. (2011) was conducted in Mozambique where only 37% of infants are exclusively breastfed (WHO, 2015). To inform the development of a national strategy to promote exclusive breastfeeding, the study was conducted in both urban and rural locations and participants included mothers, fathers, and grandmothers (both maternal and paternal) and maternal child nurses (Arts et al., 2011). There was a high prevalence of human immunodeficiency virus (HIV) infection (13.1%) in women in Mozambique; thus, mothers receive mixed messages regarding breastfeeding, including feeding with formula and not breastfeeding at all (WHO, 2015). Using a qualitative approach, participants in focus groups comprised of similar participants (mothers, fathers, grandmothers, or maternal child nurses) were guided through a discussion using semi-structured questions (Arts, et al., 2011). The questions stimulated responses to the issues related to initiation of breastfeeding, available support for breastfeeding decision-making, introduction of non-breastmilk substances prior to age six

months, and knowledge and understanding of breastfeeding by HIV positive mothers (Arts et al., 2011).

Arts and colleagues (2011) found that decision-making choices for breastfeeding included advice and support from the grandmothers and fathers, who generally advocated breastfeeding. All participants acknowledged that breastmilk as the first food is important although there was often a delay in putting the infant to breast as well as some debate concerning colostrum as breastmilk as focus group participants believed that this “first milk” was not good for the infant (Arts et al., 2011). Many of the mothers had heard the recommendation for exclusive breastfeeding through age six months (Arts et al., 2011). Arts and colleagues indicated that there was less support from mothers-in-law and fathers for breastfeeding (Arts et al., 2011).

Indeed, although the practice of breastfeeding was commonly agreed upon, participants frequently mentioned non-breastmilk substances introduced before the infant reached the age of six months (Arts et al., 2011). Common non-breastmilk substances included water, traditional medicines, and porridges before age six months (Arts et al., 2011). Mothers had difficulty in refusing to give traditional medicines when suggested by family members, especially when they themselves had received the medications during their own childhood (Arts et al., 2011). The introduction of porridges prior to six months was implemented, as the parents and family support often did not believe that breastmilk was sufficient to nurture the infant (Arts et al., 2011). An infant crying and not sleeping at night was seen as evidence of the lack of nutrients from breastmilk and resulted in semi-solid foods such as porridge to “fill them up” (Arts et al., 2011).

Some inconsistent information supporting exclusive breastfeeding was offered by hospital nurses, with some agreeing with traditional views and others giving advice that was not evidence-based (Arts et al., 2011). Insufficient support from health care professionals, especially when the mother was experiencing difficulties, impacted the maternal decision to continue with

exclusive breastfeeding (Arts et al., 2011). Common problems that were reported are similar to others cited in literature, including perceived lack of milk supply and pain or nipple problems (Gatti, 2008; Soltani, Dickinson, Kalk, & Payne, 2008). Nurses reported that education needed to be offered to the families and evidence presented to the community to follow the current, evidence-based advice rather than the traditional advice (such as offering porridge in the first six months of life, supplementing with formula etc.); however, the issue of non-evidence-based and inconsistent advice was reported by the nurses themselves (Arts et al., 2011).

Regarding the mothers who were HIV positive, there was a lack of understanding regarding exclusive breastfeeding by all participants, including the maternal child nurses. The concept of exclusive breastfeeding was not known to all of the maternal child nurses (Arts et al., 2011). Arts et al. (2011) also reported that mothers breastfed their infants not for the maternal or infant benefits received or from any breastfeeding promotion, but because of a common belief that mothers who do not breastfeed are ill (including having HIV), dislike their children, or are sorcerers. The authors concluded that implementation of a comprehensive educational program was needed. Based on this study, the introduction of community resources is required, as is the education of the family to support the exclusive breastfeeding effort.

Joshi, Trout, Aguirre, and Wilhelm (2016) reported similar findings in rural Nebraska during a study with a population of Hispanic women. Nebraska has a similar exclusive breastfeeding rate for new mothers' breastfeeding their child to age six months as the national mean (U.S. 22.3% vs. Nebraska 22.6% [CDC, 2016a]). The sample was comprised of women, with more than half between the ages of 19 and 24 years old (58%), married (75%), and having earned a high school degree or higher (58%) (Joshi, Trout, Aguirre, & Wilhelm, 2016). Most of the women had not taken prenatal breastfeeding classes (83%) and the main source of breastfeeding information was received from family (83%), followed by health care

professionals and friends (Joshi et al., 2016). The decision to breastfeed was most commonly made during pregnancy (50%), and, as in the previous study, an understanding of the benefits of breastfeeding for the infant influenced a woman's decision to breastfeed (Joshi et al., 2013). Perceived advantages of breastfeeding included financial savings as well as infant health benefits, yet less than half of the participants (42%) realized the benefits for the mother's health (Joshi et al., 2013).

Factors that were reported to hinder breastfeeding efforts were ones found in other studies, including perception of insufficient milk supply, pain with breastfeeding, and support from family (Dennis, Jackson, & Watson, 2014). Family, especially the participants' mothers, was reported to be a major factor in breastfeeding success. However, mothers of women who were considering breastfeeding often obstructed exclusive breastfeeding (Joshi et al., 2013). The perception of insufficient milk supply or that the infant was not "getting enough" resulted in the early introduction of non-breastmilk substances such as herbal teas. In addition, fruits and cereal were introduced by some participants as early as age three months (Joshi et al., 2013).

Another group of researchers explored the breastfeeding experiences of Hispanic immigrants living in rural areas of Washington (Hohl, Thompson, Escareno, & Dugan (2016). The sample included 95% having a high school degree or lower, 90% with a household income of \$50,000 or less, and 100% enrollment in WIC (Flower et al., 2007; Gaston, 2001; Sparks, 2010; Wiener & Wiener, 2011). Similar to findings by Gewa and Chepkemboi (2016), image was a concern among the younger participants of the study; perceived physical body changes became a barrier to breastfeeding (Hohl et al., 2016). Hohl, Thompson, Escareno, and Dugan (2016) also discovered that while breastfeeding is considered a Hispanic cultural expectation, the expectation changed once acculturated in the U.S. to use formula for infant feedings. The participants' belief that they were not supported in the breastfeeding effort, including feelings of

embarrassment experienced during public breastfeeding, also impacted long term and exclusive breastfeeding (Hohl et al., 2016). Support and breastfeeding education prior to immigrating to the U.S. was primarily received from the family, often with generations of experience. Yet separated from family, the difficulties encountered were found to be stressful and influenced the participants' choice to use mixed feedings or discontinue breastfeeding completely (Hohl, et al., 2016).

With those factors acknowledged, it is important to note that resources were available to the sample with all of the participants enrolled in WIC (Hohl, et al., 2016). Participants reported receiving education regarding the healthy benefits of breastfeeding for both mother and infant; however, they also received free formula, sending mixed messages to the mothers (Hohl, et al., 2016). Enrollment in WIC has previously been identified as a negative predictor of breastfeeding to such an extent that the WIC program revamped the women and infant feeding program (Frick, Pugh, & Milligan, 2011; Hildebrand et al., 2014; Whaley et al., 2012). Unfortunately, in this study evidence of the changes in WIC policy were not seen. Limitations of the study included a small sample size, low level of education for participants, and concerns about generalizability; nevertheless, the report was significant to many populations of immigrants living in rural communities in the U.S. (Hohl, et al., 2016). This research also illustrated the role of culture in the development and implementation of interventions and policies to increase breastfeeding and promote exclusive breastfeeding in this vulnerable group.

Helps and Barclay (2015) also identified the loss of generational support as a barrier to breastfeeding success using a qualitative study design. Helps and Barclay (2015) conducted a study using an indigenous research method, "which are place-based methods of gathering and disseminating data with attention to the paradigm (world view), and cultural values of the researcher, and the community where the research is taking place" (Kovach, 2009, p. 5). Helps

and Barclay (2015) used this method to better understand why Aboriginal women in rural Australia were less likely to breastfeed than women in urban Australia. Like populations living in rural America, the Aboriginal communities in rural Australia experience higher morbidity and increased rates of chronic disease (Bennett, Lopes, Spencer & van Hecke, 2013; Helps & Barclay, 2015; Simmons, Anderson & Braun, 2008; Simmons, Wu, Yang, Bush & Crofford, 2014), as well as decreased incidence of breastfeeding (AGDH, 2009; Jacobson et al., 2014; Li et al., 2002; Sparks, 2010; Wiener & Wiener, 2011). Helps and Barclay (2015) also reported the loss of knowledge and support from previous generations of women. Many women had been separated from their mothers and their infants. The culture experienced segregation and community dislocation. The participants reported a lack of understanding of the benefits of breastfeeding for the infant or mother, and knew little of the experience of breastfeeding (Helps & Barclay, 2015). In the new mothers who did initiate the breastfeeding, the perception of the absence of community support was reported, and all participants voiced an unwillingness to breastfeed in public (Helps & Barclay, 2015).

One limitation of the Helps and Barclay study was the small number of participants (N=8). They did report that saturation was achieved and that they satisfied the conditions for qualitative research method (Helps & Barclay, 2015). Of the participants, all initiated breastfeeding after delivery; however, none continued to breastfeed for eight weeks (Helps & Barclay, 2015). The authors wrote that significant antenatal and prenatal support was provided, yet the impact of cultural norms heavily influenced the decision to discontinue breastfeeding (Helps & Barclay, 2015). The implications of this failure to breastfeed reiterated the need to include family and significant others in the education process, as well as to consider the ethnic norms of the participants in the development of culturally specific educational interventions.

Interventions to promote exclusive breastfeeding. A community needs assessment can be employed to discover the effectiveness of available resources and to uncover services that are lacking. Goodman, Majee, Olsberg, and Jefferson (2016) conducted a needs assessment with the goal of identifying breastfeeding barriers and supports within a rural community in Missouri. The respondents were primarily Caucasian (60%), high school graduates (100%), had completed some college (60%), and were married (60%) (Goodman, Majee, Olsberg & Jefferson, 2016). All participants were enrolled in WIC. The demographics for the community participants did not fully align with the community characteristics, which reported as comprising of an 86% non-Hispanic white population, with 15.9% having a baccalaureate degree or higher (Goodman et al., 2016). Finally, the community level of WIC participation (68.2%), while still considerable, was lower than the participants' (100%) (Goodman et al., 2016).

Ten mothers were recruited to participate in the study as they were currently breastfeeding or had recently breastfed their infant and they were enrolled in WIC (Goodman et al., 2016). The assessment also recruited a group of ten health care professionals. The health care professional (HCP) group were non-Hispanic white, educated beyond a baccalaureate degree, employed in their position for five or more years, and lived in the community (Goodman et al., 2016). The mothers group reported that there existed insufficient hospital and community support. Three themes emerged: (a) lack of realistic information about the breastfeeding experience; (b) breastfeeding time constraints; and (c) lack of continued support (Goodman et al., 2016). They also reported inconsistent education from the HCPs (Goodman et al., 2016). The lack of lactation support included mothers who were unaware of existing community services or how to access them. The mothers who did access these services reported learning of them through outside sources (Goodman et al., 2016). Identification of the lack of coordination of community services and inconsistency in lactation education spurred needed improvements

within the county services and local hospital to promote breastfeeding and exclusive breastfeeding. The HCP group also reported an awareness of the “gaps” in lactation support (Goodman et al., 2016).

Once the needs of the community have been identified, interventions to address the findings can be implemented. The key to the success for many interventions that promote change is communication. Nor et al. (2011), representing the PROMISE EBF Study Group, conducted an intervention using peer counselling to promote exclusive breastfeeding in rural South Africa. The role of the peer counselor was to promote adherence to the participants’ chosen method of feeding, either exclusive breastfeeding or exclusive formula feeding (EFF). Participants were visited by peer counselors five times during the study, once before giving birth and four times following delivery (Nor et al., 2011). Seventeen mothers participated in the intervention, with all living in rural areas considered to be impoverished; seven (41.18 %) had been diagnosed with HIV, nine (52.9 %) tested negative for HIV, and one (5.9 %) had an unknown HIV status (Nor et al., 2011).

The presence of HIV impacts maternal infant feeding choices. Current WHO guidelines for mothers with HIV instruct the mother to take antiretroviral medication while exclusively breastfeeding their infant to provide breastfeeding benefits with little risk of HIV transmission (WHO, 2016b). HIV positive mothers who are unable to receive antiretroviral treatment are also encouraged to exclusively breastfeed, as it reduces the risk of HIV transmission by nearly half while also offering the infant protection from diarrhea, pneumonia, and malnutrition (WHO, 2016c). As reported by Joshi et al. (2014), participants of this study reported that they received mixed messages about breastfeeding and HIV in addition to inconsistent education (Nor et al., 2011). Some of the HIV positive mothers were told they would receive free formula to feed their infant but did not receive it in a timely manner or at all (Nor et al., 2011). New mothers had to

decide to breastfeed their infant or to allot finances to the purchase of formula. Some participants used mixed feeding methods, starting with breastfeeding and then switching to formula when the promised free formula became available (Nor et al., 2011). The cost of formula was cited as one factor for the early introduction of solid food, with other reasons cited as the perception of poor milk supply and cultural traditions (Nor et al., 2011).

While breastfeeding is considered to be a traditional form of infant feeding in South Africa, the practice of exclusive breastfeeding is not one that is easily accepted due to the cultural beliefs of early introduction of alternative foods. The exclusive breastfeeding rate in South Africa at age six months is only 8% (United Nations Children Fund [UNICEF], 2012). The practice of giving water and traditional medicines in early infancy and the belief that breastmilk does not satisfy the infant are cultural ideations that persist despite ongoing education from health care professionals and peer counselors (Nor et al., 2011). In fact, participants reported that they rejected the HCPs advice when it conflicted with the mother's beliefs (Nor et al., 2011). Further, education received by the mothers from the nurses was commonly misunderstood. Some mothers did not comprehend that exclusive breastfeeding meant that breastfeeding was for all nutritional intake rather than one feeding episode; some did not understand that they should not mix two types of milk (breast and formula); and some did not understand that solid food, water, or traditional medicines were not to be used despite commitments to exclusive breastfeeding (Nor et al., 2011). This was another example of cultural norms impacting education. While a peer counselor from the same culture would have more influence, often the educational message was misunderstood or not believed by the participants. This implied that the education must begin earlier and be consistent. The failure to promote the updated policy of exclusive breastfeeding to all participants was noted. However, the message of exclusive breastfeeding for mothers with HIV can be intimidating to both mothers and HCPs.

Thet, Khaing, Diamond-Smith, Sudhinaraset, Oo, and Aung (2016) conducted a study in Myanmar (formerly known as Burma) located in Southeast Asia. In this study, the researchers used qualitative inquiry to identify the barriers to exclusive breastfeeding in both rural and urban regions. Not surprisingly, they found similar themes as Arts et al. (2011). The people who provided maternal support in the decision-making process to exclusively breastfeed were grandmothers (either maternal mother or paternal mother-in-law) and fathers (Thet, Khaing, Diamond-Smith, Sudhinaraset, Oo & Aung, 2016). Mothers and grandmothers all reported an understanding of the benefits of exclusive breastfeeding; however, the fathers were less informed (Thet et al., 2016). Knowledge was obtained by multiple sources including the health care professionals who were highly regarded (Thet et al., 2016). Regardless of the reported knowledge, there existed a divide between knowledge and practice (Thet et al., 2016). For example, non-breastmilk supplements (formula, condensed milk, emulsified milk, traditional medicines) were offered when the mother perceived a lack of milk supply (Thet et al., 2016). The introduction of solid food prior to six months was reported, particularly a rice cereal called Gazi (Thet et al., 2016).

One factor found by Thet et al. (2016) and not reported by Arts et al. (2011) was the impact of maternal employment on the mothers' ability to maintain exclusive breastfeeding. Outside employment was the most reported barrier to exclusive breastfeeding, with 58.33 % of the mothers in this study employed outside of the home (Thet et al., 2016). This is a common problem in the U.S. (Flower et al., 2007) and was also discussed in the Surgeon General's Call to Action (2011). Many Northern European countries maintain higher levels of exclusive breastfeeding related to government support for the practice, though this is not the case in many countries including the U.S. (UNICEF, 2015). The health of women and children should drive

governmental policy. Depending on the culture of the country, however, policy will be difficult to change.

Another common factor in exclusive breastfeeding cessation was the report of difficulty with breastfeeding (sore nipples or slow milk production) and maternal illness which impacted not only exclusive breastfeeding but also early initiation of breastfeeding (Thet et al., 2016). In some cases, respondents spoke of feeding infants “sweet milk” while waiting for the new mother’s milk to come in rather than relying on colostrum to sustain the infant. Unfortunately, complaints of pain with breastfeeding or perceived insufficient milk supply are also common factors reported in breastfeeding and exclusive breastfeeding cessation (Brand et al., 2011; Flower et al., 2007).

Quantitative studies.

Quantitative research has contributed to the understanding of the sociodemographic and socio-environmental factors that impact suboptimal breastfeeding. Unfortunately, the focus on survey-based research has provided little insight into the decision-making processes that are employed by women who breastfeed and do not include an evaluation of exclusive breastfeeding. The impact of culture on breastfeeding outcomes continued to be a consistent theme guiding quantitative inquiry. A single study conducted exploring the impact of advertisements promoting formula on breastfeeding is included in this review.

Cultural beliefs and breastfeeding decisions. There are multiple influences that guide a mother’s decision regarding the method of infant nutrition. Advice offered by family and friends can produce both positive and negative influences. Getting recommendations to breastfeed from a source who has personal experience in the practice, such as from one’s mother, is extremely beneficial if the experience went well; however, if the trusted source had a negative experience, the advice would often be negative. The opinion of the father of the infant and the grandmothers

have been noted to be strong, independent predictors of maternal intention to breastfeed (Bentley et al., 1999). Intention was strongly related to initiation (Bentley et al., 1999). The hierarchy of family structure in some cultures is very distinctive. The following studies examined the influence cultural beliefs have in relation to breastfeeding decisions.

Gewa and Chepkemboi (2016) conducted a study in rural Kenya similar to the one by Nor et al (2011). The authors examined mothers' knowledge of breastfeeding recommendations, understanding of the health outcomes that result from exclusive breastfeeding, the mothers' perception of support to practice exclusive breastfeeding, and the impact of each on the cessation of exclusive breastfeeding (Gewa & Chepkemboi, 2016). In contrast to the findings from the previous study by Arts et al. (2011), over 68 % of infants age less than six months were exclusively breastfeeding during this study. Of the new mothers included in this study, 20% reported a belief in necessary caloric supplements for their infants with other liquids or semi-solid foods (Gewa & Chepkemboi, 2016). This was generally considered to be part of a cultural or social norm expectation. Similar foods described by Arts et al. (2011) were introduced with approximately 16 % receiving liquids (water, sweet water) within the first three days of life (Gewa & Chepkemboi, 2016). The belief that breastmilk was insufficient to satisfy the infant was another common theme with continued introduction of water, liquids, traditional medicine, and porridge to provide nourishment, infant satisfaction, and prevent illness.

Questions on the surveys involved perceived support from fathers (80%) and grandmothers and mothers (76%) (Gewa & Chepkemboi, 2016). However, the investigation did not include the source of breastfeeding information nor if a lack of support had a negative influence. The inclusion of normative supports for promotion of exclusive breastfeeding in African populations was identified (Aubel, 2011; Ismail et al., 2014), as well as the need for education for all maternal supports promoting exclusive breastfeeding.

One unique influence on exclusive breastfeeding was the perception of appearance, with maternal appearance noted to be a predictor of cessation of exclusive breastfeeding (Gewa & Chepkemboi, 2016). A fuller figure is considered to be more acceptable in the African culture, and participants believed that practicing exclusive breastfeeding would cause them to be thin and develop sagging breasts (Gewa & Chepkemboi, 2016). Breastfeeding does indeed contribute to the return to pre-pregnancy weight and mothers who are malnourished or have a low body mass index are more likely to lose weight and potentially develop sagging breasts over time (Roth, 2006). Finally, mothers in the study reported being embarrassed to breastfeed in public. There was an 81% higher risk of ceasing exclusive breastfeeding prior to age six months when the mothers felt embarrassment (Gewa & Chepkemboi, 2016). This is a common problem in the U.S. also and was addressed by the Surgeon General (2011) in a call to action for breastfeeding support. Many Northern European and North American countries are attempting to educate the public and increase an awareness of the benefits of exclusive breastfeeding, which may necessitate public breastfeeding; but in some countries, such as Africa and Asia, public breastfeeding is discouraged or even considered a criminal offense (Komodiki et al., 2014). The issue of exclusive breastfeeding in public is significant for the population in this study, yet little focus was turned to the problem by the authors.

A study by Shroff et al. (2011) was another that explored cultural influences on the decision to breastfeed in a rural Indian population. The demographics of this study comprised a large number of mothers demonstrating the extremes of Indian culture including caste status (Shroff et al., 2011). Regardless of caste status, more than half of the participants reported living in an extended family home, having completed primary school education or less (71%), and were employed outside of the home (77.4%) (Shroff et al., 2011). The practice of breastfeeding is considered to be a traditional form of infant nutrition in India, with exclusive breastfeeding

occurring in 46.3% of infants under five months of age (International Institute for Population Sciences (IIPS) & Macro International, 2007).

Shroff et al. (2011) reported that the level of financial autonomy was a factor in the maternal decision to practice exclusive breastfeeding, with mothers of higher financial autonomy more likely to breastfeed. Financial autonomy was defined as the level of participation in the family financial decision-making and ability to make financial decisions independently (Shroff et al., 2011). In addition to increased exclusive breastfeeding rates, the infants of mothers who had higher participation in decision-making within the household were less underweight and less wasted (emaciated and weak) (Shroff et al., 2011). The issue of women's status was previously proposed to be a contributing factor to the poor health outcomes and growth of infants in India (Ramalingaswami, Jonsson, and Rohde, 1996). This finding suggested that without the ability to participate and make decisions, a woman is unable to adequately care for her infant even if she has knowledge and skills (Ramalingaswami et al., 1996). Shroff et al. (2011) considered maternal autonomy, financial independence, mobility autonomy, mobility, child care decisions, and domestic violence to be additional factors that influence the mothers' decision to practice exclusive breastfeeding, thus impacting the health and wellbeing of their infants. A factor analysis was conducted, with the only significant predictor of exclusive breastfeeding in this population as financial independence (Shroff et al., 2011). In the adjusted model, mothers who scored higher on financial autonomy were 1.26 times more likely to exclusively breastfeed (Shroff et al., 2011). While there was no association between infant growth and health and maternal financial autonomy, an association was found between infant growth and health and the other factors (Shroff et al., 2011). Maternal level of education did not correlate with any of the identified domains of autonomy including domestic violence (Shroff et al., 2011).

The factor of domestic violence was included in the analysis but was not discussed beyond an explanation of the questions that defined the factor. While it was not associated with exclusive breastfeeding, it seemed more important to realize that domestic violence transpires often enough in this society that the authors included it in the survey. The survey questions were labeled “non-acceptance of domestic violence” and began with a statement “Sometimes a wife can do something that bothers her husband. Please tell me if you think that a husband is justified in beating his wife in the following situations” (Shroff et al., 2011). The situations included showing disrespect, neglect of household or children, and poor food preparation. While exclusive breastfeeding is being promoted in this population, the impact of culture on a mother’s ability to choose to practice exclusive breastfeeding is problematic. Educational programs to promote exclusive breastfeeding should therefore be focused not only on providing knowledge to the mother but also to the father and his parents.

Joshi et al. (2014) conducted a mixed method study in rural Nebraska, U.S. which had similar findings to non-North American countries. The qualitative findings are presented earlier in this review, though the quantitative portion of the study was aimed at identifying breastfeeding initiation and breastfeeding continuation in rural Hispanic mothers (Joshi et al., 2014). A small portion of the study focused on the quantitative results other than those from the instruments used. The authors employed the BSES-SF (Dennis, 2003) to identify behaviors that promoted breastfeeding initiation and continuation (Joshi et al., 2014). A second tool, the BAPT (Janke, 1994), was utilized to determine a woman’s intention and attitudes towards breastfeeding as well as to identify women at risk for terminating breastfeeding (Joshi et al., 2014). A third of the sample had low scores on the BSES-SF, predicting risk for early cessation of breastfeeding, which is also representative of the number of mothers who did not breastfeed for six months (41%) (Joshi et al., 2014). While the BAPT results for the sample indicated an above average

intention for breastfeeding (mean=31, SD=4), it did not discriminate between exclusive breastfeeding vs. mixed feeding (Joshi et al., 2014). Mixed feeding and introduction of early fluids and foods have been reported in other studies in this review, and whether a cultural or personal decision, impacts a mother's ability to practice exclusive breastfeeding (Arts, et al., 2011; Gewa, & Chepkenboi, 2016; Helps, & Barclay, 2016; Thet et al., 2016). Joshi et al. (2014) identified the need for health professionals to incorporate educational opportunities tailored to behavioral and cultural influences that impact breastfeeding in rural Hispanic women. This can certainly be generalized to other populations also, as evidenced in this literature review.

Formula advertisements and breastfeeding decisions. The decision to breastfeed is often made before a woman becomes pregnant or during pregnancy (Roll, & Cheater, 2016). External factors that impact maternal decision-making include family, friends, health care professionals, and the media. In a study by Sobel et al. (2011) the impact of formula advertisements was explored in a Filipino population. In the Philippines, the average length of exclusive breastfeeding is less than one month, while the duration of predominant breastfeeding is 2.7 months (National Statistics Office [NSO], 2008). The trend for breastfeeding is different in the Philippines, with underprivileged and uneducated mothers living in rural areas found to be more likely to breastfeed compared to their counterparts (NSO, 2008). Sobel et al. (2011) included all demographic areas in their study, and found that more than half of the participants (59.1%) recalled having viewed some type of media advertisement (television, radio, magazine, newspaper) promoting formula for infant nutrition (AOR 2.0; CI 1.2, 3.4). Television advertisements were the most recalled type of media (AOR 2.1; CI 1.2-3.8) (Sobel et al., 2011). In this study, 41.1% of mothers reported exclusive use of formula to feed their infant (Sobel et al., 2011). Mixed feeding (feeding with both breastmilk and formula) was reported; respondents who employed this practice were 6.4 (CI 1.8=23.1) times more likely to stop breastfeeding

before 12 months (Sobel et al., 2011). Unfortunately, recalling that “breastmilk is best” was neither associated with formula use nor breastfeeding ($p > 0.05$) (Sobel et al., 2011).

In addition to awareness of formula feeding through the media, the practice was reported to be recommended by physicians with a subsequent increase in participants' formula use (AOR 3.7; CI 1.7-8.2) (Sobel et al., 2011). Recommendations by nurse or midwife were not related to increased formula feeding; however, recommendation by the respondent's mother or her friend was a significant predictor of use (AOR 2.7; CI 1.3-5.5) (Sobel et al., 2011). The disturbing practice of physician promotion of formula rather than breastfeeding was a sizeable barrier and one that demonstrated lack of physician education regarding breastfeeding benefits and of WHO (2016a) breastfeeding goals. Additionally, family support influenced the decision to breastfeed. The value of physician advice was reported to outweigh opposing advice, however (Sobel et al., 2011). This study emphasized the need for consistent education for the entire population, beginning with the HCPs.

The respondents were reported to live in areas that were poor or poverty stricken, with fewer than half of the participants having completed high school (Sobel et al., 2011). Based on the report of Filipino demographics from the National Statistics Office (2008), these findings were not remarkable despite the use of formula which in many cases incurred additional financial burden by already struggling families. In keeping with the NSO statistics, the use of formula increased with level of education and decreasing poverty level (Sobel et al., 2011), rather than the opposite effect which is noted in the U.S. Sobel et al. (2011) focused their research on the response to media advertisements for formula on breastfeeding rates. No information was identified that incorporated the early introduction of complementary foods to an infant's diet yet it is a common practice in the Filipino culture (NSO, 2008). The National Statistics Office (2008) reported the practice of offering milk other than breastmilk or formula (fresh, tinned, and

powered milk) during the first month of life, and by 4-5 months, 30% of Filipino infants are introduced to solid or semisolid food. Moreover, the cultural practice of early non-breastmilk substances is noted in other ethnic groups including the African population (Nor et al., 2011), Kenya (Gewa, & Chepkenboi, 2016). Thus, interventions aimed at impacting breastfeeding and exclusive breastfeeding in populations in rural communities should integrate ethnic and cultural practices into the educational process to help promote success.

Interventions to promote exclusive breastfeeding. An intervention to promote breastfeeding through age six months that was impacted by the maternal culture was conducted by Wilhelm, Aguirre, Koehler, and Rodehorst (2015). This intervention employed the motivational interviewing technique which promotes behavioral change by fostering the participants' intrinsic motivation for goal attainment, which in this case was breastfeeding (Channon, Smith, Gregory, 2003). A rural cohort of Mexican-American mothers was introduced to the technique to promote breastfeeding (Wilhelm, Aguirre, Koehler, & Rodehorst, 2015). Participants were divided randomly into two groups, with one receiving motivational interviewing during home visits, and a group who received attention but without motivational interviewing (Wilhelm et al., 2015). The intervention was conducted during home visits to the new mother three times: on day three, week two, and week six following delivery (Wilhelm et al., 2015). These times points were specifically chosen since they reflect particularly stressful phases during the postpartum period: day three is approximately when a mother's milk would be coming in; during week two she may begin to perceive a low milk supply; and week six is typically when many mothers are completing their maternity leave and returning to work (Wilhelm et al., 2015). A final contact was completed via phone at six months to investigate whether the mother had discontinued breastfeeding previously (Wilhelm et al., 2015). The demographics for all participants indicated that all self-identified as Mexican-American (100%);

more than half of the participants were young (58% age 20-25); single (66%); had not completed high school (68%); and declared a household income of less than \$20,000 (91%) (Wilhelm et al., 2015). The concept of motivational interviewing, especially the extra attention and support considered to promote continued breastfeeding in the home would suggest successful outcomes. Yet in this case the study was plagued by attrition, resulting in a failure to reach power for statistical analysis, thus limiting the researchers' ability to evaluate the efficacy of the intervention. Between both groups, the attrition (57%) resulted when they ceased breastfeeding and withdrew from the study (Wilhelm et al., 2015). Despite very high scores on intention to breastfeed for six months and breastfeeding self-efficacy, only 22% of each group (5 of 23 intervention group and 6 of 27 control group) were actually still breastfeeding at some level at six months (Wilhelm et al., 2015). Only a slight increase in the total number of days breastfed at any level was noted between the two groups (90 days intervention group [SD=69.7, n=23] vs control group at 82 days [SD=74.7, n=27]) (Wilhelm et al., 2015). Researchers attributed the results to cultural influences impacting recruitment and retention which included a lack of an established relationship by the investigator conducting the home visits with the participants (Wilhelm et al., 2015). This may have influenced the attrition, though as seen in the previous study peer counselors attained from the same community (Nor et al., 2011) were not effective in combating cultural influences. Wilhelm et al. (2016), however, did not examine the impact of culture or traditions on breastfeeding during their study. The inclusion of information on breastfeeding beliefs and social supports specific to Mexican-American women would have enhanced this study, giving more insight into the causes of attrition and cessation of breastfeeding while identifying barriers encountered to exclusive breastfeeding.

This intervention clearly demonstrates that there are normative beliefs that apply to the mothers' choice to breastfeed and to continue breastfeeding during the first six months. These

beliefs may be cultural, regional, or even personal. Moreover, the decision to breastfeed is often not a singular one and many components may influence the mother in her decision.

Characteristics of women who breastfeed. Many studies have been conducted to identify predictors of intention and initiation of breastfeeding (Bai et al., 2009; Bailey & Wright, 2011; Bentley et al., 1999; Chertok et al., 2011; Flower et al., 2007; Heck et al., 2006; Hildebrand et al., 2014; Kachoria & Oza-Frank, 2014; Newby et al., 2014; Roll & Cheater, 2016; Ryser, 2004; Sparks, 2010; Swanson & Power, 2005). Since 1972, the focus has been on initiating breastfeeding, with more recent promotion for exclusive breastfeeding for the first six months inspiring new research to identify whether the same predictors of initiation may also predict exclusive breastfeeding to six months. Unfortunately, there is very limited research that fully explores exclusive breastfeeding to six months.

One study by Coduti, Sowa, Diakakis, and Chen (2015) identified characteristics of mothers who are more likely to practice exclusive breastfeeding in the U.S. The research was conducted in a Midwest medical center; no distinction was made between urban and rural settings (Coduti, Sowa, Diakakis, & Chen, 2015). In this large sample (N=299), 60.8% initiated breastfeeding following the delivery of their infant and 62.1% of those who initiated breastfeeding continued to exclusively breastfeed at one month (Coduti et al., 2015). The initiation rate was lower than the national average (81.1%) (CDC, 2016a). Coduti et al. (2015) reported that their one-month rate was higher than the national exclusive breastfeeding rate at three months, though this is not truly representative since the rates of breastfeeding decrease incrementally over time (CDC, 2016a). Coduti et al. (2015) used the Infant Feeding Practices Survey II (IFPS-II), developed by the CDC (2014c) for a national longitudinal study. The IFPS-II contains questions about infant breastfeeding patterns including the introduction of formula, and other complementary foods and liquids (CDC, 2014c). The IFPS-II (CDC, 2014c) also

contains questions regarding the source of support, type of support, and timing of support received which was used to measure the amount of perceived support from the sample (Coduti et al., 2015). The Iowa Infant Feeding Attitude Scale (Mora, Russell, Dungy, Losch & Dusdieker, 1999) was used to predict breastfeeding duration (Coduti et al., 2015). A hospital practices score was calculated, indicating the number of baby-friendly practices experienced by participants (Coduti et al., 2015). In this sample, the mothers who continued to exclusively breastfeed at one month were largely Caucasian (53.9%); had completed high school or higher (100%); were married (76.3%); and had private insurance (55.3%) (Coduti et al., 2015). Scores on the Iowa Infant Feeding Attitude Scale (Mora et al., 1999) were also significantly higher in mothers who exclusively breastfed compared to mothers who used mixed feedings and formula feedings (Coduti et al., 2015).

Support for breastfeeding was received from the baby's father and both the baby's maternal and paternal grandmothers, with the opinion of the father being ranked highest (Coduti et al., 2015). A finding that differed from other studies (Herndon, 2015; Hohl et al., 2016; Joshi et al., 2014) was the degree that the family's opinion of breastfeeding influenced the decision to breastfeed or practice exclusive breastfeeding. Coduti et al. (2015) found that Hispanic and African-American participants reported that family opinion for breastfeeding choices was less important to them than did the Caucasian and Asian participants (Coduti et al., 2015). The opinion of the health care professional also positively impacted the decision to exclusively breastfeed (Coduti et al., 2015). Baby-friendly practices were assessed to identify which, if any, influenced exclusive breastfeeding with nine out of the Ten Steps to Successful Breastfeeding practices being employed by the staff and facility with the exception of the promotion of pacifiers. More than half of the participants (63.2%) reported receiving pacifiers (Coduti et al., 2015). This number may be less concerning than the authors indicate, however, as non-nutritive

sucking is not contraindicated in formula-fed infants, the rate cited is impacted by the 39.2% of the sample who did not initiate breastfeeding in the hospital.

Limitations of this study include the design, which was a descriptive study, the timing of the first survey (day one post-delivery), and the attrition of participants from the second survey (43.9%). The characteristics of mothers who exclusively breastfeed to one month are similar to known predictors of initiation of breastfeeding found in other studies. Yet the study design limiting the measurement of exclusive breastfeeding to only one month did not fully describe characteristics that would predict exclusive breastfeeding to six months. In the U.S. a mother's routine discharge from postpartum care at six weeks often signals a return to employment (Laughlin, 2011); unfortunately, the return to work may also signal an early end to exclusive breastfeeding (Biagioli, 2003; Ogbuanu, Glover, Probst, Liu & Hussey, 2011).

Participation in the WIC program has been identified as a predictor of failure to initiate breastfeeding, decreased duration of breastfeeding, and lack of understanding of breastfeeding benefits (McCann, Baydar & Williams, 2007; Murimi, Dodge, Pope & Erickson, 2011; Sparks, 2011). As the WIC program is under federal authority, an attempt to promote breastfeeding has resulted in an overhaul of the policies towards breastfeeding support; mothers who breastfed were offered incentives (food vouchers, breast pump, and ongoing support for breastfeeding) (Holmes et al., 2009; Haughton, Gregorio & Perez-Escamilla, 2010). Jacobson et al. (2015) conducted secondary data analysis using the Pregnancy Nutrition Surveillance System data (PNSS) set for women enrolled in the Kansas WIC program in 2011 to compare breastfeeding behaviors in rural versus urban WIC participants. The PNSS, a surveillance project created and administered nationally by the CDC, collects population-specific, state-based data monitoring nutritional status during the course of pregnancy (Missouri Department of Health and Senior Services, n.d).

The significant results that were found included similar predictors of breastfeeding between the rural and urban populations, with some ethnic and health behaviors identified that impacted breastfeeding as well. The majority of the participants were non-Hispanic white, with the rural population experiencing a larger disparity (82.6% non-Hispanic white, 1.1% non-Hispanic black, and 13.1 % Hispanic) compared to their urban counter parts (50.1% non-Hispanic white, 13.4% non-Hispanic black, and 30.6% Hispanic) (Jacobson et al., 2015). Being of Hispanic origin increased the odds of breastfeeding one and one-half times while non-Hispanic black women were least likely to breastfeed in both rural and urban populations (Jacobson et al., 2015). Urban WIC participants were found to be most likely to breastfeed if they were between 18 and 19 years old, had a high school education or higher, were earning more than \$10,000 per year, had enrolled into the WIC program during the first trimester, began prenatal care in the first trimester of pregnancy, did not smoke, and used multi-vitamins (Jacobson et al., 2015). Women in rural areas had similar predictors of breastfeeding initiation with the exception of age, household income, smoking and failure to take multi-vitamins, which reduced the odds of breastfeeding (Jacobson et al., 2014).

While urban and rural women reported similar maternal and infant health characteristics, results from this study supported previous research findings in which women living in rural locations had increased morbidity and chronic illness compared to their urban counterparts (Bennett et al., 2013; Helps & Barclay, 2015; Simmons et al., 2008; Simmons et al., 2014). Women who smoke are also less likely to initiate breastfeeding (Bailey & Wright, 2011; Kendzor et al., 2010), and in this study, women in rural areas were significantly more likely to smoke before, during, and after pregnancy which decreased the odds of breastfeeding (AOR 0.78, CI 0.63–0.97) compared to women in urban areas (AOR 0.61, CI 0.55–0.68) (Jacobson et al., 2015). An underlying purpose of this study was to identify if the WIC changes in policy, staff

training, and participant education increased the breastfeeding rate of WIC participants. The authors concluded that there was indeed noted improvement in breastfeeding initiation in WIC participants in this study compared with earlier WIC participant breastfeeding trends (Holmes et al., 2009; Ryan et al., 2002) with similar reports of breastfeeding from urban (73.8%) and rural (74.5%) participants.

While giving insight into the differences and similarities for breastfeeding in rural and urban WIC populations, the PNSS data source does not include exclusive breastfeeding. Rather, the question presented to the respondent is has the participant “ever breastfed” (CDC, 2016b). Current results from the 2012 IFPS-II included initiation rates for WIC participants at 47.3%, however final reporting indicated exclusive breastfeeding at six months at only 3.3% (CDC, 2014c). The next step for WIC is the promotion of exclusive breastfeeding.

Breastfeeding in urban vs. rural populations. Four studies concerning the differences in breastfeeding in new mothers who lived in rural and urban areas were examined. Lynch, Bethel, Chowdhury, and Moore (2011) explored the impact of ethnicity on breastfeeding in a population of low-income women in North Carolina. Lynch et al. (2011) conducted secondary data analysis using the PNSS in which data were collected about health indicators, prenatal behaviors, birth outcomes, and infant feeding practices (U.S. Department of Health & Human Services, 2003). North Carolina is a diverse state with many different ethnicities living in both rural and urban locations. New mothers in North Carolina have a slightly higher practice of breastfeeding than new mothers nationally (CDC, 2014a; Lynch, Bethel, Chowdhury & Moore, 2011).

Unfortunately, the overall breastfeeding rates are not predictive of breastfeeding for subgroups of new mothers in North Carolina. Low breastfeeding rates were found in many of the ethnic groups, women with low incomes, and women living in rural areas (Reinold, Dalenius, Smith, Brindley & Grummer-Strawn, 2009).

Breastfeeding initiation was measured as a yes/no response to the question of having “ever breastfed” in the survey. The survey was administered at about six weeks postpartum. No questions regarding exclusive breastfeeding were asked. The authors recoded the location variable from seven classifications into four (rural, mixed rural, mixed urban, and urban) to create clearer distinctions between the geographical locations (Lynch et al., 2011). Breastfeeding initiation was found to be higher in urban and mixed-urban areas, compared to mixed-rural and completely rural areas; an increase in initiation by year for each level from rural to urban over a five-year period was noted (Lynch et al., 2011). Breastfeeding initiation increased yearly from 2003 to 2007 for each of the four geographical classifications wherein rural locations experienced less growth overall than urban, mixed-urban, or mixed-rural locations (Lynch et al., 2011). The rise in breastfeeding initiation rates aligns with national rates and Healthy People 2020 goals (HHS, 2012). The results validated the difference in breastfeeding initiation between rural and urban women while also suggesting that the disproportion is increasing (Lynch et al., 2011).

While rural women of all ethnicities were less likely to initiate breastfeeding compared to their urban counterparts, Non-Hispanic white women accounted for the largest ethnicity (42.7%), followed by non-Hispanic blacks (35.1%) and Hispanics (22.1%). Interestingly, the highest rate of breastfeeding initiation occurred in Hispanic women (81.9%). Hispanic women in this study also had the lowest education attainment (less than nine years) though this factor was not found to be significant in multivariate regression (Lynch et al., 2011). It does, however, support findings by Joshi et al. (2014) and Hohl et al. (2016) regarding the ingrained cultural belief perceiving breastfeeding as a source of infant nutrition by Hispanic populations. A significant finding was that non-Hispanic black women living in rural locations were the least likely to initiate breastfeeding compared to other ethnicities and geographical location (Lynch et al.,

2011). This finding is also one previously noted in other literature (Ahluwalia et al., 2012; Belanoff, McManns, Carle, McCormick & Subramanian, 2012; Kachoria & Oza-Frank, 2014; Sparks, 2010).

Limitations of this study included missing responses for some questions, compressing the levels of urban-rural categories from seven to four, and the limited data relating to breastfeeding as the only question asked was if the participant ever breastfed. As with any secondary data analysis, the researchers were limited by the data included in the data set (Cheng & Phillips, 2014). The outcomes of this study corroborated the ongoing effort of health care professionals to promote breastfeeding in both rural and urban areas. Unfortunately, the message is not being adopted across all ethnic groups and urban/rural areas. The researchers expressed concerns that data sets often fail to have information concerning if a new mother is or has breastfed exclusively. Future research is needed to explore the predictors of 1) why new mothers in rural areas do not initiate breastfeeding as often as new mothers in other areas; and 2) why new mothers choose or do not choose to exclusively breastfeed for six months.

To better understand why rural women were less likely to initiate breastfeeding, Bailey and Wright (2011) explored the relationship between breastfeeding, tobacco use, and other demographic characteristics of rural populations. They conducted their study as part of a larger study of two hospitals in southern Appalachia. The Appalachian region of the U.S. is mountainous and encompasses the region from southern New York to northern Mississippi. Central and southern regions have high poverty levels and many people in those regions of Appalachia lack access to health care (Appalachian Regional Commission, n.d.; Lichter & Campell, 2005). Bailey and Wright (2011) used multivariable analysis in their analyses of their sample of 2,323 participants. They reported the following predictors of initiating breastfeeding:

higher maternal education attainment; being married; having private insurance; and being a first-time mother (2011).

The researchers found that smoking was the strongest predictor of failure to initiate breastfeeding. Moreover, when combined with low education attainment, government-funded health insurance, single status, and other children, smoking increased the risk of failure to initiate breastfeeding by three times (Bailey & Wright, 2011). Smoking is a predictor of overall poor health outcomes, and there is an increased rate of smoking in rural populations (HHS, 2013a; HHS, 2013c; McElroy et al., 2012).

Other researchers have also linked smoking to failure to initiate and maintain breastfeeding following delivery (Flower et al., 2007; Jacobson et al., 2014; Kachoria & Oza-Frank, 2014; Kendzor et al., 2010). Flower and colleagues (2007) also supported Bailey and Wright's findings of the predictors for initiating breast feeding to include level of education, type of insurance, and marital status. Bailey and Wright (2011) suggested that education targeting this population regarding the breastfeeding benefits is essential. Information about the benefits of breastfeeding while continuing to smoke in the literature. The AAP does recommend breastfeeding regardless of the new mother's smoking status (AAP, 2012).

Race/ethnicity as a predictor to initiate breastfeeding was not significant in the Bailey and Wright (2011) study as it was in other studies (Ahluwalia et al., 2012; Belanoff et al., 2012; Bently et al., 1999; Kachoria & Oza-Frank, 2014; Lynch et al., 2011; Sparks, 2010). However, as the majority of the sample was Caucasian (95.9%), and all other race/ethnicities only comprised 4.1% of the sample, there were not enough other race/ethnicity participants to identify a race/ethnicity influence (Lynch et al., 2011). The overall breastfeeding initiation rate in the sample (51.1%) was much lower than 2011 national levels (74.6%) and levels of the states containing southern Appalachia (Alabama 56.7%, Georgia 71.6%, South Carolina 62.5%) with

the exception of Mississippi (50.3%), which may be partially explained by the more diverse population in that state (CDC, 2016a).

Several questions arise after considering the Bailey and Wright study: how has the rate of breastfeeding progressed since this 2011 study? Does this Appalachian population continue to lag behind? Has the education generated by this research had any impact? The focus of this study, breastfeeding initiation, is a subject encompassing a critical need for more information about exclusive breastfeeding, particularly in mothers within the Appalachian region.

Bailey and Wright (2011) introduced the Appalachian population as a single group without urban/rural classification; however, another study compared breastfeeding factors between rural and urban mothers with Appalachia specified between separate urban/rural groupings. In addition, Wiener and Wiener (2011) evaluated the incidence of breastfeeding, health behaviors, health care practices, and sociodemographic characteristics in children nationally by urban and rural classification. In this study, Appalachian designation is also included as a separate geographical classification. Historically, populations living in Appalachia are identified in national research with urban/rural designations. Most researchers who evaluate the Appalachian population report high rates of poverty, unemployment, and lower access to health care and educational attainment (Lichter & Campbell, 2005). These factors have been shown to influence breastfeeding initiation and continuation (Flower et al., 2007; Gaston, 2001; Sparks, 2010).

Wiener and Wiener (2011) conducted a secondary data analysis using the U.S. 2007 National Survey of Children's Health (Data Resource Center for Child & Adolescent Health, n.d.) which provided information that relates to overall well-being of children and included information on infant feeding practices. They identified that children were breastfed in urban regions more frequently (0.77; CI 0.757-0.784) than children in rural regions (0.687; CI 0.713-

0.661). Further, the odds of being breastfed were lower for Appalachian children (OR 1.73) when compared to national overall rates and when compared to children in other rural areas (Wiener & Wiener, 2011). The lack of medical insurance, a medical home, and living below the federal poverty level negatively influenced breastfeeding in both urban and rural populations. The concept of a medical home was used in the research. It was defined as the availability of accessible, patient-centered, and comprehensive health care by the individual and family (Patient-Centered Primary Care Collaborative, 2015). Wiener and Weiner's (2011) findings were also noted by Lynch et al. (2011), who reported that the lack of a medical home was even more extreme in Appalachian regions as compared with other regions.

There are many strengths associated with studies conducted using secondary data analysis, especially in those having access to large numbers of participants. Limitations remain, however, such as: sub-samples are not large enough to be a valid representation of the group; no control over the questions posed in the original data; and potential bias from self-reported surveys (Cheng & Phillips, 2014). Weiner and Weiner (2011) also reported that sample size was an issue for some Appalachian areas, although the data were included with notation to alert readers to interpret the result with caution. The authors also identified that while rates of breastfeeding in the U.S. continue to slowly increase, rural populations and especially Appalachian populations are not rising proportionally with their urban counterparts (Wiener & Wiener, 2011). The authors suggested an urgent need for available health care and a medical home to provide education and support for participants who live in remote and isolated areas (Wiener and Wiener, 2011).

Many researchers have recommended that new mothers have support and consistent, evidence-based education that is offered throughout pregnancy and following delivery to promote breastfeeding (DiGirolamo et al., 2008; Lin, Kuo, Lin & Chang, 2008; Thulier &

Mercer, 2009; Weddig et al., 2011). In an effort to meet the Healthy People 2020's goal for breastfeeding, many hospitals are working to incorporate BFHI practices, including:

1. Having a written breastfeeding policy that is routinely communicated to all health care staff.
2. Training all staff in the skills necessary to implement this policy.
3. Informing all pregnant women about the benefits and management of breastfeeding.
4. Helping mothers initiate breastfeeding within one hour of birth.
5. Showing mothers how to breastfeed and maintain lactation, even if they are separated from their infants.
6. Giving infants no food or drink other than breastmilk, unless medically indicated.
7. Practicing rooming-in: allowing mothers and infants to remain together 24 hours per day.
8. Encouraging breastfeeding on demand.
9. Giving no pacifiers or artificial nipples to breastfeeding infants.
10. Fostering the establishment of breastfeeding support groups and refer mothers to them upon discharge. (Baby-Friendly USA, 2012, para 2)

Not all hospitals are able to implement all ten steps; however, the more steps that are achieved, the more likely mothers are to breastfeed (Figueredo, Mattar, & de Bilhena Abrao, 2013; Samuel, Thomas, Bhat & Kurpad, 2012; Vasquez & Berg, 2012). Researchers show that the lack of support and education from hospital staff negatively impacts breastfeeding initiation and continuation (DiGirolamo et al., 2008; Lin, Kuo, Lin & Chang, 2008; Thulier & Mercer, 2009; Weddig et al., 2011).

Allen, Perrine and Scanlon (2015) explored breastfeeding support offered by hospitals in the U.S. over three years by urbanization level using the Maternity Practices in Infant Nutrition and Care (mPINC) Survey (CDC, 2015). This questionnaire was created by the CDC to monitor breastfeeding support offered in U.S. hospitals in which women deliver infants (CDC, 2015). The BFHI has been promoted globally since 1991 and in the U.S. since 1997, yet as of October 2016, only 18.89% of U.S. hospitals and birthing centers have achieved BFHI status (Baby-Friendly USA, 2016). The mPINC identifies hospital practices aligning with the BFHI initiative steps that are focused on in-patient care, though does not address antenatal education or fostering support groups (CDC, 2015). The mPINC also is used to assess staff training and breastfeeding interventions such as refraining from pacifier use and supplemental formula feedings; rooming-in; skin-to-skin contact immediately after delivery; and providing ongoing consistent education throughout the hospital stay (CDC, 2015). Levels of urbanization were recoded from the nine mPINC rural-urban continuum codes to four codes: metropolitan urbanized counties; nonmetropolitan urbanized counties; less urbanized counties; and thinly populated counties (Allen, Perrine, & Scanlon, 2015). The authors speculated mPINC scores would be lower in facilities designated as thinly populated and less urbanized, suggesting a partial explanation for the continuing lower breastfeeding rates by new mothers living in rural areas (Allen et al., 2015).

Allen et al. (2015) reported mPINC scores were lower in some areas of dimensions of care. Specifically, hospitals in thinly populated counties scored lower in: breastfeeding assistance; staff training; and structural and organizational aspects of care. The mPINC scores for staff training were particularly low (37) compared to metropolitan urbanized (63), nonmetropolitan urbanized (52), and less urbanized (41) (Allen et al., 2015). Scores were generally similar across urbanization levels for labor and delivery care, with thinly populated facilities scoring highest (77) in mother-infant contact and facility discharge care (57) (Allen et

al., 2015). No discussion of why rural facilities scored higher in those two areas was offered by the authors. A potential answer may be associated to the lower number of deliveries that occurred in rural facilities; staff may have been able to give more attention and care to the new mothers, albeit care and support that was not guided by policy and training. Overall, mPINC scores raised in each level of urbanization over the four-year period analyzed, yet the gap between thinly populated and metropolitan urbanized did not decrease (Allen et al., 2015), demonstrating a need for specific interventions to be directed towards improving facility dimensions of care that promote breastfeeding.

This study utilized mPINC scores to successfully identify the degree to which elements of hospital care can promote the BFHI and support breastfeeding. Limitations in the study were noted, including the potential masking of within-county differences caused by the compressing of the urbanization categories. Another limitation is that the mPINC survey itself is a self-reported survey in which responses may not be accurately representative of all practices.

Structural and organizational aspects of care delivery include the creation and adherence to policies that support breastfeeding, including removal of free formula gifts for discharged patients (CDC, 2015). While fewer births occurred in rural compared to urban areas within the U.S. (Allen et al., 2015), the need for targeted interventions and training to improve maternity care practices in rural areas is crucial for improving the breastfeeding rates of new mothers in those locations. Additionally, the inclusion of promotion of exclusive breastfeeding before and after birth is needed to promote long- and short-term health outcomes for mothers and infants living in rural America.

Summary

Breastfeeding is a heavily researched topic due to the growing understanding of the short- and long-term benefits for the mother and the infant. Despite knowledge of breastfeeding as the

most beneficial feeding option for the infant, many mothers do not initiate nor continue to practice exclusive breastfeeding through age six months. This is especially true of rural mothers.

Researchers have attempted to understand the experiences influencing breastfeeding and breastfeeding choices using theories such as the theory of planned behavior, the social cognitive theory, and grounded theory to support both qualitative and quantitative inquiry. Other qualitative and quantitative researchers explored the influence of culture and sociodemographic characteristics in attempts to explain why one mother initiates and practices exclusive breastfeeding whereas another mother does not. The characteristics that predict failure to breastfeed include living in rural areas, smoking, identifying as non-Hispanic black, having a low educational level, participating in government sponsored health insurance, and having a lack of support from family, community, and/or health care professionals.

Yet there is little research of the characteristics of mothers who do not exclusively breastfeed for the baby's first six months of life. Mothers living in rural geographical regions have increased health disparities and are less likely to breastfeed than mothers living in urban or suburban communities. Additionally, the early introduction of fluids and food other than breastmilk can be a traditional and cultural norm that negatively impacts exclusive breastfeeding, and was one of the most common barriers noted in this review. The maternal perception of insufficient milk supply, lack of professional support to maintain lactation, and embarrassment related to public breastfeeding also impacted the maternal decision to exclusive breastfeeding.

Cultural, societal, familial, and personal health beliefs impact an individual's decision regarding feeding, initiation of breastfeeding, and exclusive breastfeeding. Beliefs can be influenced both positively and negatively by family, friends, the community, and health care professionals. Health care professionals can make an impact on breastfeeding and exclusive breastfeeding promotion by providing consistent, evidence-based education, support, and

interventions. Moreover, including families in the educational process can promote breastfeeding as well as exclusive breastfeeding. Unfortunately, until hospitals with maternity departments prioritize services to create and implement policies to support breastfeeding and provide staff training, inconsistent exclusive breastfeeding education will continue to be offered to mothers.

Chapter 3: Method

Qualitative inquiry is needed to explore beyond the quantitative risks and factors to discover “what is really going on” (Glaser, 1998, p. 12). For this study, since little is known about mothers’ decisions surrounding exclusive breastfeeding, a qualitative approach is appropriate. Specifically, classic grounded theory was chosen as the research method for this study, as it is suitable for the investigation of complex phenomena and is well equipped to explore socially-related issues that pertain to women and family health such as breastfeeding (Glaser & Strauss, 1967; Marcellus, 2005). Classic grounded theory also allowed the researcher to understand breastfeeding as reported by mothers who have breastfed.

Few classic grounded theory studies have been conducted exploring breastfeeding. Of those published, two were found that focused on the decision-making process to breastfeed as well as initiating breastfeeding after delivery (Sheehan et al., 2009; Sheehan et al., 2013). Markedly, no literature was found to explore the personal decisions that influence success or failure to exclusively breastfeed in a rural population of women.

The purpose of this study was to develop a substantive theory that describes the decision-making process for women in a rural population to exclusively breastfeed. Decision-making did not emerge from the participants as a constituent factor in the process of seeking to do what was best for baby, as is common in grounded theory. The research question that emerged from the grounded theory analysis instead was, “What is the main concern of rural women who are breastfeeding and how do they continually resolve that concern?”

This chapter describes the background of classic grounded theory and how this method was utilized throughout this study. This chapter also includes details of sampling, data collection, and analysis employed to identify the decision-making process for women to exclusively breastfeed in a rural population.

Research Design

Classic Grounded Theory

Classic grounded theory as a research method was introduced by Glaser and Strauss in the mid-1960's through their research on hospitalized dying patients. A substantive theory titled *Awareness of Dying* emerged from their discovery that the knowledge of impending death impacted patient attitudes as well as the communication and care received from their doctors and nurses (Glaser & Strauss, 1965). The novelty of generating a new theory from the discovered data rather than verifying hypotheses was initially criticized but soon became a valuable method for health care research (Kenny & Fourie, 2014).

Classic grounded theory has transcended its original roots in sociology and has been employed by researchers internationally in a multitude of disciplines (Marcellus, 2005). Over time, this method has grown in popularity and has evolved as Glaser and Strauss diverged in their professional and methodological ideation (Glaser, 1998). Classic grounded theory, or Glaserian grounded theory, holds true to Glaser's positivistic methodological approach, and denies the philosophy of pragmatism and symbolic interactionism implemented by Strauss and Corbin as well as the constructivist interpretation promoted by Charmez (Kenny & Fourie, 2014). This study employed classic grounded theory to "generate a theory that accounts for a pattern of behavior which is relevant and problematic for those involved" (Glaser, 1978, p. 93).

Using an inductive process, the researcher sought to enter into the study with no preconceived notions and no concept of potential outcomes (Kenny & Fouie, 2014). This is a difficult feat, and even Glaser (1998) wrote that while it is impossible for researchers to be completely *tabula rasa*, they must be aware of the potential risks inherent with preconceived notions that may derail the data analysis. It is for this very reason that Glaser (1978, 1998) recommended completing the literature review, normally done prior to initiation of the study,

later in the process. Once the data analysis has begun and the theory is sufficiently developed, the researcher can commence the literature review and incorporate the findings as data to be analyzed. Unfortunately in this case, the researcher has considerable knowledge relating to the subject of breastfeeding which is both personal and professional. Nevertheless, “there is a difference between an empty head and an open mind” (Dey, 1993, p. 63). The researcher must consider previous knowledge and experiences as data; rather than attempting to disremember the knowledge, it should be put to use to better understand the process (Baker et al., 1992). To put any preconceived notions into perspective, the researcher will conduct a self-interview and then put the data aside as recommended in previous research (A. Nathaniel, personal communication, February 12, 2016). After this step, the researcher is apt to remain curious, receptive, and sensitive to what emerged from the subsequent data.

Method

Using classic grounded theory method, the researcher explored the meaning and experiences of individuals who were undergoing similar events, found commonalties that emerged as the core concept (Glaser, 1998). Classic grounded theory requires a researcher to collect and analyze data simultaneously, using theoretical sampling to choose participants (Glaser, 1989). Further, the researcher followed Glaser’s suggestions for note-taking, constant comparison, theoretical coding, memoing, and sorting to “verify a core category through saturation, relevance and workability” (Glaser, 1978, p. 95) in the development of the substantive theory.

Population and Sample Selection

Purposive sampling was used to recruit candidates who matched characteristics of interest to ensure information-rich data. The sample was accessed through a rural Virginia hospital system in which two facilities have obstetrical services. Inclusion criteria for the study

were: (a) women who delivered a live singleton infant in the last 12 months and exclusively breastfed beyond discharge from the hospital, and (b) are English-speaking. Exclusion criteria for the study were: (a) non-English speaking; (b) maternal health complications that limited the woman's ability to initiate breastfeeding following delivery; (c) prolonged separation of the infant from the mother preventing feeding upon demand; (d) having an infant who was admitted to the neonatal intensive care unit (NICU); (e) congenital or physical illness that impacted ability to breastfeed; (f) multiple gestation; and (g) unwilling or unable to sign the consent.

Recruitment of participants occurred in a rural Virginia community and involved the following steps:

1. A mailing list of women who met the inclusion criteria was generated by the facility.
2. A West Virginia University IRB-approved cover letter detailing the study and contact information was then mailed to the potential participants by the researcher.
3. When participants contacted the researcher, study procedures were clarified, and a date, place, and time for the initial interview was scheduled.

The initial database of potential candidates meeting the inclusion and exclusion criteria consisted of 615 women who gave birth between May 1, 2016 and May 1, 2017. Invitations to participate were mailed over a period of 20 weeks to 149 women. Fifteen women were initially recruited and interviewed. As the theory emerged, four additional women were selected using theoretical sampling. The purpose of theoretical sampling was to explore more deeply the concepts that had emerged.

The nineteen participants were women between the ages of 19 and 40 with a mean age of 31.1. All women lived in communities in Virginia or West Virginia designated as rural using the Rural Health Information Hub "Am I Rural" (Health Resources and Services Administration, 2017). The distance to the hospital where they sought prenatal care and delivered their babies

was between 15 and 50 miles from the participant's home. The mean distance was 30 miles. The majority of participants self-reported as Caucasian (89.47%) with two participants claiming mixed heritage (Hispanic and Caucasian). The majority also reported having private or military insurance (73.68%) with the three reporting federal insurance (Medicaid) and two reporting being covered by their parents' insurance. Most of the new mothers had more than one child. Six (31.58%) of the participants interviewed were first-time mothers, ten (52.63%) reported having two children, and three (15.79%) reported having three children. Sixty-eight percent of the participants returned to work before their babies were weaned from breastfeeding. Outside employment after birth varied. One returned to work two weeks postpartum, eleven returned to work between six and twelve weeks, one returned twenty-four weeks postpartum, and six did not return to outside employment while breastfeeding. All participants had completed high school with four completing some college, four completing college, and seven completing graduate school. See Appendix G Table A.1.

Data Collection

Each participant was interviewed once. The interviews were completed on a one-on-one basis and occurred in the participant's home or other neutral place of mutual agreement. The opportunity for privacy was offered, although some participants elected to meet and be interviewed in a busy public environment. The researcher obtained informed consent prior to the start of each interview and verified that the participant was fully aware of the procedure, risks, and benefits of the study. Participants were then asked to complete a brief demographic questionnaire that assisted the researcher in describing the population of the study. As advised by Glaser (1998) no recording or note-taking took place during the interview. This promoted a level of trust and confidentiality that could not be guaranteed with the usage of those tools.

The researcher launched the interviews with a broad yet deliberate question that served to “instill a spill” as described by Glaser (1989) (p. 111). The question was designed to encourage the participant to fully disclose her story without the researcher leading the participant through a series of specific questions. In this study, the spill question was “tell me about breastfeeding.” This simple start encouraged participants to elaborate, providing the deep meaningful data needed for the researcher to create the emergent theory. Any following questions were not scripted or predetermined; instead participants were encouraged to speak freely about their main concerns. Once the interview was completed, the researcher composed field notes containing observations and a summary of the interview. Glaser (1998) strongly advised the researcher to “code and analyze and memo immediately” (p. 113), thereby beginning the process of data analysis.

Once the data began to accumulate, and relevant concepts and categories emerged, the researcher conducted theoretical sampling of participants to elaborate the emerging concepts (Glaser, 1978; Polit & Beck, 2012). As Glaser (1978) suggested, this allowed “comparisons [to be] made continually between kinds of information to generate qualifying conditions, not [to] disprove hypotheses” (p. 39). Recruitment of participants continued until saturation of data was achieved; theoretical saturation occurred at the point when no new properties or components emerged from the data to support or contradict the emerging substantive theory.

Data Analysis

The analysis began with an open exploration of notes, starting with the first interview; however this was not a linear process. Instead, it was a back and forth process of concurrent data generation and analysis in which the researcher examined all of the data collected. The following are the specific steps used in data collection and analysis in classic grounded theory that were followed in an iterative manner as Glaser (1978) instructed.

Constant comparative analysis. Constant comparative analysis is the term used to describe the simultaneous collection and analysis of data (Glaser, 1965). This feature is central to grounded theory. The researcher began with the analysis of data from the first interview and continued throughout the entire process of data collection, memoing, sorting, and writing. Glaser and Holton (2004) described three types of comparative analysis: (1) incident to incident, (2) concepts to more incidents, and (3) concepts to concepts. This continuous analysis allowed the researcher to discover how the data, concepts, and categories were integrated to become a hypothesis followed by theory generation. The researcher employed a continuous internal cognitive process of constant comparison throughout the study. Examples of field notes can be found in Appendix B.

Coding. As suggested by Glaser (1988), the process of coding is much deeper than simply making notes of similarities and putting order to the ideas; it is a process that allows the identification of categories that revolve around participants' experiences, problems or concerns. Glaser (1998) described two different methods of coding, substantive and theoretical. Both were essential to the process, but each very different.

Substantive coding. From the first interview of this study, the researcher began open coding to understand the answer to the question, "What is going on?" Glaser (2006) wrote that "to discover what is going on using grounded theory is first to discover the problem or main concern in a social area – to discover it conceptually, which is not necessarily in the participant's view" (p. 5). Open coding thereby required the researcher to read line by line all notes to identify, name, and categorize the data emerging from the participant's experience. As suggested by Glaser and Holton (2004), this type of coding allowed the researcher freedom to label the relationships within the data while exploring the emerging abstractions.

As the core category emerged from the data the researcher began selective coding, which delimited coding to only those concepts or fragments of data that related to the core category. Christiansen (2007) outlined three questions the researcher must ask in order to determine the core category: (1) "What is this data a study of?"; (2) What category or property of a category does this incident indicate?; and (3) what is actually happening in the data?" (p. 49-50). As Glaser (1998) stated, this core category was the essence of the story around which all sub-core categories were connected and is the way in which the participants continually resolve their main concern.

Fracturing of the data through constant comparison allowed for the conceptualization of the categories and core to become abstract. Glaser & Holton (2001) suggested that substantive coding lifts the data from the empirical level to the conceptual level by forcing the researcher to focus on patterns within the data. Both open and selective coding further directed theoretical sampling in this study.

Theoretical coding. As the data were fractured in substantive coding, the researcher began to conceptualize the manner in which the fractured data symbolized the core category and looked to generalize the data beyond individual or group. In this way, as Glaser (1978) noted, "substantive codes relate to each other as hypotheses to be integrated into a theory" (p. 72). It is during this process that the fractured data were pulled back together to create a framework for the emerging theory.

Memoing. Memoing is the process by which the researcher notes ideas and thoughts about concepts and the relationships among concepts inspired by the data. Memoing could occur at any time that inspiration struck. A memo simply had to capture the spark of inspiration as it was generated. Glaser (1998) advised stopping immediately when ideas occur to craft a memo, regardless of what the researcher is doing. For this study, each memo was written individually

and stored in a memo fund to be sorted and resorted as new data and memos were added. Memoing empowered the researcher to contemplate the data, codes, notes, and impressions while making higher level associations of conceptualization, beyond the individual participant to the process, in the generation of a theory. Through memoing, the researcher was able to identify gaps in existing analyses and develop a conceptualization of the emerging theory. Additionally, the “paper trail” created by memoing provided an ongoing record of the research process.

Sorting. Glaser (1998) considered the sorting of memos to be the “epitome of the theory generating process” (p. 197). During this stage, the researcher began to sort the accumulated memos and organize them into a conceptual order. The goal was to demonstrate the relationships between concepts in order to create an outline of the emergent theory. Glaser (1978) suggested the memos should be sorted as they relate to the core category, and if a concept was not related to the core category, the concept should be dismissed. The sorting of piles of memos was daunting. However, the researcher began sorting memos shortly after each interview. The categories grew initially, until, as Glaser (1998) noted, all memos “fit.”

The sorting process was also circular in that memos were moved from one pile to another as the theory coalesced and took shape. Often the process of sorting generated additional memos or directed the researcher to seek additional data. Importantly, as Christansen (2007) noted, once the substantive theory emerged, a researcher would begin to incorporate pertinent existing literature, and complete a literature review at this time. After sorting resulted in categories that were becoming saturated, the researcher began the next stage of research which was the writing of the first draft of the research.

Writing. During the sorting, the researcher considered how the fractured data was conceptually linked so that it no longer described individual participants, but reflected an overarching explanation of a process or pattern associated with the phenomenon of interest.

Once realizing this, the substantive theory writing began. The writing process had several starts and stops as the researcher identified missing or related data and concepts that necessitated further memoing or resorting. During the writing process, as Glaser (1998) suggested, the researcher “funnel[ed] down to the core relevance” (p. 195) while developing the substantive theory. Glaser (1978) stated the goal of grounded theory was the development of a substantive theory to account “for a pattern of behavior which is relevant and problematic for those involved” (p.93).

Grounded Theory Product

The product of classic grounded theory research is a substantive or formal theory (Glaser & Strauss, 1967). A formal grounded theory is developed to explain a “conceptual area of sociological inquiry” (Glaser, 1978, p. 144) and a substantive theory is one that fits the “real world” in that it is relevant to the individuals experiencing it and is modifiable over time (Glaser, 1978). A substantive theory consists of concepts and an interrelated set of tentative hypotheses that are generated to produce an inductive theory that explains how individuals continually resolve their main concerns with concepts that fit, work, have relevance, and are saturated (Glaser & Holton, 2007).

A grounded theory is conceptual rather than descriptive. Although readers may find grounded theory to be story-like, it actually consists of a highly integrated, systematic, and rigorous detail of a social process (Nathaniel, 2018). The researcher fractures the data descriptively and then “puts it back together conceptually” (Glaser, 1998, p. 194), using examples to illustrate the concept. The illustrations should be carefully chosen to prevent distraction from the conceptual nature of the theory (Glaser, 1998). Further, the grounded theory product is a narrative that illustrates the basic social processes that occur with participants in a particular substantive area (Nathaniel, 2018).

The substantive theory *seeking to do what's best for baby* describes the process that a mother will work through to succeed in her goal. During the process, *working through*, the mother will likely encounter several basic social processes. Glaser (1978) wrote that basic social processes are “patterned processes in the organization of social behaviors” that account for most of the variation in a pattern of behavior (p. 100). They occur around a core category and are considered core variables (Glaser, 2005, p.1). Basic social processes are further divided into two categories, basic social psychological processes and basic social structural processes.

Basic Social Psychological Processes

Social psychology refers to individual behavior as it is influenced by other people and the social context in which the behavior occurs (McLeod, 2007). A basic social psychological process, as described by Glaser (1978), is one that explains a personal process as “becoming, highlighting, personalizing, health optimizing, awe inspiring and so forth” (p. 102). For example, Andrews and Waterman (2007) studied the psychosocial process that occurs when nurses attempt to relay their concerns of deteriorating patient health to physicians who do not listen to their concerns. This basic social psychological process is impacted by basic social structural processes.

Basic Social Structural Processes

Another type of basic social process is the basic social structural process. A basic social structural process is an organizational system and describes social structure in the process (Glaser, 1978). Glaser described the basic social structural process as one that “abets, facilitates, or is the social structure within which the basic social psychological process processes” (p. 102). For example, in Andrews and Waterman’s (2007) study above, nurses find themselves constrained by the social structural processes imposed by the hierarchical structure of physicians

who are in charge when attempting to communicate their concerns about worsening patient symptoms.

Methods to Assure Rigor

There is a great deal of consideration attributed to demonstrating rigor in all methods of research. Reliability and validity are common terms used to define rigor in quantitative research, describing the objectivity and credibility of the research; however, according to Polit & Beck (2012), the terms are not well-suited to qualitative methods nor grounded theory method. Lincoln and Guba (1985) adapted the positivist concepts of rigor for use in qualitative research by establishing criteria of trustworthiness. Lincoln and Guba (1985) further defined trustworthiness as credibility, transferability, dependability, and confirmability, concepts found in classic grounded theory.

Credibility

Credibility is a construct used to describe the accuracy or truth of the data (Lincoln & Guba, 1985). Glaser (1978) stated the purpose of grounded theory is to determine the primary concern as related by those experiencing it, demonstrating truth in findings. Much discussion of not “forcing data” was provided by Glaser (1978, 1998) to assure that there is truth in the findings. The use of the constant comparative method in analysis ensures the emergent conceptualizations are constantly checked to maintain the credibility of the emerging theory. In using the constant comparative method, data that emerge from the grounded theory method are analyzed by constant comparison which, as suggested by Glaser (1998), is its own constant verification. Furthermore, returning to the literature and incorporating a comparative analysis contextualizes and grounds the study in the literature as well as in the data while also providing validation of the findings.

Transferability

Transferability, as suggested by Lincoln and Guba (1985), refers to the ability of the research findings to be relevant in other settings. The use of theoretical sampling allows for the selection of a variety of individuals who have experienced a similar phenomenon yet who otherwise remain diverse. Furthermore, the intent of grounded theory, as described by Glaser (1978, 1998), is to lift the individual stories of the participants who have similar experiences to a level of abstraction seeking similarities that will account for variation or shifting in human behavior. Therefore, transferability is demonstrated in the grounded theory method of using the descriptive data to construct a substantive theory to explain a basic social process.

Dependability

Dependability ensures that the findings are consistent and dependable despite the ongoing processes of the phenomenon being studied, according to Lincoln and Guba (1985). In grounded theory, the use of note-taking, memoing, and sorting provides an audit trail which is necessary to demonstrating dependability. When combined with the ongoing constant comparison process, the development of the thoughts and ideas that are generated by the analysis provide the detailed means by which the researcher arrives at the theoretical construct.

Confirmability

Confirmability, as suggested by Lincoln and Guba (1985), describes the degree of objectivity that is noted in the data. Confirmability is addressed by the researcher's ability to put aside preconceived ideas and prior knowledge to prevent bias or forcing the data through theoretical sensitivity. Glaser (1998) noted that a researcher who is able to refrain from forcing data will yield results that are true and repeatable. Glaser (1989) also stated that completing field notes on the researcher's own experiences and incorporating them into the analysis can also correct preconceptions and demonstrate the researcher's neutrality. Finally, the audit trail that

exists from field notes, memoing, and sorting provides necessary materials to confirm the research.

Fit, Workability, Relevance, and Modifiability

While qualitative inquiry employs the Lincoln and Guba (1985) constructs of trustworthiness, Glaser (1998) proposed four criteria for judging the outcomes of grounded theory: (1) fit; (2) workability; (3) relevance; and, (4) modifiability. Each of these constructs is internally related and is constantly being assessed through the circular process of analysis. Glaser (1998) wrote that the proof of the outcome is found when “in the final analysis the criteria that grounded theory ‘works, fit[s] and is relevant’ resolves its legitimation” (p. 17). In other words, the substantive theory generated by the research must meet these criteria if the data were generated systematically through Glaser’s (1978) idea of the grounded theory method. The intention of the researcher thus is not to assess the data for validity, but to determine its accuracy by judging it for fit, workability, relevance, and modifiability.

“Fit” describes the relationship between the data and the concepts. Do the concepts emerge from the data? Does the discovered grounded theory explain the social process that was uncovered in the data? Has the data emerged “unforced”? According to Lomborg & Kirkevold (2003), fit is foundational to grounded theory through the process of open and substantive coding in which the data were generated, and in theoretical coding where the concepts are generalized to the theory. Glaser (1978, 1998) also noted the process of constant comparison further establishes the fit of the data.

Workability is defined by Holton (2008) and Lomborg & Kirkevold (2003) as the ability of the generated theory to account for the main concern of the participants in the substantive area. Does the emerging theory explain what happened? Can it predict what will happen? Can it

interpret what is happening? Glaser (1978) writes that workability is “getting the facts...or the “core of what is going on” (p. 5).

As suggested by Glaser (1998), relevance refers to the importance of the research. Does the research address the main concerns of the participants involved? Does the significance emerge from the core problems and processes? Does the theory evoke a “grab” or stimulate an emotional response for other individuals? According to Holton (2008), the emergence of concepts from the data establishes the significance of the core concern and confirms its relevance to the participants and equally to all who hear it.

Modifiability, as suggested by Holton (2008), is the ability of the research to adapt and change as new data emerges or is introduced. How does new data impact the core concept? How does a literature review or personal knowledge fit into the analysis? Is this a new category or does it fit in with another? Glaser (1978) asserted theory “generation is an ever-modifying process and nothing is sacred if the analyst is dedicated to giving priority attention to the data” (p. 5).

These four constructs first identified by Glaser and Strauss (1967) are considered to be an essential part of the inductive-deductive method that moves empirical data forward to the discovery of a relevant substantive theory. Investigators who are conducting research using the classic grounded theory method can be confident in the outcome if they address each of the four criteria in an ongoing fashion throughout the process. The careful attention paid to each of the four criteria will also promote rigor in the four concepts that Lincoln and Guba (1985) use to define trustworthiness. Regardless of the nomenclature used to describe the methods of rigor, each included factor should be employed when conducting classic grounded theory research.

Human Rights and Ethical Considerations

It was essential that participants were offered every ethical consideration during and following this study, and privacy and confidentiality were achieved in this study. The study commenced only after approval by the dissertation committee was obtained, and following institutional review board (IRB) approval through both West Virginia University and Valley Health System. Minimal risk to participants was expected. The researcher provided a copy of the written consent to each potential participant and discussed the study purpose and procedures. The researcher assured each candidate that participation was voluntary, that they could stop the interview at any point in time, and withdrawal from the study at any time without consequences was acceptable. The candidates were also given time to ask questions and seek clarification of any points, assuring that they had a full understanding of their rights as a study participant. A signed consent was obtained prior to the initiation of each candidate's interview. An incentive gift card was offered to encourage participation. At the conclusion of each interview, all participants were given a gift card as specified in the cover letter and consent.

To maintain privacy, all participants were provided the opportunity to have the interview conducted in a room with a shutting door. Confidentiality was maintained by de-identifying collected data. Each participant was assigned a participant number which was used to identify the participant in all written or electronic notes or memos. The list of participants with assigned codes was maintained in a locked file accessible to the researcher only. All field notes and memos constructed from interviews were converted to electronic form. The hard copies of the notes and memos were also stored in a locked file and will be kept for five years beyond the study before being destroyed. Electronic versions were maintained securely on a computer that is password-protected. The researcher does not perceive more than minimal risk from involvement in this study.

Advantages and Limitations

There were several advantages to the design of this study. The use of classic grounded theory was well-suited to the investigation of a social process that is poorly understood using a systematic approach to data analysis (Glaser, 1978; Hussein, Hirst, Salyers, & Osuji, 2014). Additionally, the method allowed for the accumulation of data that supported the development of a substantive theory as described by Glaser (1978). In addition, the emergent design of the study allowed the researcher to adapt data collection and analysis procedures in a comparative method as suggested by Baker et al. (1995). This purposive sampling method provided several different sampling techniques that could be used to select cases that were designed to advance the study. Finally – and importantly – in using classic grounded theory method techniques, the researcher trusted that this method was highly likely to illicit problems from participants' perspectives and would be able to encourage them to speak truthfully about things that are important to them.

There are several limitations to classic grounded theory. Most of the limitations involve the researcher. The novice researcher may have difficulty separating his or her biases while reviewing the literature, during data collection, and throughout the analysis. Another concern is that the novice researcher may manipulate the data by adhering to strict collection and analyzing techniques rather than letting the “true nature” emerge (Boychuk-Duchscher & Morgan, 2004). Researchers may also become inundated by a large amount of data, and have difficulty with the sorting and coding process. According to Annells (1996), ensuring proper time is taken during the coding process and having the advice of a mentor who is established in the practice of classic grounded theory research is useful for novice researchers to learn the process.

A further limitation is found in the sampling method. Purposive sampling is highly prone to researcher bias; however, as Polit & Beck (2012) noted, this is only a disadvantage when there are no clear criteria to participant selection. Lastly, there are limitations related to time and

finances. Theoretical sampling, as described earlier by Glaser (1978), may require additional resources including time and potential funding.

Summary

Despite recommendations for exclusive breastfeeding through six months following birth, the practice is not often performed by mothers in rural communities. Classic grounded theory was applied to determine “what is going on” in a rural population of breastfeeding mothers. Following IRB approval, a purposive sample for the study was collected from a rural population in north-west Virginia, comprised of participants who met the inclusion criteria. Data collection commenced following participant consent, and theoretical sampling was employed to continue participant recruitment until saturation of data occurred. Interviews were conducted in a private location (unless participant elected otherwise) and stimulated with an initial spill question: “Tell me about breastfeeding.” No notes or recordings were collected during the interview. Immediately after leaving the interview, however, the researcher composed field notes containing observations and a summary of the interview. Coding of the field notes commenced immediately after beginning the process of data analysis. Steps to collect and analyze data were: (a) constant comparative analysis; (b) coding; (c) substantive coding; (d) theoretical coding; (e) memoing; (f) sorting; and (g) writing. Methods to assure rigor in all steps of the research were applied and included credibility, transferability, dependability, confirmability, and Glaser’s criteria for rigor—fit, workability, relevance, and modifiability.

Extreme care was taken to protect the rights of the participants. IRB approval was obtained from West Virginia University and Valley Health System prior to initiation of the study. Consent to participate was thoroughly explained to each participant and written consent obtained. Strict privacy and confidentiality were maintained although several participants selected public meeting spaces for interviews. All data were de-identified. All electronic records

were stored on a password-protected computer, with all hard copy of notes and memos stored in a locked file. Records will be securely maintained for five years and then destroyed. Finally, all participants held the right to withdraw for any reason, at any time from the study.

The grounded theory method has both advantages and limitations. Advantages included the openness of the questioning style allowing the participant to speak freely about problems experienced. The design also allowed the researcher to adapt data collection and analysis procedures as the study progressed, ensuring that the problem was fully explored and understood. Finally, the accumulation of data was believed to produce a substantive theory to help explain the social process of exclusive breastfeeding in rural women. Limitations that may have hampered results were mostly related to the researcher's inexperience with research and classic grounded theory method. The researcher also has had much experience with breastfeeding, personally and professionally, which may have created bias within the data and emerging categories. The use of mentors who were well-versed in classic grounded theory allowed the researcher to fully immerse in the data while having insight and support to decrease the effect of the limitations on the results. The final product of this study is a substantive theory that explains how rural women who breastfeed define and constantly resolve their main concern.

Chapter 4: Results

This chapter presents a grounded theory of *seeking to do what's best for baby*. The original purpose of this study was to develop a substantive theory that describes the decision-making process for women in a rural population to exclusively breastfeed. Decision-making did not emerge from the participants as a constituent factor in the process of seeking to do what was best for baby - as is common in grounded theory. The theory emerged from interview data collected and analyzed from mothers who reported planning to exclusively breastfeed their infants. Analysis of in-depth interview data employed classic grounded theory method as detailed in Chapter 3. The data were influenced by a symbolic interactionism perspective. In essence, the theory of *seeking to do what's best for baby* consists of a three-stage process that occurs over time. The stages are *pre-pregnancy nescience*, *working through*, and *succeeding or surrendering*. The processes are influenced by *evolving internal conditions* identified as *enculturating*, *believing*, and *lacking knowledge*. Also identified are basic social processes and conditions that influence the core category of *working through* and affect the three-stage process. The basic social psychological processes that impact *working through* are *struggling*, *needing support*, *winging it*, and *admitting fed is best*. The basic social structural process that impacts the core category of *working through* are *health care*, *family structure*, *customs*, *hierarchy*, and *social media* (Figure 4.1). Examples of tentative hypotheses inherent in the theory are summarized in Appendix A.

Seeking to do what's best for baby emerged as the main concern and was continually resolved with the core category, *working through*, by every study participant. *Working through* while *seeking to do what's best for baby* concludes with either *succeeding* or *surrendering*. A quality of *working through* emerged and is termed *determined*, as the level of determination and commitment has been found to be a factor in the success of exclusive breastfeeding and *seeking*

to do what's best for baby. Included in this chapter is a discussion of the evolving internal conditions and the basic social processes that impact the *working through* process.

Evolving internal conditions are found to be present for all mothers prior to *seeking to do what's best for baby*. The three evolving internal conditions, *believing, enculturating, and lacking knowledge*, influence a mother's decision-making, goals, and plans for infant nutrition and care. The three conditions overlap each other, as well as persist through and beyond *seeking to do what's best for baby*, impacting a mother's ability to feed and care for all of her children.

While *working through*, a mother will invariably experience one or more basic social processes which are considered core variables. Basic social psychological processes are identified and account for the variation in the pattern of behavior experienced by the mothers *working through* while *seeking to do what's best for baby*. The variables are unpredictable and fluid. For example, a mother may resolve one variable only to encounter it again while another mother may experience several variables, but not all of them. The basic social psychological processes are termed *struggling, needing support, winging it, and admitting fed is best*. *Struggling* and *needing support* both contain properties that further influence the basic social process.

In addition to experiencing basic social psychological processes, a mother who is *working through* will also experience the influence of basic social structural processes. These variables can originate from home, hospital, work, or other external organizations and affect a mother's succeeding or surrendering while *seeking to do what's best for baby*. Three basic social structural processes that strongly influence the basic social psychological processes are identified as health care systems; family structure, customs, and hierarchy; and social media. Figure 4.1 represents the grounded theory associated with *seeking to do what's best for baby*.

Seeking to do What's Best for Baby

A period of unknowing exists before women become pregnant and have little or no personal connection with child-rearing. This period is defined as *pre-pregnancy nescience* and describes the insouciant behavior that accompanies a period of time in which concerns of pregnancy, delivery, and childcare are not considered. *Pre-pregnancy nescience* ends when women become pregnant and realize that they will be responsible for caring for their infants. This cutting point signals a change in attitude and focus to an infant.

Figure 4.1. Model of the Theory Seeking to do What's Best for Baby



Most new mothers are concerned with the health and wellness of their newborns. They make decisions on the care and feeding of their newborns while *seeking to do what's best for baby*. Breastfeeding is reported in literature and by health care professionals as the best source of

infant nutrition. Health care professionals also recommend that new mothers should exclusively breastfeed for the first six months of their baby's life. A mother's intention to exclusively breastfeed her infant is an essential piece of her strategy when *seeking to do what's best for baby*, with the decision to breastfeed, including her plans for duration of breastfeeding, frequently made prior to the birth of her infant. A mother will declare her intent to breastfeed often without considering barriers that may occur to prevent her from *succeeding*. She *seeks to do what's best for baby* without consideration of herself or other factors that may impact the outcome. While many mothers make plans to return to work, the belief that they will continue to pump to provide breastmilk sustains their goals of achieving exclusive breastfeeding for the first six months and *succeeding* at doing what is best for baby. Plans to return to work often result in a modification to breastfeeding goals, but mothers believe they can adapt and adjust accordingly. They are confident in their ability to be flexible enough to ultimately succeed at exclusive breastfeeding. An example includes mothers who breastfeed while at home with their infant but pump their breasts while at work, carefully storing and transporting the milk home to prevent any need for formula supplementation.

Seeking to do what's best for baby was the most common theme that emerged from all interviews. The actual wording "*best for baby*" was repeatedly heard in interviews, particularly in support of breastfeeding as a source of infant nutrition as "breastfeeding is healthy and best for the baby." One participant reported that "any breastfeeding is better than none" and another recounted telling a young child that "mommies are supposed to feed babies like this." Indeed, the statement "*best for baby*" was often heard when the participant was asked why she chose to breastfeed – "it's best for baby." On the surface, the concept of *seeking to do what's best for baby* symbolizes a positive perspective; however, it also provides the mothers with justification in deviating from exclusive breastfeeding when facing difficulties. A mother who chooses to

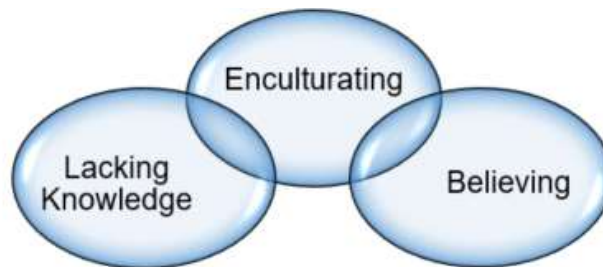
supplement her baby with formula can console herself with the belief that any nourishment is better than none, *surrendering* her goals for exclusive breastfeeding. *Seeking to do what's best for baby* ends with a mother's perception of *succeeding* at doing what is best or *surrendering*.

These qualities are discussed further in the core concepts of the theory.

Evolving Internal Conditions

Women entering motherhood have evolving internal conditions that guide and influence their decisions for caring and nurturing their infants. These conditions are developed from life experiences, exposure to external ideas, and the vision of themselves as mothers. As pre-pregnancy nescience ends, the influence of the evolving internal conditions will impact their plans for childbirth and child-rearing. Three evolving internal conditions are identified as specific to infant nourishment and *seeking to do what's best for baby*. The three concepts overlap and are titled *enculturating*, *believing*, and *lacking knowledge* (Figure 4.2).

Figure 4.2. *Evolving Internal Conditions: Overlapping Attitudes Influencing the Process of Seeking to Do What's Best for Baby*



Enculturating. Enculturating is “to change, modify, or adapt (behavior, ideas, etc.)” by socialization (Enculturate, n.d., para 1). This process occurs in women who are exposed to breastfeeding. The exposure may have been by having breastfed themselves, having friends who are breastfeeding their babies, and/or education that presented the benefits of breastfeeding for both mother and infant. For these women, there is an expectation that breastfeeding will be their choice for infant nourishment by their family, friends, and health care providers. While a mother

is assured that she has the right to choose how she will feed her infant (breast or formula), she understands that her choice should be to breastfeed. By the time she delivers her infant, the mother has chosen to breastfeed and is prepared to do so regardless of any barriers that she may encounter. The symbolic interpretation is that it is something she is “meant to do.” This *enculturating* begins before *seeking to do what is best for baby*; it is woven throughout *working through*, and it endures through *succeeding* or *surrendering*. The enculturation inspires a mother’s decision to breastfeed her future children as well.

The evolving internal condition of *enculturating* was identified in most of the participants interviewed in this study. One reported “breastfeeding is natural, it’s what I’m supposed to do.” A second participant said that she “was breastfed and it felt like something that [she] should do.” A third stated that she “just did it, it was not a choice, more like an expectation” for which she was supported by her family and friends. A participant who reported she had not been exposed to breastfeeding had also not considered how she would feed her baby after birth. In the end, she chose to breastfeed when asked after she delivered, “Were you planning on breastfeeding? You should.” The expectation of breastfeeding was further supported by health care professionals by another participant’s statement: “My OB said ‘you’re going to breastfeed, right?’” *Enculturating* was revealed by the participants who declared that breastfeeding was how they were supposed to feed their infants, and was not only influential in their decision to initiate breastfeeding, but also in continuing breastfeeding when experiencing issues and barriers to *succeeding*. Indeed, *enculturating* continued beyond the end of breastfeeding with the mothers voicing their intention of breastfeeding subsequent children. A participant who had experienced a very difficult time breastfeeding was asked if she would breastfeed again if she had another child; she was puzzled and responded, “Well yes – why wouldn’t I?”

Believing. A second evolving internal condition was identified as *believing* and is comprised of two different components; *believing* in one's ability and also *believing* in what one is told. The first component describes a mother's vision of her ability to succeed at breastfeeding. *Believing* that breastfeeding is the best way to nourish her infant, a mother also believes that she is able to succeed at doing so. *Believing* in the benefits for her infant she will plan to initiate breastfeeding, and, while aware that she may struggle, trusts that she will be able to overcome any obstacles to breastfeeding that she encounters. She is confident in herself and what she believes is the right thing to do. *Believing* overlaps *enculturating* in that it encompasses the opinion that breastfeeding is a normal behavior and one that should be undertaken. This was noted in participant statements such as "I knew it was *best for baby*, so I did it" and "I never considered stopping even though it was a struggle."

The second component of *believing* also overlaps with *enculturating*, in that this *believing* occurs when a mother receives advice from a family member, friend, or health care professional. Before and during pregnancy women are exposed to information related to child care from trusted sources. *Believing* in the veracity of the information, the mother will incorporate the knowledge into her plans for raising her infant. This is especially true of recommendations for breastfeeding and infant nutrition. *Believing* in the advice from a trustworthy individual will influence a mother's decision to exclusively breastfeed while she is *seeking to do what's best for baby*, especially when the advice comes from a pediatrician or other health care professional. She is conditioned to believe health care professionals and will follow their instructions even when the instructions may oppose her own goals and ideas. This component of *believing* was identified by statements such as "I was told I should breastfeed but no one told me how hard it would be" and "the hospital gave me formula to take home so I guess it's okay to use it."

Lacking knowledge. Unfortunately, while a mother is *enculturating* and *believing*, she may be doing so with a knowledge deficit. Her knowledge is limited by her ability to understand, integrate, and utilize any instruction she has received. *Lacking knowledge* impacts a mother's decision-making process to exclusively breastfeed or to problem-solve when encountering barriers to exclusive breastfeeding while *working through*. Despite the availability of information about breastfeeding, some mothers may not have received breastfeeding instructions, comprehend the content, or be able to apply it to the "hands-on" process of breastfeeding. Lack of prenatal education and support before, during, and after birth further exaggerates *lacking knowledge*. Later, while *working through*, mothers who are *lacking knowledge* will work harder to try to solve a problem. They often fail due to their lack of understanding and fear that they are not doing what is best for the baby. For example, the mother who wants to do what is best for baby yet is *lacking knowledge* may quickly resort to formula supplementation when she fears that she is not meeting her infant's nutritional needs.

There was a lack of knowledge in the study sample. The women did recognize that there was a financial gain to not having to purchase formula; however, many could not articulate any other benefit for infant and mother. One participant reported that she "knew that breastfeeding was *best for baby*" but she did not know what the benefits for baby were or that there were any benefits of breastfeeding for herself. Two other participants demonstrated *lacking knowledge* when they reported that they had no knowledge of breastfeeding other than they knew it was "*best for baby*" and planned to do it. They had not researched or questioned others about breastfeeding prior to initiating. Unfortunately, another participant believed that the formula she gave her baby "was the same as breastmilk," further demonstrating *lacking knowledge* regarding breastmilk and its benefits.

Lacking knowledge continues to impact a mother's ability to successfully breastfeed after delivery and once home. Several participants demonstrated *lacking knowledge* when issues with breastfeeding, such as poor latch or how to deal with a decreasing milk supply, occurred and they had no idea how to resolve their problems. One participant who had no understanding of the breastfeeding process offered her infant formula because "her [breast] milk didn't fill her [baby] up." The subsequent issue was compounded by *lacking knowledge* concerning the existence of resources for help or how to access them. This was especially true for the first-time mother. One participant reported that she did not know that her "milk supply would decrease if [she] missed feedings and didn't pump." Another recounted that she did not know about a workplace policy for breastfeeding mothers until she had already quit breastfeeding.

The most significant example of *lacking knowledge* was the failure to understand what exclusive breastfeeding entails. Many participants considered exclusive breastfeeding to be the abstinence of any formula supplementation. They did not realize that offering any other food, including cereal, constituted an end to exclusive breastfeeding. *Lacking knowledge* was perpetuated by *getting mixed messages* from pediatricians who informed participants that they should introduce cereal to their infant between four and six months of age.

Working Through

The process of *seeking to do what's best for baby* by exclusively breastfeeding is not always a direct and easy one (see Figure 4.3). Many women experience problems while breastfeeding and *seeking to do what's best for baby*. The theme of *working through* is the symbolic representation of a mother's decision to continue breastfeeding despite any real or perceived barriers encountered. The suggestion of *working through* evokes an image of an individual struggling through something that is difficult or protracted. This refrain is one that

was heard during every interview – whether from a mother who *succeeded* in exclusively breastfeeding through the first six months or one who had quit breastfeeding in the first weeks.

Working through describes a mother's perseverance to breastfeed while tackling the barriers encountered. One example was a participant who, when her baby refused to latch onto her breast, pumped to provide breastmilk for her infant. A second example came from a participant who was so exhausted she was not sure she could continue but she *worked through* because she wanted to exclusively breastfeed her infant. A third participant even used those words when she told me that she "*worked through* the pain" to breastfeed. The idea is one that describes the mothers' commitment to breastfeeding regardless of the difficulty or their situation – they simply worked through. This determination was found at the heart of all mothers in this study and was identified as a quality of *working through* (Figure 4.3).

Figure 4.3. The Three-Stage Process of Seeking to Do What's Best for Baby



Determined: A Quality of Working Through

Being determined is a quality of the core category *working through* that positively impacts a mother's ability to exclusively breastfeed. A quality is a conceptual phenomenon that is a distinctive attribute or property of the core category. Determination is seen in all mothers *working through* while *seeking to do what's best for baby* and represents the quintessential resolve to succeed. A mother who is *being determined* is resolute in her goal and in her ability to

achieve that goal, whatever it may be. Having chosen exclusive breastfeeding as a means for providing this “best,” a mother who is determined will do all in her power to accomplish it. She will be active in *searching for help* if, or when, she encounters barriers that are in the way of achieving her goal. She will seek multiple opinions and will work through them all to sustain exclusive breastfeeding. Barriers such as returning to work, low milk supply, and the need to breastfeed in public are seen as problems that can be solved. A mother who is *being determined* will plan, organize, and schedule to allow herself to breastfeed or pump to provide breastmilk to her infant after returning to work. When necessary to breastfeed in a public place, she may endure public stigma in an effort to do what is best for baby. Unfortunately, a mother who is determined may not have a choice when issues such as infant illness or lack of support to continue exclusive breastfeeding occur. This mother will regret what she considers her failure but will quickly work through while *being determined* and *seeking to do what's best for baby*.

Examples of *being determined* were heard from the participants in this study. One participant arranged her schedule so she could return home to nurse her baby during the day. A second participant reported that she was so determined to give only breastmilk that she “refused to even have formula in her house.” A third stated that she “refused to give her baby formula” and so quit her job to stay home and feed her baby.

Many of the participants in the study were determined to do what was *best for baby* although most were not able to sustain exclusive breastfeeding through six months. This occurred for one participant who reported that while she had to supplement with formula “this time” she was “determined to [exclusively breastfeed] the next time.”

Needing support that was not forthcoming was also identified as a barrier that prevented a participant who was determined from exclusively breastfeeding. This included the support that was received from health care professionals. One participant stated that her pediatrician told her

to offer supplementation to help with her baby's constipation but said, "I didn't want to give her formula!" She compromised by offering the breast and then formula in a syringe. This idea introduced a basic social psychological process, *admitting fed is best*, which supports the mothers who are determined while *seeking to do what's best for baby* by assuring that their baby is nourished regardless of how that is accomplished.

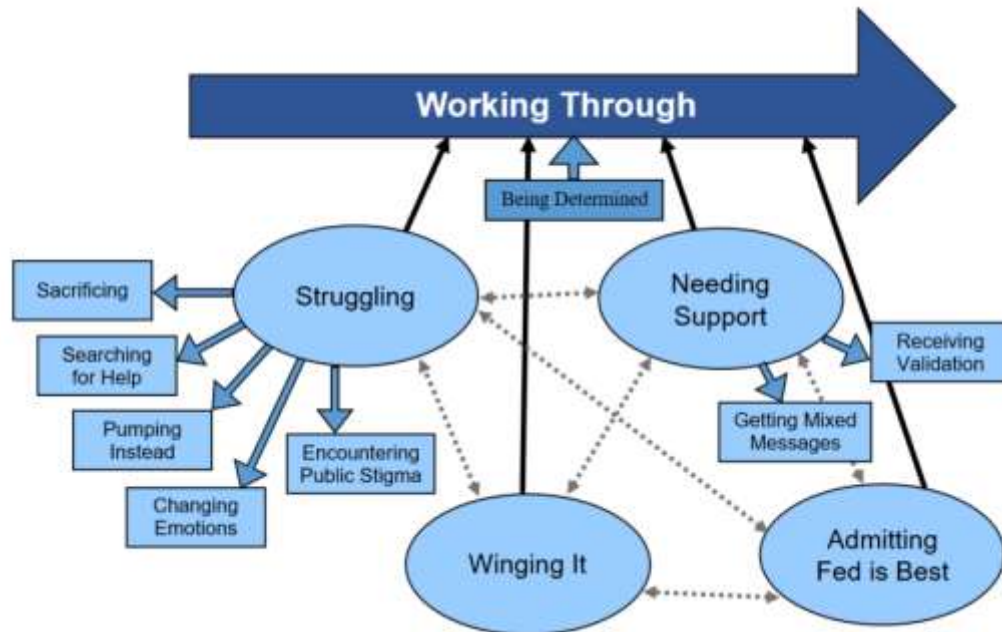
Basic Social Processes

Basic social processes account for the change that occurs over time in the core category, *working through*, as they influence a mother's ability to do what's best while attempting to exclusively breastfeed her infant. Two types of basic social processes are identified in the grounded theory *seeking to do what's best for baby*, basic social psychological process and basic social structural process.

Basic Social Psychological Processes

During the process of *working through*, the mother experiences different situations that influence the success or failure of her exclusive breastfeeding attempt and are identified as basic social psychological processes. These events are variable in nature with mothers experiencing some or all of them at different periods while *working through*. See Figure 4.4.

Figure 4.4. Basic Social Processes Impacting the Core Category, Working Through



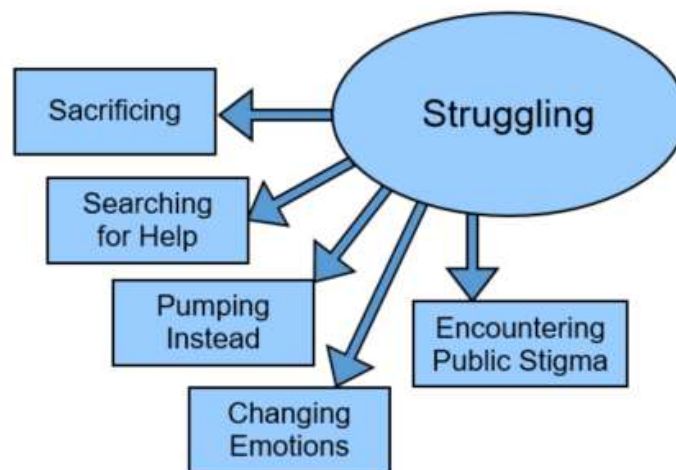
The basic social psychological processes are *struggling*, *winging it*, *needing support*, and *admitting fed is best*. *Struggling* is influenced by the properties *sacrificing*, *searching for help*, *pumping instead*, *changing emotions*, and *encountering public stigma*. Properties of *needing support* are identified as *receiving validation* and *getting mixed messages*. The following describes each of the basic social psychological processes, including their properties.

Struggling. The first basic social psychological process to impact mothers while *working through* while *seeking to do what's best for baby* is *struggling*. *Struggling* is defined by Merriam-Webster (n.d.) as a “forceful effort to reach a goal or objective” (para 1). Many breastfeeding mothers experience *struggling* in their effort to exclusively breastfeed their infant. The specific difficulties that trigger *struggling* are individual to each mother and are not isolated to a single incident. Rather, *struggling* is a fluid variable that occurs randomly, may be repeated, or may be one of many different events experienced. Some causes of *struggling* include lacking the necessary support to exclusively breastfeed, decreasing milk supply, and experiencing other physical issues such as fatigue, pain, or illness. Participants recounted *struggling* to pump or

increase feedings in an attempt to keep up their milk supply to provide breastmilk for their infant.

Struggling occurred when participants resorted to multiple different homeopathic methods such as taking the herbal supplements fenugreek and mother's milk tea to enhance their milk production. *Struggling* was reported by participants who pumped (*pumping instead*) while at work to provide their infant with breastmilk. One participant reported that she "struggled to keep her baby's weight up" while exclusively breastfeeding and another reported "*struggling* to get her pediatrician to listen to her concerns" about her infant's persistent vomiting. Finally, one participant stated, "I was so tired, I cried. But I kept breastfeeding." The *struggling* mother will *work through* successfully or she will not, with either outcome resulting in an end to the struggle.

Figure 4.5. *Properties of the Basic Social Psychological Process Struggling*



Mothers who are *struggling* while *working through* may experience different elements that also constitute part of the struggle. These elements influence, in part, how the mother resolves her main concern of *seeking to do what's best for baby*. Five properties were identified from the data and were identified as *sacrificing*, *searching for help*, *pumping instead*,

encountering public stigma and *changing emotions*. All were noted to exert either a positive or negative force towards successful *working through*.

Sacrificing. The first property of *struggling* is *sacrificing*. Mothers are often called on to give up something or to “sacrifice” for the sake of their infants. One notable example of *sacrificing* is the loss of sleep when exclusively breastfeeding. While nearly all infants will sleep through the night by six months, the months and weeks until then are often disrupted by mothers waking to nurse one or more times during the night. Mothers are cognizant that this nighttime feeding is essential and that their infants will eventually sleep through the night; however, it is a *sacrifice* of sleep which later impacts a mother’s daytime hours.

Other types of *sacrificing* occur as a result of a mother’s perception of being “trapped in the home” due to her inability or discomfort with public breastfeeding. Participants interviewed all had strong opinions about public breastfeeding and while only two had a negative experience, all voiced the perception of a stigma attached to breastfeeding in public. More than one participant reported *sacrificing* while breastfeeding in the car rather than potentially encountering any negative remarks caused by her breastfeeding in public. One participant stated she “was afraid of what people might say or do if I [breast] fed in public so I just stayed home.” A final example of *sacrificing* was relayed by one participant who said that her “baby would not take a bottle – even of breastmilk! I had to quit my job to stay home and feed her.”

Searching for help. The second property of *struggling* is *searching for help*. While breastfeeding is considered natural, the reality is that it is not always easy. Mothers often need help to succeed. *Searching for help* represents the extent that a mother may go to in the process of seeking advice and is exaggerated by the evolving internal conditions of *enculturing* and *lacking knowledge*. Often mothers do not reach out for help until they experience problems and are desperate.

An internet search is a common source used by mothers; however, while the information is abundant, it may not be reliable. The internet also offers the opportunity for meeting other mothers with similar issues providing support and advice. It is during this search that they may come across the “Fed is Best” (Fed is Best Foundation, n.d.) site promoting formula supplementation.

Contacting family and friends is a second common source of *searching for help* when mothers are having problems. Often if the grandmother has experience with breastfeeding, she is the “go to” for help. Sisters and friends who have experience are also called upon to answer questions. One participant said, “I called my mom [baby’s grandmother] and even though she hadn’t breastfed me she was able to help. She told me to relax – he [the baby] looked healthy and so I must be doing it right.”

Seeking professional advice from a lactation consultant or pediatrician is another option when *searching for help*. The pediatrician is the most likely individual for mothers to seek advice from but that advice is not as available during times of crisis. Mothers respect the advice received and often defer to the pediatrician’s instructions – even when it compromises their breastfeeding plan or goals. One participant planned to exclusively breastfeed her baby but when given an informational leaflet from the pediatrician with instructions to introduce solid food between four and six months, she followed the directions. This advice from pediatricians was reported by other participants in the study, a surprise in light of the CDC, WHO, and AAP endorsement for exclusive breastfeeding for the first six months of life.

Professional consultations with a hospital lactation consultant were available for all participants who were *searching for help* in this study. While some participants contacted the lactation consultant for advice and reported that this advice was integral to their success, other participants had less positive experiences. The decision to contact a lactation consultant was

often shadowed by earlier encounters with hospital lactation consultants following delivery. In some cases the lactation support in the hospital was inconsistent or unavailable. One participant stated “they [the lactation consultant] wouldn’t help me in the hospital, why would I call them after I got home?” Another reported that she was not aware that this service was available. On the other hand, two participants *searching for help* used the services of an independent lactation consultant who visited them in their homes and provided help. Both mothers praised the lactation consultant, reporting that her efforts were the source of their success with exclusive breastfeeding. One stated it “was worth the money she paid her.” Was this caused by the one-on-one attention that was received in the home? Could the participant have received this same information from the hospital lactation consultant?

The outcome of *searching for help* can either support or hinder a mother’s attempts at *working through* while *seeking to do what’s best for baby*. *Searching for help* will often result in a mother *receiving validation*, a property of *needing support*, for her breastfeeding effort. Conversely, other mothers *searching for help* are attempting to resolve real issues such as infant weight loss or jaundice with breastfeeding, maternal insufficient milk production, or pain with breastfeeding. Failure to obtain help or to get help that resolves the problem influences a mother’s decision to continue breastfeeding or may cause her to shift her goals for exclusive breastfeeding.

Pumping instead. A third property of *struggling* is *pumping instead* and describes the extreme actions that a mother will take to provide breastmilk to her infant rather than supplement with formula. The mothers are aware of the benefits of breastfeeding and decide to use a breast pump to extract milk, store, and later feed their infants. One reason for *pumping instead* is reported as a means to promote bonding between a father and his newborn. A second is to let another person feed the baby while the mother is unavailable. This commonly occurs when

mothers are returning to the workforce. Pumping to provide breastmilk that is supplied to their infants while they are at work is a natural extension of exclusive breastfeeding. Allowing working mothers the opportunity to pump at work is supported by state and federal policies, yet some mothers are unaware of the benefit. One participant stated, "I didn't know that pumping at work was even a thing..." Another participant felt stress and discomfort while pumping at work because she was "worried that someone come in and see her." Nevertheless, she continued to pump while *seeking to do what's best for baby*.

Pumping instead can also be instituted when mothers believe that their milk supply is low. It can be a means by which to increase their supply. Also, it can help in situations when an infant is unable or unwilling to latch onto the nipple. The worry and fear that her breastmilk supply is diminishing and that a mother would be unable to provide exclusive breastmilk is the rationale for *pumping instead*. One participant set an alarm to wake up every three hours to pump during the night. Two other mothers recounted attaching the breast pump under their clothing and pumping while driving to and from work. The amount of work that is needed to organize, schedule, pump, and store the milk is significant; yet the participants interviewed recounted many examples of *pumping instead*. "I pumped regularly at work" and "breastmilk is best (*best for baby*) so I pumped to give breastmilk even though it was a hassle" were comments from the interviews. *Pumping instead* persisted until the infant was weaned or the mother's milk supply dried up. One participant stated, "She [the baby] didn't reach out to nurse and so when I went to work – I just didn't bother pumping. It was a relief – I was ready to be done with pumping." In some cases, *admitting fed is best* influenced the mother's decision to supplement with formula or validated the decision to cease *pumping instead* to provide any breastmilk altogether. One participant stated, "I was pumping and pumping and getting less and less – I needed to add formula to the breastmilk to satisfy him. I didn't want him to starve."

Changing emotions. A fourth property of *struggling while working through* is *changing emotions*. Mothers undergo a multitude of emotions in the months after giving birth. The sleeplessness and hormonal changes that they undergo increase their *changing emotions* and can impact their decisions to continue exclusive breastfeeding, to supplement breastfeeding to get through the day, or to cease breastfeeding altogether. Participants all spoke of the *changing emotions* that revolved around breastfeeding their infants. They described feeling resolve in *succeeding* at exclusive breastfeeding, pride when experiencing successful moments with breastfeeding, happiness with the bonding and closeness they had with their babies, surprise when breastfeeding went well, and relief when able to work through barriers and issues they encountered with breastfeeding. Positive emotions sustained participants with the needed reinforcement to continue and to work through when faced with discouraging events.

On the other hand, negative emotions experienced when *changing emotions* such as worry, frustration, fear, anger, remorse, and grief, were ones that the participants spoke of more frequently during their interviews. Negative emotions erect barriers to *succeeding*. Mothers have difficulty seeing the positive benefits when engaged in negative emotions. Negative emotions often accompany physical lack of sleep and exhaustion which perpetuate the negative emotion. Some participants interviewed expressed negative emotions relating to breastfeeding. Each described how worried they were when they encountered an issue that impacted their ability to breastfeed their babies. Their worry turned to frustration and fear when they were unable to overcome the obstacles. Anger followed, especially by participants who believed that their concerns were not respected by the health care professionals who they contacted while *searching for help*. Unfortunately, when participants were unable to continue breastfeeding and *surrendered*, they experienced remorse and grief at the loss of the breastfeeding experience. One participant stated she was “devastated when she was unable to breastfeed”; a second participant

reported that she “regretted having to stop [breastfeeding],” and a third said that she “grieved the loss of the bond” with her baby when the baby refused to take the breast.

Encountering public stigma. The fifth and final property of *struggling* is *encountering public stigma*. One significant issue that impacts any mother who is breastfeeding revolves around what to do when the baby needs to breastfeed when in public. For mothers who are exclusively breastfeeding, this topic is of utmost importance. To exclusively breastfeed, the mother must nurse her infant at the breast and risk *encountering public stigma*. Public breastfeeding has been a topic of discussion in social media and breastfeeding mothers are aware of the stigma related to exposing their breasts in public to feed their babies. Therefore, mothers must decide whether to breastfeed their infants in public and how they will deal with any negative stigma associated with the act.

Participants in this study all reported they were aware of the potential for *encountering public stigma* with a few reporting having experienced negative comments or reactions while breastfeeding in public. They also reported putting much thought and planning into how they would react to any criticism directed towards them. One participant said she “didn’t want to feel trapped in her home” so she ignored comments and looks from others. Another found positive support from a stranger who defended breastfeeding to her young daughter by saying, “It’s not yucky, it’s is how I fed you and how, I expect, you will feed your own babies.” Some comments heard may not be openly aggressive but are still unkind when *encountering public stigma*. One such example was reported by a participant who was asked “Aren’t you done with that yet?” by a co-worker.

Regrettably, most of the participants interviewed chose to avoid the opportunity to encounter public stigma. Because of the negative image and symbolic meaning associated with breastfeeding, they chose not to breastfeed in public. One participant said she “went to her car to

breastfeed” her baby. A second participant also reported stopping what she was doing to seek out a private place to breastfeed stating that she “didn’t want anyone to see me breastfeeding.” A third participant was insulted when a stranger rudely pointed out that there was “a lounge for that.”

One option to prevent *encountering public stigma* for some participants was to carefully schedule outings to prevent having to breastfeed in public. A second easy solution was to feed the baby from a bottle while outside of the home. Unfortunately, too often, the bottle was filled with formula instead of pumped breastmilk. The ease of formula preparation opposed to the need to keep breastmilk cold predisposed the participant to formula supplementation. Ultimately, the real or perceived stigma associated with public breastfeeding impacted the participants’ likelihood to comfortably breastfeed their infants.

Winging it. A second basic social psychological process encountered while *working through* is *winging it*. While some mothers sought out help to work through the issues they encountered, other mothers chose *winging it*. This concept is one that describes the trial and error method of mothering and breastfeeding. Common characteristics of mothers who wing it include being a first-time mother, having little social support, and having little understanding of what resources are available. While admitting to *lacking knowledge*, the mother desires to breastfeed her infant and plans to do her best or try by *winging it*. One participant summed it up by saying, “I didn’t know what I was supposed to do but I knew I was supposed to do something!” She was *winging it* by seeking out information, using social media, and later was offered resources through community agencies. Unfortunately, she did not understand the long term benefits of breastfeeding and offered formula to her baby when it was provided to her through the WIC program.

Needing support. A third basic social psychological process encountered while *working through* is *needing support*. This basic social psychological process is impacted by two properties, *receiving validation* and *getting mixed messages*. Merriam-Webster (n.d.) defines support as “to promote an interest or cause; to advocate; and to assist or help” (para 1). For breastfeeding mothers, *needing support* describes the efforts that a woman will go to promote *succeeding*. While *working through*, *needing support* is identified and must be brought about to promote a mother’s *succeeding* at exclusive breastfeeding; *needing support* that is not forthcoming creates a barrier to *succeeding* and often results in *surrendering*. *Needing support* is likely to be demonstrated through multiple methods and by many different individuals. The mother’s significant other is most commonly considered to be her “biggest supporter.” Participants interviewed reported that their significant other “was my biggest supporter,” “got up in the night and brought the baby to her to nurse” and helped to “shield her so she could breastfeed in public.”

The maternal grandmother is the second most common individual to offer support and encouragement. If the father of a baby is not involved in its care, the maternal grandmother is often the main supporter. Other family members and friends are also often called upon to provide support for a new mother. Examples of this were heard during interviews by participants who said “even though my mom didn’t breastfeed me, she has been right there to help me from the beginning” and “my friends are quick to help me when I am overwhelmed or have questions.”

Needing support from outside the family is often identified by new mothers. Professional support is frequently found while *searching for help*. Lactation consultants, pediatricians, and individuals trained to assist new mothers in meeting their infants’ nutritional needs provide needed support through education and hands-on help. One participant reported that she “wouldn’t have been as successful if it had not been for the lactation consultant.” Another

mother reported that the paramedic who delivered her baby supported her first efforts at breastfeeding in the back of the ambulance en route to the hospital.

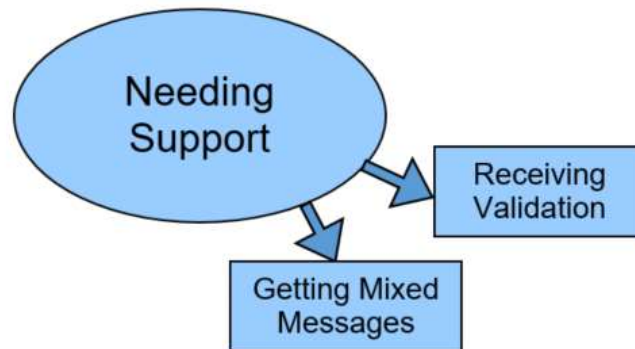
Support from untrained persons can be found through the internet and by reaching out to mothers' groups. Mothers *searching for help* take advantage of online information including chat groups and forums for mothers. Participants searched for help through online resources such as chat groups and forums for mothers. One participant spoke of the "tight group of mothers who are always there for her with advice and support."

A final external support can come from a mother's employer upon her return to the workforce. This concept of *needing support* includes not only an employer's understanding of a mother's desire to continue to breastfeed, but also their willingness to provide breaks at regular intervals and a private location for mothers to pump while at work. Failure to provide this support to breastfeeding mothers can sabotage their efforts and prevent them from *succeeding*. There were mixed reports from participants about their experiences with pumping after returning to work. Some had no difficulty, with employers willing to provide the mother with time to pump and the privacy to do it. One participant who worked as a bartender said her male employers "covered the bar [for her] so I could pump every couple of hours." Another participant reported that her colleagues "arranged the room so she could pump privately in a corner and not miss the meeting." This was not always the case as reported by a participant who stated that, "They [employers] said I could only pump in the bathroom but there was only one bathroom and the entire time I was trying to pump people were knocking at the door to use it." The lack of support by her employers resulted in her supplementing her baby with formula rather than pumping to provide stored breastmilk.

The two properties of *needing support* identified in the data are further explored below (Figure 4.6). These properties were identified as *receiving validation* and *getting mixed*

messages. Both were noted to exert either a positive or negative force towards successful *working through*.

Figure 4.6. *Properties of the Basic Social Psychological Process Needing Support*



Receiving validation. Mothers commonly seek out validation for their breastfeeding efforts and of their ability to do what is *best for baby*. *Receiving validation* can provide the needed encouragement for mothers to continue *working through* when they meet barriers. This is especially true for the first-time mothers who are *struggling* to transition into their new maternal role. Validation can communicate a needed reminder of their self-efficacy and that they are *succeeding* in their efforts while *seeking to do what's best for baby*. This positive reassurance reminds mothers of their goals and promotes their ability to achieve them.

The concept of *receiving validation* was heard throughout the interviews. At times during the interviews it seemed that the participants were seeking validation for their experience from the researcher. An example of *receiving validation* was heard from one participant who said that her spouse told her that he was “proud that she was able to do this for their baby.” Another example came from a participant who said “the lactation consultant told me that I was doing everything right.” A final example came from a pediatrician who told the participant, “Your baby is eating and healthy – you are doing a good job.” In this case the positive statements validated the mother’s efforts and promoted her continuation of breastfeeding. Conversely, the lack of

validation for a breastfeeding mother's efforts can negatively impact their ability to succeed. Lack of validation from the immediate family has a profound effect on the mother's desire to continue breastfeeding. For example, one participant stopped breastfeeding because her significant other "thought it was gross."

Getting mixed messages. Another property of *needing support* is *getting mixed messages*. The ability for mothers to *work through* and *succeed* at exclusive breastfeeding is impacted by their ability to receive and understand the information that they are given. This includes information from the health care professionals who they encounter while *searching for help*. The information should be clearly presented, based in evidence, and standardized between all professionals. Information and support that are not consistent are termed *mixed messages*. Mothers *getting mixed messages* may become confused, frustrated, and angry. The experience of *changing emotions* can create further obstacles while *working through* and potentially lead to a mother's eventual *surrendering*.

Getting mixed messages was noted by participants in this study. One participant *needing support* for exclusive breastfeeding from her pediatrician was told that she "could supplement with formula if she wanted." This statement came immediately after *receiving validation* of her breastfeeding effort from the pediatrician who told her that her baby was growing and healthy. The participant questioned why she was *getting mixed messages* – "was there something wrong that [she] was unaware of? Is supplementing with formula okay with exclusive breastfeeding?" Another participant reported that she was aware of the recommendation to exclusively breastfeed for the first six months, but offered early solid food (cereal) to her baby before six months because she was given nutritional guidelines from her pediatrician suggesting the introduction of cereal between four and six months of age. *Getting mixed messages* on a larger scale was perpetuated by the hospital in which all study participants delivered their infants. One participant

pointed out that “the hospital promoted exclusive breastfeeding while I was there, they stressed how important it was for my baby – then they sent me home with a gift bag of formula.”

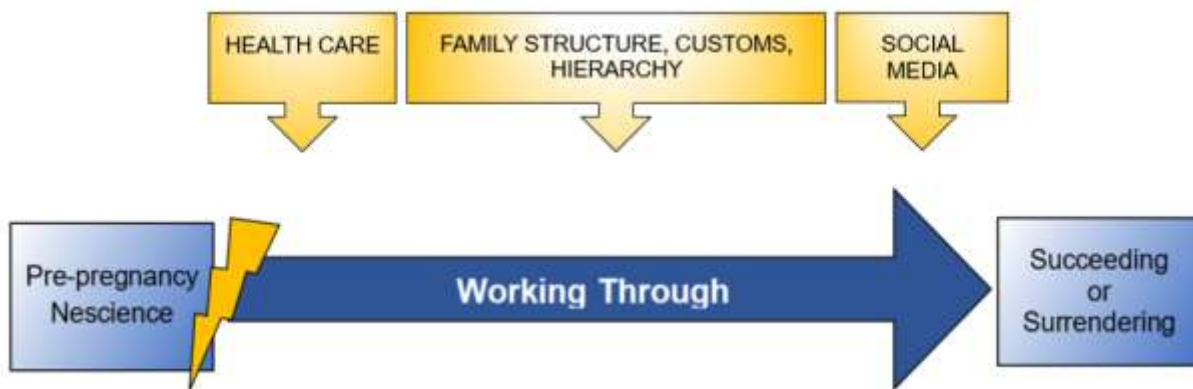
Another participant had the same experience and stated, “I guess they didn’t think I could do it [exclusively breastfeed] so they wanted to make sure I had some formula just in case.”

Admitting fed is best. The fourth basic social psychological process that was found to impact *working through* is termed *admitting fed is best*. The participants all shared the common belief that breastmilk was *best for baby* but not all were able to exclusively breastfeed or continue breastfeeding at all. The concept *admitting fed is best* was heard from several participants, especially the ones who perceived or experienced low milk supply, had infants who did not tolerate breastmilk, underwent difficulties with breastfeeding, or who chose to supplement with formula. Therefore the idea of *admitting fed is best* can be used to validate a mother’s choice to supplement her infant with formula or cease breastfeeding altogether. The actual wording “*fed is best*” was heard more than once in interviews and later was discovered to be an online movement to decrease the stigma of formula feeding (Fed is Best Foundation, 2016). One participant stated that it was “better to feed [the baby] formula than to starve them.” The fear of not providing their babies with enough nourishment was pervasive. One participant explicitly stated this as the reason she began to supplement. The introduction of formula to supplement breastmilk ended the participant’s attempt to exclusively breastfeed and often precipitated the early discontinuation of breastfeeding altogether. One participant stated that after beginning to supplement her baby with formula “what [she] had (breastmilk) got less and less and eventually dried up.” While mothers reported *struggling in seeking to do what’s best for baby*, ultimately they *admitted fed is best* was indeed, best.

Basic Social Structural Processes

New mothers are inundated with information, both positive and negative, that influence their *seeking to do what's best for baby*. Some of the influences are basic social psychological processes but other basic social structural processes can influence a mother's best intent and ability at *working through*. Three external influences are identified in the theory *seeking to do what's best for baby* and are *family structure-customs- hierarchy, social media, and health care*.

Figure 4.7. Basic Social Structural Processes Impacting the Core Category, Working Through



Family structure, customs, hierarchy. The influence of family, customs, and hierarchy on mothers' decision-making process is notable. The basic social structural process that is exerted by the family, customs, and hierarchy is observed in the *enculturating* that occurs prior to pregnancy with family opinions and suggestions applying influence on the mothers' decision-making ability. Often mothers will comply with the expectations of family, especially when they have doubts or concerns about their infants' well-being and a relationship exists between this basic social structural process and the property - *needing support*. The structure of the family yields insight into the amount of support that is available to sustain the mother *needing support* while *working through*. Mothers who are single and without a significant other may need additional assistance to cope with raising their newborns on their own. Whereas, mothers in a stable committed relationship are more likely to succeed at the *working through* process. This

was noted in the study by one participant who reported having a disruptive home life, moving about and living with friends. She said, "Trying to breastfeed was so hard with people I didn't feel comfortable being around." While reporting being in a committed relationship, she believed her significant other to be unsupportive. Her decision to exclusively breastfeed was not supported by her environment or her significant other. Conversely, most participants in the study reported that they believed that their significant other was their greatest support while they were *seeking to do what's best for baby* by exclusively breastfeeding. Two participants reported being single and living with their parents. The stable environment was considered to be one way for them to *do what's best for baby* and the grandmothers provided the supportive foundation for their attempts at exclusive breastfeeding.

The grandmothers' opinions and suggestions strongly influence the mothers' ability to successfully breastfeed regardless of where the mothers reside. Matriarchal opinions can either support or create barriers when new mothers ask for help and advice or when receiving unsolicited opinions. Other family members' opinions do not have the same weight as those of the grandmothers.

Most participants reported that their own mothers were very supportive of their efforts. One said her mother had "tried to provide information to help her with breastfeeding choice during her pregnancy." Another said that her mother "was so excited that I was breastfeeding even though she had not breastfed me – she knew it was important and supported that I wanted to do it." Participants identified their own mothers as significant support in the process of breastfeeding as well as providing validation of their attempts. Participants reported that they felt it important that their own mothers were pleased with their ability to do what is best for their babies by breastfeeding.

Grandmothers who breastfed their daughters promote the culture of breastfeeding as well as provide support when their granddaughters chose exclusive breastfeeding. Breastfeeding is considered a shared attitude and goal that should be practiced. This *enculturating* begins during *pre-pregnancy nescience* and is woven throughout the entire process of *working through* while *seeking to do what's best for baby*. Participants in the study reported that they knew that they would breastfeed their babies because “it was expected.”

Social media. A second basic social structural process is imbedded in the pervasive influence of social media. Mothers today are more “connected” to the internet and social media than any generation previously (Duggan, Lenhart, Lampe & Ellison, 2015). Social media has become a vital component for daily interactions including communication with family and friends as well as gathering information on topics related to parenting information and social support (Duggan et al., 2015). The use of *social media* is noted by mothers who are *searching for help* while *working through* issues encountered as well as by those *needing support*. Being able to seek information 24/7 is a valuable tool, yet also one that can create unrealistic expectations. The information and support that is available may not be dependable and the difference between reliable and unreliable information may be difficult to determine. Participants found that websites and blogs with suggestions for new mothers may or may not be helpful, yet internet searches were often the first avenue they pursued when *working through* a basic social psychological process.

Participants all reported having looked for information online to help them “figure out” a problem. One mother described receiving her primary source of support through a new mother’s blog on social media. She reported that mothers offered advice online “when her milk supply was drying up” including suggestions for homeopathic medications, teas, and herbs. It did not occur to her to seek professional help until she had exhausted the suggestions from the other

mothers on the blog site. A second participant spoke of having been given advice from a friend but not believing it until she had “looked it up online.”

Health care. Health care organizations constitute the third basic social structural process that heavily influences mothers and their ability to succeed at seeking to do what is best for baby. Individuals who provide care and are considered experts strongly influence mothers' decisions, *working through*, and *seeking to do what is best for baby*. The services offered by the different health care professionals that mothers come into contact with during pregnancy, delivery, and beyond set the foundation for trust and reliable care. Unfortunately, all mothers do not receive the same level of care from all their providers, nor the same support and information.

Participants in this study found that the care they experienced impacted their success at exclusively breastfeeding. Participants all delivered at the same organization, yet reported very different experiences with lactation consultants and nursing staff. One went so far as to say that her care was so ineffective that she refused to call for help when she had issues after being discharged: “They didn't help me when I was in the hospital, why would I call them for help?”

Participants found that they received *mixed messages* from the hospital and staff. This lack of organizational consistency heavily influenced the mothers while *seeking to do what's best for baby* and during the *working through* process. The inconsistency overshadowed the positive messages and care that was received. This was further complicated by *mixed messages* received from the pediatricians caring for their infants. Participants reported that pediatricians were more supportive of exclusive breastfeeding, but even the pediatricians offered information that was inconsistent. As one participant who planned to exclusively breastfeed for six months stated, “He [the pediatrician] told me to give cereal at four months. Which is it?”

Overall, the basic social structural process within health care organizations creates a dichotomy for many mothers. For participants in this study, the information and care provided by

the experts working in the organizations was inconsistent and inefficient, causing them to doubt their own abilities or to receive the information needed all them to succeed. Yet, it was the health care providers who supervised the information and care that was needed for healthy outcomes such as exclusive breastfeeding for the first six months of life.

Succeeding or Surrendering

The main concern of women who are *seeking to do what's best for baby* concludes with either *succeeding* or *surrendering*. Either *succeeding* or *surrendering* is experienced by a mother and describes the mother's belief in her success. The specifics of each component follow.

Succeeding

Succeeding is defined as the "accomplishment of an aim or a purpose" (Succeeding, n.d. para 1). Ideally with exclusive breastfeeding *succeeding* signifies that the mothers exclusively breastfeed their infant for the first six months of life. In reality, *succeeding* is less prescriptive and instead symbolizes a mother's satisfaction with *seeking to do what's best for baby*. Meeting set goals for exclusive breastfeeding was less important to participants in this study than the health and welfare of their infants. If they believed that deviating from the plan for exclusive breastfeeding was in the infant's best interest, then the participants did so while believing themselves to have succeeded. Additionally, participants had no feelings of lingering guilt or remorse for their decisions made in the process of *working through* any barriers or complications experienced. *Succeeding* in this context is therefore an individual experience and the perception of satisfaction with her achievement of *seeking to do what's best for baby*. *Succeeding* reinforces a mother's decision to breastfeed beyond the six months and to exclusively breastfeed again with future children.

Some participants in the study believed that they were *succeeding* at their breastfeeding effort even when they did not reach their goal of exclusive breastfeeding until six months. One

reported that she was pleased by *succeeding* and was “glad [she] could provide breastmilk for her baby” while another said she was “happy she could give her baby what little [breastmilk] she could.” While some said they had succeeded with exclusive breastfeeding and “never had any issues with breastfeeding,” others experienced setbacks in their plans but believed themselves to still be *succeeding*. A statement by one participant summed it up: “I wanted to do what was best for my baby and breastfeeding just wasn’t it; that didn’t make me a failure.” For participants who were *succeeding* and also exclusively breastfed, their experience was so positive they decided to continue to breastfeed beyond one year. During the interview several participants offered their thoughts on what promoted *succeeding* which included early lactation support, positive experiences while in the hospital after delivery, no separation from baby in the hospital, feeding upon demand, co-sleeping, and “wearing” the infant in a sling. One participant reported that the single most important factor in *succeeding* for her was “being comfortable with breastfeeding and her body image.” Unfortunately, the process of *working through* is not always successful.

Surrendering

Not all mothers believe they were successful in *seeking to do what’s best for baby* and surrendered instead. One definition of *surrendering* is to “give in” (Surrender, n.d. para 1). This symbolic giving in or *surrendering* occurs when mothers determine that they are no longer able to maneuver through the obstacles encountered during *working through*. The *surrendering* results in the discontinuation of breastfeeding, either voluntarily or unwillingly. In some cases participants were encouraged by either a support or health care provider to “give up” or give in to *surrendering* when they were no longer able to work through the struggles encountered, or the health of the mothers or infants was in question. Many different scenarios bring about a *surrendering* but ultimately it is an emotional giving up of the vision and plan for providing their

baby breastmilk for nourishment and a belief that they have not been able to do what's best for baby.

Surrendering was most often heard by participants stating they had done everything they could but were simply unable to continue to breastfeed. Examples included an infant who would not nurse at the breast, a participant's diminishing supply of milk, and instruction by a health care professional to cease breastfeeding. One participant spoke about experiencing an illness saying, "We [mom and baby] were both so sick with fevers and vomiting. When it [illness] was over my milk was gone... she wanted to nurse but I had nothing to give her."

Another example of *surrendering* occurred when a participant received discouragement for breastfeeding from her significant other. In that situation, the mother felt compelled to give up breastfeeding, *surrendering* to keep the status quo of her family. This situation highlights the influence of the basic social structural processes within the culture and hierarchy of families.

Some participants grieved the loss of their goals and the closeness they had with their infants. Others were able to let go because the *struggle* had been too difficult. The participants who stopped breastfeeding were fully supported by their families but they experienced guilt and remorse after *surrendering*.

Once mothers work through *changing emotions* associated with *struggling* and then *surrendering*, they again focused on *seeking to do what's best for baby*. Each participant was willing to breastfeed if she had another child. One participant said it best: "It didn't matter how hard it was, I would do it again because it's better for the baby; so why wouldn't I?"

Summary

This chapter presented *seeking to do what's best for baby*, a new grounded theory which emerged from the recounted experiences of mothers who initiated exclusive breastfeeding following the birth of their newborns. In essence, the theory of *seeking to do what's best for baby*

consists of a three-stage process that occurs over time. The stages are *pre-pregnancy nescience*, *working through*, and *succeeding or surrendering*. The process is influenced by *evolving internal conditions* identified as *enculturating*, *believing*, and *lacking knowledge*. Also identified are basic social processes and conditions that influence the core category of *working through* and affect the three-stage process. The basic social psychological processes that impact *working through* are *struggling*, *needing support*, *winging it*, and *admitting fed is best*. The basic social structural process that impact the core category of *working through* are *health care*, *family structure*, *customs*, *hierarchy*, and *social media*. The theory reveals the basic social processes involved in the resolution of a mother's main concern of *seeking to do what's best for baby* through exclusively breastfeeding. (See figure 4.1.)

Women entering into pregnancy and motherhood are enculturated by family, friends, and health care professionals to exclusively breastfeed to nourish their newborn. Upon ending their pre-pregnancy nescience they are confronted with the realities of child-rearing. Having assimilated that belief (*enculturating*), they are confident (*believing*) that they will be able to succeed in their efforts to exclusively breastfeed. However, they also enter into motherhood without fully understanding (*lacking knowledge*) the complexities of breastfeeding and the effort that is associated with it. While exclusive breastfeeding through six months is the plan, the true goal of *seeking to do what's best for baby* is a healthy and nourished infant.

During the process of exclusively breastfeeding while *seeking to do what's best for baby*, mothers will work through (*working through*) any barriers and difficulties experienced to provide the best nourishment possible for their infants. A quality of *working through* is being *determined* and is a foundation for success in maneuvering obstacles experienced during the process. Four basic social psychological processes and their properties impact mother's ability to exclusively breastfeed their infants. The four processes are titled *struggling*, *winging it*, *needing support*, and

admitting fed is best. Each component describes a mother's internal response to any experiences encountered while practicing exclusive breastfeeding. The basic social psychological processes are variable in nature and may be experienced to some degree either individually or simultaneously over time. It is not common for a mother to go through the process of exclusively breastfeeding her infant without experiencing any of the identified internal processes during the course of *working through*.

Three basic social structural processes further complicate a mother's ability to exclusively breastfeed her infant. They are identified as *family structure-customs-hierarchy, social media, and health care*. Again, these are variable in nature and come from outside or external sources with mothers experiencing one, some, all, or none while attempting to exclusively breastfeed.

The conclusion of the main concern – *seeking to do what's best for baby*, the core category – includes *working through*, and exclusive breastfeeding ends with mothers *succeeding* or *surrendering* in their efforts. This emotional outcome signifies a mother's belief in her success or failure at “doing what is best for [her] baby” and typically heralds the end of exclusive breastfeeding and potentially any breastfeeding efforts all together. This phase is limited as mothers must continue to make decisions to satisfy the nutritional needs of their children and seek to be at peace with the outcome of their exclusive breastfeeding efforts. Regardless of the difficulties encountered during the process of *working through*, mothers will endeavor to promote exclusive breastfeeding as the best form of infant nutrition and will plan to exclusively breastfeed any children they may have in the future.

Chapter 5: Discussion

This chapter presents a discussion of the grounded theory *seeking to do what's best for baby*. Rural mothers seek to provide the best care for their newborn infants possible. Their common concern is their ability to succeed as they are continuously *seeking to do what's best for baby*. With exclusive breastfeeding for the first six months of life recognized as the gold standard for infant nutrition, mothers choose to exclusively breastfeed in their efforts to provide the best nutrition possible for their infants. This theory describes how rural mothers navigate the basic social processes that they encounter to provide their best for baby. *Seeking to do what's best for baby* is an overarching theory of many concepts, all supported individually by literature, yet unidentified as combination concepts explaining how mothers deal with the basic social processes encountered while breastfeeding. In this chapter, the investigator presents the following: (a) a summary of the theory, (b) a comparison of the grounded theory *seeking to do what's best for baby* with the published literature, (c) a critique of the theory, and (d) implications for education, nursing and clinical practice, breastfeeding policy, and research.

Summary of Seeking to Do What's Best for Baby

The new theory, *seeking to do what's best for baby*, emerged from interview data collected and analyzed from rural mothers who reported planning to exclusively breastfeed their infants. Analysis of in-depth interview data employed the classic grounded theory method as detailed in Chapter 3. *Seeking to do what's best for baby* emerged as the main concern of rural mothers and was continually resolved with the core category, *working through*, by every study participant. A quality of *working through* was identified and labeled *determined*, as the level of determination and commitment reported by mothers was a factor in their success at exclusive breastfeeding and the theory *seeking to do what's best for baby*.

In essence, the theory of *seeking to do what's best for baby* consists of a three-stage process that occurs over time. The stages are *pre-pregnancy nescience*, *working through*, and *succeeding or surrendering*. The first stage of *pre-pregnancy nescience* ends with a cutting point signifying a change in thinking from oneself to accepting the responsibility of caring for a new infant. The second stage, *working through*, is how the mothers continually resolve their main concern of *seeking to do what's best for baby*. The process ends with the third stage in which the mothers identify their satisfaction in their ability to do what's best for baby, termed *succeeding or surrendering*. The entire process is influenced by *evolving internal conditions* identified as *enculturating*, *believing*, and *lacking knowledge*. Also identified are basic social processes and conditions that impact the core category of *working through*. The basic social psychological processes that affect *working through* are *struggling*, *needing support*, *winging it*, and *admitting fed is best*. The basic social structural processes that impact the core category of *working through* are *health care*, *family structure*, *customs*, *hierarchy*, and *social media*. See figure 4.1.

Comparison of the Theory with the Empirical Literature

In studies using grounded theory, Glaser (1998) recommends delaying a review of the substantive literature until the emerging grounded theory is nearing completion. This premise is amended when the researcher has been studying the subject prior to beginning the grounded theory study and Glaser (1998) suggests that all previous knowledge be included into the note-taking process and incorporated into the data. In this section, an analysis of the extant empirical and theoretical literature is presented as it relates to the grounded theory *seeking to do what's best for baby*.

A review of the extant literature demonstrated an overwhelming number of studies conducted that examined characteristics predicting exclusive breastfeeding that would include some components of the grounded theory, *seeking to do what's best for baby*. The literature

review in chapter two was conducted prior to the start of the study and captured some of the properties of the theory; however, none incorporated all properties of the theory into a single study or addressed the processes that mothers encounter while exclusively breastfeeding.

Additional pertinent literature was identified through the process of constant comparison and is included in the following discussion of the empirical research literature as it relates to the new grounded theory.

Seeking to Do What's Best for Baby

Seeking to do what's best for baby was not an uncommon theme in the literature, especially as new mothers rationalize their decision to breastfeed their infants. The choice to exclusively breastfeed is supported in the literature as a means of providing the best form of nutrition for infants (AAP, 2012; WHO, 2013). Hjalnhult and Lomborg (2012) identified that mothers sought to do what was best for baby by preserving control and integrity through the prioritization of newborn care which included exclusive breastfeeding. Ismail et al. (2014) found that mothers believed that exclusive breastfeeding would make their babies healthier than if they were fed with formula. Indeed, the theme "best for baby" is identified in more than one study as the mothers' rationale for exclusive breastfeeding (Bowman, 2013; Charlick, Pincombe, McKellar, & Gordon, 2018; Helps & Barclay, Hohl et al., 2016; Ismail et al., 2014; Joshi et al., 2014; Sheehan, et al., 2010). The identified literature supported the main concern of mothers who are *seeking to do what's best for baby*, but contained a limited view as little reports the process that mothers engage in while they do so. Instead, the preponderance of literature focused on the factors that predict successful breastfeeding or exclusive breastfeeding (Bailey & Wright, 2011; Bowman, 2013; Colledge, 2011; Coduti et al., 2015; Jacobson et al., 2014; Lynch et al., 2011; Nor et al., 2012; Wiener & Wiener, 2011).

One notable exception was found in an international study by Sheehan et al. (2010) which had similar findings to that of the theory *seeking to do what's best for baby*. Sheehan et al. (2010) also employed grounded theory as they sought to identify infant feeding decisions in the first six weeks after birth. The authors identified the basic social process of “Complex Decisions: Deconstructing Best” as the main concern (Sheehan et al., 2010, p. 371), which identified the participants' desire to do what they believed best for their infants by exclusively breastfeeding. The process included seven stages of decision-making including one termed “getting on with it,” which was very similar in nature to the process of *working through* identified in this study. In review, many of the concepts that were reported by participants in this decade-old study were heard again from participants by this researcher. The substantive theory identified by Sheehan et al. (2010) supports the findings of the theory *seeking to do what's best for baby*. It also suggests a direction for future research to further explore the experiences that influence exclusive breastfeeding. Further discussion of similarities and differences will be included as the theory is discussed in more detail.

Evolving Internal Conditions

The theory *seeking to do what's best for baby* is impacted by three internal evolving conditions, particularly as they influence the mothers' choice in exclusive breastfeeding as a method of doing what is best. Each condition affects the mothers' behaviors and choices during *pre-pregnancy nescience*, before they initiate exclusive breastfeeding, and throughout the process of *working through* while exclusively breastfeeding. There is overlapping found in the three internal evolving conditions and mothers are influenced by each individually and jointly. While the three conditions overlap, they are discussed here separately as no empirical literature was found that identifies the three evolving internal conditions related to exclusive breastfeeding.

Enculturating. Prior to delivery, mothers have integrated information about breastfeeding and exclusive breastfeeding from their family, friends, health care providers, and social media. The understanding that “breast is best” is well understood and most mothers have already made the decision to breastfeed or exclusively breastfeed prior to the birth of their babies. Several international studies identified the *enculturating* that occurs when a woman is exposed to family and societal beliefs of breastfeeding as a norm. Okafor, Agwu, Okoye, Uche, & Oyeoku, (2017) reported that the process of socialization within a culture influenced the decision to exclusively breastfeed by Nigerian mothers. Charlick, Pincombe, McKellar, and Gordon (2018) of Australia wrote that participants stated they had made the decision to breastfeed when they were children themselves, implying they had exposure to the practice. Further, in a study by Alianmoghaddam, Phibbs, and Benn (2018) conducted in New Zealand, the concept of a breastfeeding culture within a family was discussed with an expectation that all women will exclusively breastfeed their infants. This belief was also identified in participants in a rural Kentucky study (Bowman, 2013). Hohl et al. (2016) wrote that Hispanic participants in a study conducted in the rural Washington State reported that breastfeeding was a cultural expectation as well. Unfortunately, Hohl et al. (2016) also discovered that while breastfeeding is considered a Hispanic cultural expectation, once in the U.S. the influence of society to use formula for infant feedings swayed their feeding decision. Finally, Australian participants in the Sheehan et al. (2010) study reported that there was a great deal of information promoting exclusive breastfeeding available. This literature supported the study findings of enculturation with the message that breastfeeding is best being perceived by women both consciously and subconsciously during the stage of *pre-pregnancy nescience* and throughout the stage of *working through*. This communication and influence by families, friends, and society promoted the expectation that to do what is best for baby, a woman should exclusively breastfeed.

Believing. The concept of believing is supported in breastfeeding literature as a component of success. It is most commonly associated with self-efficacy, or the confidence that an individual can succeed at a desired goal (Bandura, 1977). Herndon (2015) found that rural teens who had high scores on a breastfeeding self-efficacy instrument had a higher probability of breastfeeding intention and initiation. Bowman (2013) identified that women with higher scores on a breastfeeding self-efficacy survey were more likely to continue exclusive breastfeeding for longer durations than women with lower scores. During *pre-pregnancy nescience* there is no concern that a woman could not breastfeed if desired – if she chooses to, she can. It is not until later, after initiating exclusive breastfeeding, that the belief in one's abilities is often challenged and the realization that one is lacking knowledge impacts the ability to be successful.

Lacking knowledge. Women believing that they can succeed at exclusive breastfeeding often do so with limited information about the actual process or understanding of the difficulties that they may encounter. They are confident that they will “figure it out” or be able to find help when the time comes. This lack of knowledge was discovered in the grounded theory study by Sheehan et al. (2010) by women who reported that breastfeeding looked easy and so they believed they could do it. *Lacking knowledge* was also found in a study by Goodman et al. (2016), with participants reporting that upon initiating breastfeeding they found it to be much more difficult than they had expected. Another example of lacking knowledge includes the misunderstanding of what exclusive breastfeeding actually is. Participants in this study recounted during interviews that they were exclusively breastfeeding but then reported starting cereal supplements to their infant before six months. This confusion was also noted in studies by Thet et al. (2015) and Gewa and Chepkemboi (2016) with participants being unaware that introducing any other fluid or solid ends exclusivity of breastfeeding. Finally, a lack of understanding of the reasons for exclusive breastfeeding was found. Participants in the *seeking to do what's best for*

baby study understood that breastfeeding is best, but did not know why. *Enculturating* had taken place and the decision to do what is best was chosen, but the link to the rationale was missing. This was supported in the literature by the authors Charlick et al. (2018), Gewa and Chepkemboi (2016), and Helps and Barclay (2015). Surprisingly, Sheehan et al. (2010) did not identify this; rather, they identified the opposite with the participants being very aware of the benefits for both mother and baby. Joshi et al. (2014) reported that Hispanic mothers in their study had mixed understanding – exclusive breastfeeding helped infants to be healthy and suffer fewer illnesses but they could identify no maternal benefits. The *lacking knowledge* found in the evolving internal conditions was one that is noted throughout the entire stage of *working through* with mothers encountering issues in which they have no previous experience to guide them. How the mother chooses to overcome the lack of knowledge is part of the basic social processes encountered while *working through*.

Working Through

The core category of the theory *seeking to do what's best for baby* is termed *working through*. This process is closely aligned to one described by Sheehan et al. (2010) as “getting on with it.” Both described how the mother works through the issues encountered while trying to do what is best for baby. The main difference between the two occurred with the view by Sheehan et al. (2010) of “getting on with it” as a stage of decision-making rather than a stage that is characterized by the navigation of the basic social psychological and basic social structural processes encountered found in the theory *seeking to do what's best for baby*.

Being Determined

The quality of *being determined* played a part in mothers' abilities at working through. Determination is also supported in empirical literature as a factor in successful exclusive breastfeeding. Charlick, Fielder, Pincombe, and McKellar (2017) describe it as self-

determination and Kestler-Peleg, Shamir-Dardikman, Hermoni, and Ginzburg (2015) associate it with self-motivation. Both reported that higher levels of either self-determination or motivation were noted in women who were able to navigate through the barriers encountered while exclusively breastfeeding. In the theory of *seeking to do what's best for baby*, the level of determination or the mother's *being determined* to succeed was noted to either promote or impede a mother's ability to succeed at exclusively breastfeeding to six months.

Empirical literature that supported individual properties of *working through* could be found, but none that described all properties or how they flow together to impact the process. The properties in the theory *seeking to do what's best for baby* are identified as basic social processes and are further divided into two types, basic social psychological processes and basic social structural processes. Both types influence a mother's ability to successfully achieve what she considers best for baby.

Basic Social Processes

Glaser (1978) wrote that basic social processes are “patterned processes in the organization of social behaviors” that account for most of the variation in a pattern of behavior (p. 100). They occur around a core category and are considered core variables (Glaser, 2005, p.1). Basic social processes are further divided into two categories, basic social psychological processes and basic social structural processes. Both types of process are noted to influence the success of *seeking to do what's best for baby* yet no literature identified the groups of basic social processes occurring while exclusively breastfeeding or noted the influence of them as a group.

Basic social structural processes. Three basic structural processes were found to heavily influence mothers' decision-making abilities during the process of *working through*. They are identified as *health care, family structure, customs, hierarchy, and social media*. These external

influences are inherent in society and are noted woven through the discussion of basic social psychological processes as well as identified here.

Family structure, customs, and hierarchy. The influence of family including its cultural norms and guidance from older generations cannot be ignored in a discussion of exclusive breastfeeding. It begins with the *enculturating* before the need to breastfeed exists and is woven throughout the entire theory of *seeking to do what's best for baby*. The wisdom passed down from previous generations is cited as an influence in both initiating and continuing breastfeeding (Alianmoghaddametal et al., 2018; Gewa & Chepkemboi, 2016; Hohl et al. 2016). Yet, while breastfeeding may be a cultural expectation, exclusive breastfeeding to six months may not be (Gewa & Chepkemboi, 2016). The influence of families, especially from fathers and grandmothers, can either support or hinder mothers' effort to exclusively breastfeed (Alianmoghaddam et al., 2018; Arts et al., 2011; Bowman, 2013; Coduti et al., 2015; Gewa & Chepkemboi, 2016; Helps & Barclay, 2015; Ismail et al., 2014; Joshi et al, 2014; Okafor et al., 2017; Thet et al., 2015). Helps and Barclay (2015) identified that despite the amount of antenatal and prenatal support provided to educate mothers about exclusive breastfeeding, the impact of cultural norms heavily influenced their decision to discontinue breastfeeding. Bowman (2013) reported that not only did family influence the decision to breastfeed, but the mixed messages received from different family members deterred exclusive breastfeeding beyond the first weeks. The conflict between culture and advice from health care professionals also ended exclusive breastfeeding with the early introduction of non-breastmilk supplements in both the theory *seeking to do what's best for baby* and in the literature reviewed (Arts et al., 2011; Gewa & Chepkemboi, 2016; Hohl et al., 2016; Joshi et al., 2014; Nor et al., 2012; Okafor et al., 2017; Thet et al., 2015). This disconnect affirmed the need for education relevant to exclusive

breastfeeding to be directed not only towards the mother, but to the entire family. It also required that the information provided from health care professionals be consistent and evidence-based.

Health care. Mothers depend on and trust health care professionals for advice and guidance in the raising of their infants. Bowman (2013) reported in her dissertation work that health care professionals were trusted and had a strong influence on mothers' successful exclusive breastfeeding. Yet while some mothers when *seeking to do what's best for baby* found that the advice they received was dependable and trustworthy, others received inconsistent information (*mixed messages*) and were treated with indifference or lack of sympathy. This same negative behavior from health care professionals was overwhelmingly identified in the literature despite the narrow search limitations of this review (Allen et al., 2015; Arts et al., 2011; Charlick, et al., 2018; Coduti et al., 2015; Colledge, 2011; Goodman et al., 2016; Hjalmlhult & Lomborg, 2012; Hohl et al., 2016; Nor et al., 2012; Sheehan et al., 2010; Sobel et al., 2011). Additionally, health care professionals provided incomplete or missing information regarding long-term resources for breastfeeding mothers (Goodman et al., 2016) and a complete lack of resources altogether for rural mothers (Allen et al., 2015). Further, the information that was received regarding exclusive breastfeeding was often inconsistent and conflicting, creating discord in a mother's decision-making and ability to exclusively breastfeed to six months (Charlick et al., 2018; Hjalmlhult & omborg, 2012; Hohl et al., 2016).

A last aspect of health care professionals' influence on exclusive breastfeeding was the very opposite from previously discussed with mothers perceiving that they must exclusively breastfeed regardless of the effort and struggle they are encountering (Charlick et al., 2018; Hjalmlhult & Lomborg, 2012; Sheehan et al., 2010). The message that exclusive breastfeeding is in the best interest of both mother and infant cannot overcome a mother's autonomy to choose how to nourish her infant. Her individual needs must be considered and accepted by health care

providers even while promoting exclusive breastfeeding by providing consistent and evidence-based information (Hjalmlult & Lomborg, 2012; Sheehan et al., 2010). However; this consistent and evidence-based information may be difficult for mothers to identify through the mass of information available through social media.

Social Media. The impact of social media on mothers' decision-making and their ability to navigate the process of *working through* is significant. The participants in *seeking to do what's best for baby* study all spoke of the instances where they received information, advice, or support from the internet, television, or publications marketed for new mothers. This was supported by a study by Sobel et al. (2011) in which the information participants received influenced their decision to initiate breastfeeding or introduce formula supplementation. Literature that explored the concept of using social media to increase exclusive breastfeeding success by offering health-focused websites, infant feeding apps, and social networking support was not identified in the narrow search limitations of the initial literature review. Subsequent literature was identified reporting the use of social media to increase exclusive breastfeeding to six months (Alianmoghaddam; 2017; Giglia, Cox, Zhao, and Binns, 2015). Surprisingly, the literature was limited with most dedicated to telephone support (Bunik, 2013; Grkovic, Phuaric, Malicki, & Hoddinott, 2017; Mullen Marshall, Warren, 2017). This discovery highly suggested a need for further research to fully explore the impact of social media to not only promote exclusive breastfeeding to six months, but to also provide mothers with support while *working through* the basic social psychological processes encountered. It also suggested a need for changes by health care organizations that promote dedicated social media sites that are aligned with evidence-based practice and manned by professionals to provide help and advice when accessed.

Basic social psychological processes. Four different basic social psychological processes and their properties were identified in the theory *seeking to do what's best for baby*. The process

of *working through* was impacted by the mother's ability to navigate through the basic social psychological processes that are encountered. The basic social psychological processes are ones that are identified individually in literature as factors that facilitate or hinder the initiation of breastfeeding, exclusive breastfeeding, and the duration of exclusive breastfeeding. Little focus was placed on the differences between mothers living in rural or urban areas and the majority of the literature identified originated from studies conducted internationally rather than from within the U.S. While all of the basic social psychological processes are acknowledged as something that will impact success, little has been written that discusses how to address support of mothers who fail in their efforts to exclusively breastfeed or to acknowledge their inability to maneuver through the obstacles in their desire to do what is best for their babies. The following passages will present the four basic social psychological processes and their properties individually with the literature found regarding each.

Struggling. The act of struggling while exclusively breastfeeding is one experienced by many mothers although not well described in the literature. While *working through*, *struggling* describes the process that occurs with any issue that disrupts exclusive breastfeeding and requires effort to overcome. Indeed, each mother's struggle is personal and fluid in nature with the struggle occurring randomly, intermittently, or continuously. The concept of struggling in literature, however, was narrow and more commonly defined as the physical barriers that prevent successful exclusive breastfeeding. Joshi et al. (2014) described struggling as "challenges of breastfeeding" (p. 5) and focused primarily on the physical discomforts that mothers encountered which resulted in cessation of exclusive breastfeeding. Physical discomfort experienced while exclusively breastfeeding was also reported by participants in studies by Helps and Barclay (2015), Hjalmlhult and Lomborg (2012), Thet et al. (2016), and Charlick et al. (2018).

Properties of *struggling* are *sacrificing*, *changing emotions*, *encountering public stigma*, *pumping instead*, and *searching for help*. The extant literature supports each of these properties as barriers to breastfeeding success. Okafor et al. (2017) reported that a challenge of exclusive breastfeeding included the sacrifice associated with lack of sleep and Sheehan et al. (2010) reported that participants in their study felt emotional, fearful, and stressed while exclusively breastfeeding. All of these components play a part in a mother's ability to work through the process of exclusive breastfeeding. While extant literature exists that explores these concepts in the first days following delivery, none identified in this review beyond Sheehan et al. (2010) and Okafor et al. (2017) included any mention of the maternal perception of sacrifice or being emotional as barriers encountered while exclusively breastfeeding.

More literature was identified that touched on the perception of public stigma associated with exclusive breastfeeding. In the theory *seeking to do what's best for baby*, there was a constant perception of social censure associated with public breastfeeding. Charlick et al. (2018) reported *encountering public stigma* as a barrier to exclusive breastfeeding, titling it "Experiencing breastfeeding difficulties" (p. 23). Public stigma was also identified by Gewa and Chepkemboi (2016), Helps and Barclay (2015), and Hohl et al. (2016) as problematic due to the negative opinions participants in their studies experienced or the embarrassment felt while breastfeeding their infants in public. Charlick et al. (2018) included a discussion of a social stigma associated with bottle feeding as a new concept. In their study, participants reported that they believed that they were judged for offering their infant a bottle, regardless of the contents (expressed breastmilk or formula) (Charlick et al., 2018). This was not identified in the theory *seeking to do what's best for baby*, but is possibly an area that was not heard or explored in interviews due to the researcher's line of questions. Instead, participants reported *pumping instead* as a way to provide breastmilk while mothers were away from home or to increase milk

supply. While no other discussion of pumping as a method of continuing exclusive breastfeeding was noted in the literature reviewed, the theme was heard from all mothers in the study. The use of pumping was discussed as a measure of maintaining or increasing milk supply, providing breastmilk upon return to employment, and feeding when their infant would no longer feed at the breast. The lack of literature that touched on those issues related to exclusive breastfeeding to six months, even with the narrow literature constraints of this review, was surprisingly absent. This is one area in which new ideas about exclusive breastfeeding emerged from the present study.

One component of struggling that was well identified in the literature was that of searching for help. Indeed, seeking advice was supported in the literature by mothers attempting to navigate the barriers encountered when lacking knowledge while exclusively breastfeeding. When the mother is not able to resolve her issues through the basic social psychological process of *winging it*, she will seek help from family, friends, health care professionals, and through electronic media. Art et al. (2011) found that breastfeeding advice was actively sought from the fathers and grandmothers. Hjalnhult and Lomborg (2012) discovered that participants also sought help from health care services during the first weeks following birth, but did not explore the long-term help that might be required for exclusive breastfeeding to six months. Coduti et al. (2015) identified that while breastfeeding services were available for mothers, few actually sought them out while they were dealing with breastfeeding issues. This finding was echoed by Goodman et al. (2016) who reported that rural participants in their study were dissatisfied with the lack of information about community resources for long-term help with exclusive breastfeeding. While the information was not provided by health care professionals, the participants identified the resources themselves and attributed their success at exclusive breastfeeding to the help they received through the “Le Leche League, WIC, and Certified lactation consultants” (Goodman et al., 2016, p. 102). The identification of resources likely

began by mothers using the internet to identify resources and support with exclusive breastfeeding.

To that end, while *seeking to do what's best for baby*, mothers also sought help online. In a Pew Research Center report, Duggan et al. (2015) identified that mothers are more likely to initiate *seeking help* through internet sources as a first step to dealing with any issues they encounter while exclusively breastfeeding. This finding was not identified in any studies identified within the search limitations of this literature review but was discovered in the theory *seeking to do what's best for baby*. The use of online sources to provide mothers with information that helps them to navigate *working through*, especially for mothers living in rural areas, is an innovative resource that needs further exploration. It is noted that *seeking help* by “going online” is strongly aligned with the basic social structural process identified as *social media* as well as the basic social psychological process of *needing support*.

Needing support. *Needing support* while *working through* is a broader basic social psychological process of *struggling* and its property of *seeking help*. Two properties of *needing support* are *receiving validation* and *getting mixed messages*. The support in the theory *seeking to do what's best for baby* extended beyond receiving advice and hands-on help with mothering and included the reinforcement in a mother's beliefs and goals for doing what she considers to be best for her infant. *Needing support* is also well-documented as a facilitator of success in exclusive breastfeeding but is not limited to receiving help after seeking it. The support can be emotional as well as physical. Support as a contributing factor to successful exclusive breastfeeding is well-documented in quantitative research (Bowman, 2013; Coduti et al., 2015; Gewa & Chepkemboi, 2016; Ismail et al., 2014; Joshi et al, 2014). More description of the actual support received is reported in qualitative studies and aligned with the *needing support* process found in this theory. Studies by Arts et al. (2011) and Thet et al. (2015) both identified the

spouse as the main emotional and physical support while the mother was exclusively breastfeeding. Support from the father was also identified in studies by Alianmoghaddam et al. (2018) and Okafor et al. (2017) who found that the lack of spousal support negatively influenced the mother's ability to succeed at exclusively breastfeeding. Additional support from the grandmother (maternal or paternal) was frequently discussed in literature, but was cited as either a barrier or a promotor of exclusive breastfeeding (Arts et al., 2011; Bowman, 2013; Helps & Barclay, 2015; Ismail et al., 2014; Okafor et al., 2017; Thet et al. 2016). Hjalmhult & Lomborg (2012) and Sheehan et al. (2010) identified the need for continued social support beyond that of the immediate family to promote successful exclusive breastfeeding.

The support that is external to the family unit is essential to exclusive breastfeeding. Again, as in the previous studies reported here, support through education and intervention from health care professionals is significant to the success of exclusive breastfeeding (Hjalmhult & Lomborg, 2012). Yet, as with the theory *seeking to do what's best for baby*, the participants reported that there existed insufficient hospital and community support (Goodman et al., 2016). And again, as in the theory *seeking to do what's best for baby*, the support that was available was not always perceived to be delivered in a consistent and compassionate manner, deterring mothers from seeking the needed support from that agency (Goodman et al., 2016).

Needing support takes place beyond professional and family sources, especially for mothers who return to the workplace before six months. The separation of mother from infant during the work hours usually precludes a mother's ability to feed from the breast. The common solution is to express breastmilk by pumping to store and feed later. Mothers need support for that effort through dedicated time and space in which to pump while at work. In the theory *seeking to do what's best for baby* a common concern was that "lack of support" from employers that heralded an end to exclusive breastfeeding. Okafor et al (2017) and Hohl et al. (2016) also

found lack of employer support to be a barrier to exclusive breastfeeding. Additionally, other researchers reported that the mother's return to work was a predictor of an early end to exclusive breastfeeding (Coduti, 2015; Goodman et al., 2016; Hohl et al., 2016; Thet et al., 2016).

Currently there are active federal and state laws in the U.S that promote breastfeeding in the workplace for mothers. The lack of regulation of those laws in the workplace is concerning as is the lack of awareness by mothers of their right to breastfeed or pump while at work. This is one type of mixed message that mothers receive when attempting to practice exclusive breastfeeding.

Getting mixed messages. Not only are mothers not getting mandated support from employers supported by the federal government, they are receiving mixed messages from the health care community. Hospitals promote exclusive breastfeeding but do not seek Baby Friendly Status. Further, health systems endorse exclusive breastfeeding but provide a mixed message by sending the mothers home from the hospital with a formula and other formula manufacturing coupons and gifts. The message received by rural mothers is that they will have formula available when they fail.

This mixed message was found in the theory *seeking to do what's best for baby* and supported in literature by Hohl et al. (2016) and Coduti (2011) who reported that participants were confused over the message they got when receiving gifts containing formula supplements from the hospital where they delivered. As in the theory *seeking to do what's best for baby*, another mixed message occurs with when to introduce solids. Confusion ensues when mothers who are exclusively breastfeeding are advised to offer cereal between four and six months by their pediatricians or told to offer solid food when their infants began to reach for food at the table (Charlick et al., 2018). This suggestion was reported by more than one participant in the *seeking to do what's best for baby* study, especially for those who understood that exclusive breastfeeding constituted the provision of no other food or drink with the exception of oral

rehydration salts, vitamins, minerals, and medicines (WHO, 2016). Unfortunately, many mothers do not understand the meaning of exclusive breastfeeding, considering that what is meant is to not use formula supplementation and does not apply to initiation of solid foods (Arts et al., 2011; Charlick et al., 2018; Nor et al., 2018). These mixed messages are not only barriers to maternal success at exclusively breastfeeding, but also indicators of the level of consistency in education provided to new mothers. Indeed, if the goal is to exclusively breastfeed for the first six months of life, the message sent out must be consistent, unanimous, and based on evidence.

Receiving validation. A final property of *needing support* occurs when a mother receives validation for her efforts at exclusive breastfeeding. The concept is one that was found in the theory *seeking to do what's best for baby*. Hjalnhult and Lomborg (2012) also noted that seeking recognition was part of the process of prioritizing infant care, and Alianmoghaddam et al. (2018) identified that recognition of a mother's experience with exclusive breastfeeding was integral to continuation to six months. Sheehan et al. (2010) and Charlick et al. (2018) also found that the opposite of receiving validation – being judged – was destructive and discouraged the continued practice of exclusive breastfeeding. This is one factor that may lead a mother to *admitting fed is best*.

Admitting fed is best. Eventually, most mothers succumb to the other basic social psychological processes and come to the conclusion that feeding their babies by any means is better than letting them go without. In the theory *seeking to do what's best for baby*, some participants even reported being afraid that they were starving their babies because of their belief that they were not producing enough milk. The perception of insufficient milk supply was reported throughout literature as the most common cause of failure to exclusively breastfeed, as well as the cause of early cessation of any breastfeeding (Brand et al., 2011; Dennis et al., 2014; Gatti et al., Joshi et al., 2013; Thet et al. 2016). While they may or may not actually be

experiencing decreased milk supply, mothers *seeking to do what's best for baby* will believe the worst case scenario. The idea that they are not providing adequate nutrition is one that signifies failure and causes the mothers to quickly put their goals of exclusive breastfeeding aside in order to meet the needs of their babies. Participants in the grounded theory study by Sheehan et al. (2010) also identified this concept with the “realization that breastfeeding is not always doable” (p. 376). The idea was echoed by Helps and Barclay (2015) who identified that doing what was best may indeed be formula supplementation. Finally, in some cases, it was noted that the struggle with trying to breastfeed at all may be too much for a mother and she will cease breastfeeding altogether (Joshi et al., 2014). Supplementing with formula or complete cessation of breastfeeding may end *working through*, but it also signifies the end of exclusive breastfeeding and leaves the mother with the belief that she either has or has not done her best while *seeking to do what's best for baby*.

Surrendering or Succeeding

Upon completion of exclusive breastfeeding, mothers will reassess their efforts. Their ability to find satisfaction in having done their best leaves them validated and successful at *seeking to do what's best for baby*. Conversely, a mother who is not satisfied with her exclusive breastfeeding outcome or her effort may have lingering doubts and guilt over the process and her status as a “good mother.” Charlick et al. (2018) noted the positive aspect of *succeeding* is noted by participants who realized that early introduction of solids heralded an end to exclusive breastfeeding but were both satisfied and confident in their decision. Hjalmlhult and Lomborg (2012) reported both aspects: some participants succeeded but others suspected that the struggle was too burdensome. A final construct in the grounded theory conducted by Sheehan et al. (2010) aligned best with that of the theory *seeking to do what's best for baby*. The construct “qualifying” emerged and was identified by participants as the insight that “everybody's best is

different” (p. 376) and their focus should be on infant health and well-being, not personal validation. As in the study by Sheehan et al. (2010), mothers *seeking to do what's best for baby* all resolved their belief of *succeeding* or *surrendering* and moved forward in their efforts to do what is best for baby. Having concluded *working through*, all participants proclaimed they would exclusively breastfeed again despite the experiences encountered while *working through*. This resolution may not be experienced by some mothers and was missing from the literature. No other studies identifying the maternal perception of success or failure were noted, exposing a gap in the literature that requires further exploration.

Comparison of the Theory with Theoretical Literature

Linking a theoretical foundation to research allows the researcher to view the topic through a specific lens to help explain the phenomena that is being explored. Glaser (1978) wrote that “grounded theory stands on its own as a theory” (p. 11), and Holton and Walsh proclaim it to be philosophically unbiased. However, this is not completely true as the researcher came to the study with inherent personal philosophies that influenced how the data were viewed and interpreted. The researcher, as discussed in chapter one, identified her own theoretical viewpoint to be that of symbolic interactionism and will present here a discussion of the usefulness of symbolic interactionism in analysis and interpretation of the theory *seeking to do what's best for baby*. The theory will also be compared to the theory of planned behavior (Ajzen, 1991).

Symbolic Interactionism

Symbolic interactionism evolved as a social theory influenced by the early work of several social scientists, the most noteworthy being George Herbert Mead (Aksan, Kisac, Aydin, & Demirbuken, 2009). Mead wrote that symbols are developed by humans as a method to think, communicate, and to create order and meaning in their lives (Korgen & White, 2008). Herbert Blumer, a student of Mead's, expanded on the concept by identifying basic assumptions and

called the theory symbolic interactionism (Aksan et al., 2009). The theory explains social behavior in terms of how humans interact with each other using a complex set of symbols that they have given to objects, events, and behaviors to provide meaning to the world in their perspective. Symbolic interactionism views the individual during small scale interactions to explain the individual in society and their interactions with others to explain social order and change as a whole (Aksan et al., 2009). The theory is based on three core assumptions: 1) human actions are based upon the meaning of the symbols that they have ascribed to those objects, events, ideas and other human interactions; 2) the meaning of the objects is influenced by interactions with others and with society; 3) the meaning of symbols is interpreted by humans based on their experiences dealing with specific events and are subject to change (Blumer, 1969).

Symbolic interactionism is frequently used as a philosophical foundation by grounded theory researchers. It has been found to help with the synthesis of data, aligning smoothly with the grounded theory *seeking to do what's best for baby* as a foundation to examine the social processes that influence behaviors as a result of relationships and socialization with others (Burbank & Martins, 2009; Leeming, Williamson, Lyttle, & Johnson, 2013). This was especially true in this case as the maternal self-identity is intimately embedded in relationships with others through the process of exclusive breastfeeding while *seeking to do what's best for baby*.

Seeking to do what's best for baby. "Self" is a core concept in social interactionism and is influenced by interactions with others (Korgan & White, 2008; Blumer, 1969). The transition to motherhood is one in which the "self" is reevaluated and transformed in order to revise the self-identity, in this case to that of a breastfeeding mother. The transformation does not occur independently and is shaped by interactions with all individuals that mothers come in contact with during the process. This begins even before pregnancy as the opinions of others influence how a mother's ideas and beliefs of what "doing the best for baby" are integrated into planned

behaviors (Leeming et al., 2013). Behaviors are then revealed as the interpretation of an ongoing dialogue between the “I” who acts and the “me” who interprets the self that is reflected by others (Korgan & White, 2008; Blumer, 1969).

Evolving internal conditions. *Evolving internal conditions* are overarching concepts that influence the process of *working through* while *seeking to do what's best for baby*. A period of pre-pregnancy nescience occurs prior to motherhood in which the woman has no personal experience with exclusive breastfeeding but is exposed to the ideas from outside sources or is influenced by what Mead (1934) termed “others” around her. After pre-pregnancy nescience ends and the woman enters motherhood, the influence of social interactions from others influence her decisions and behaviors. “Others” is a broad term for society and social interactions including those from family, friends, health care professionals, and sources of telecommunication. Mothers experience that influence from the evolving internal condition, *enculturating*, as they observe and communicate with others throughout the process of *working through*. During this process they develop symbols as opinions are being formed and beliefs that will lead to specific behaviors. Based on their communication, women will identify that exclusive breastfeeding is symbolic of what is “best” for baby and will initiate the practice to provide that “best” when the time occurs. Indeed, breastfeeding may be seen as the ultimate symbol of motherhood.

Working through. Making sense of what is required to become a good mother takes place within the context of interactions and communications with others. Based on the assumption that individuals will interpret and create meaning from interactions with others (Blumer, 1969), women who are *seeking to do what's best for baby* will change and adapt their behaviors while encountering the basic social processes identified in the phase *working through*. The likelihood of meeting barriers or successes while *working through* has been discussed and

all are resolved or celebrated through external communication and social interaction. Examples include the social interaction found in mothers proclaiming their main support to be their significant other, relying on their own mothers for support and advice, seeking help from both family and professional help when experiencing issues, and even in searching the internet for knowledge when in doubt. These interactions have meaning to the mothers and become symbolic, representing how they believe that they are being perceived by others (Burbank & Martins, 2009). The mothers change their behaviors based on that view as it relates to the specific situations they are encountering (Burbank & Martins, 2009).

The basic social processes identified in the theory *seeking to do what's best for baby* then are all opportunities for social interaction. The third assumption of symbolic interactionism relates to the internal conversations that occur as the individual considers how others will respond when they demonstrate a specific behavior (Blumer, 1969). The mother's ability to change her behaviors based on her internal conversation and beliefs then helps her to establish her self-identity as she relates to others and group memberships (Leeming et al., 2013). The process of symbolic interaction affords each individual their own interpretation of actions and symbolic meaning for each encounter and situation, and yet is one that may be shared with others (Aksan et al., 2009). A limitation of symbolic interactionism is noted when the identified symbol is not shared by others, in this case, the importance of exclusive breastfeeding as a form of "best." The symbolic meaning may change for the mother (*fed is best*) or she may have difficulty dealing with the basic social processes encountered (*working through*) (Askan, et al., 2009). The situations related to exclusive breastfeeding are continually changing as are the interactions and perception of "others" in behaviors of mothers who are exclusively breastfeeding. This narrow view is another limitation of symbolic interactionism as the mother may be so focused on social

interactions (*needing support*) that she may not be able to comprehend the larger issues of societal forces (*health care and mixed messages*) (Aksan et al., 2009).

Theory of Planned Behavior

The theory of planned behavior supports the theory *seeking to do what's best for baby*. The theory of planned behavior has been used by multiple studies to evaluate breastfeeding intention, initiation, exclusive breastfeeding, and duration of breastfeeding (Bowman, 2013; Lau, Lok & Tarrant, 2018; McMillan et al., 2007; Zhang, Zhu, Zhang, & Wan, 2018). The theory of planned behavior links beliefs to behavior and proposes that an individual's attitude toward behavior, subjective norms, and perceived behavioral control combine to influence an individual's behavioral intentions and behaviors (Ajzen, 1991). The theory proposed to explain all behaviors over which individuals have an ability to exert self-control (Fishbein & Ajzen, 1975).

The constructs that form the original theory of planned behavior are attitude, subjective norms, perceived behavioral control, and intention. Attitude is formed through past experiences and may be either positive or negative towards the behavior (Ajzen & Madden, 1986). Attitudes regarding breastfeeding are developed through the observation of family or friends feeding their infants, during public encounters with breastfeeding mothers, and from external sources providing information about breastfeeding. Subjective norms refer to the perceived social pressure that an individual believes exists compelling them to perform a behavior (Ajzen & Madden, 1986). Breastfeeding norms are determined by a woman's insights into how the practice is regarded by family, friends, and society as whole. Perceived behavioral control refers to the individual's perception of the level of difficulty of the behavior (Ajzen & Madden, 1986). In relation to breastfeeding, the perceived behavioral control is variable and may be influenced by a mother's observations of others breastfeeding or from a previous experience herself.

Intention is an indication of the willingness to put forth the effort to complete an action (Ajzen, 1991). Intention is an antecedent to behavior and is influenced by attitudes about the behavior (Ajzen & Madden, 1986). Therefore, the probability of performing a behavior increases as the strength of intention increases (Fishbein & Ajzen, 1975). This intention plays a part in the success of exclusive breastfeeding with the higher the level of intention, the more likely the mother is to succeed (Bowman, 2013). Breastfeeding intention is a measurable construct with several instruments available for researchers and has been shown to align well with self-efficacy and motivation to assess breastfeeding intention and effort. The basic constructs of the theory of planned behavior presented a process for decision-making that aligns well with the new theory *seeking to do what's best for baby*.

Seeking to do what's best for baby. In the theory *seeking to do what's best for baby*, mothers identify that they want to exclusively breastfeed to provide “what is best” for their infant. This intention is a goal that will promote them to perform the actual behavior of exclusive breastfeeding. The intention is formulated through a process of observations and beliefs formed prior to pregnancy and throughout the breastfeeding process.

Evolving internal conditions. *Evolving internal conditions* are concepts of the theory *seeking to do what's best for baby* that closely align with the constructs of the theory of planned behavior. The period of pre-pregnancy nescience is an opportunity for women to develop their attitudes and subjective norms related to exclusive breastfeeding before any behaviors are required. After pre-pregnancy nescience ends and the woman enters motherhood, she will explore her attitudes, subjective norms, and perceived behavioral control to determine a method of infant feeding that will be best for baby. The concept of *enculturating* identified in the theory *seeking to do what's best for baby* describes the exposure to external beliefs that influence and shape women's attitudes and identify their beliefs regarding exclusive breastfeeding importance

(subjective norms). The concept of *believing* also has similarities to perceived behavioral control with the mother assessing her ability to exclusively breastfeed and determining that she has the skill to succeed at it if she chooses.

Working through. The insight that achieving a set goal is dependent jointly on an individual's motivation and ability is core to the theory of planned behavior (Ajzen, 1991). This was also identified in the theory *seeking to do what's best for baby*. The level of intention noted in *being determined* is key to the success of either theory with the higher level of intention (motivation or determination) correlated with the success of completing the behavior (exclusive breastfeeding).

The basic social psychological processes encountered while *working through* are comparable to the components of the theory, although each basic social process generates a complete cycle of the theory of planned behavior. For example, the following scenario applies the theory of planned behavior to the property of *struggling: encountering public stigma*. A mother has developed attitudes about public breastfeeding based on the reports of other mothers who have experienced public stigma. She explored social media and other forms of telecommunication to learn more about the issues related to public breastfeeding. She may have even experienced her own episode of being ostracized while breastfeeding her infant in public. The subjective norm of other mothers who are exclusively breastfeeding was to do so even when in public areas. There is encouragement from her significant other in support of her choice to breastfeed in public. She became aware of a media campaign that is prominently featured on social media, and new laws passed in the federal government addressing the rights of breastfeeding mothers that give them the right to breastfeed in public. These beliefs combined with her perception that breastfeeding in public is still just breastfeeding, a skill that she has already attained, and identified breastfeeding in public to be a low level of difficulty. Her

intention, then based on her attitude, subjective norm, and perceived behavioral control, is to breastfeed her infant if needed while at church the next morning. When the situation occurred the next morning, she was prepared by wearing a blouse that was easily adjusted to allow the baby to nurse and had a cover-up in case more covering was needed. She made her spouse aware of her intent and when her infant began to demonstrate signs of hunger, she put child to her to breast and nursed.

Limitations of the theory of planned behavior can be addressed by this scenario as well. The theory of planned behavior assumes that the mother will have the opportunity and resources to be successful when in fact this is not always the case. In the case of public stigma, a mother may not be prepared to breastfeed in public at the moment her infant demonstrates the signs of hunger, or the environment may not be one where breastfeeding is convenient for the mother. Another limitation in the theory of planned behavior was noted in the lack of accounting for other variables that may impact behavioral intention and motivation, such as emotional state and previous experience. Finally, the theory *seeking to do what's best for baby* is not constrained by a linear decision-making process comprised of intention and then behavior. The theory *seeking to do what's best for baby* allows the mother to reflect on multiple different scenarios and experiences about public breastfeeding, and it also allows her to change her beliefs and behaviors over time.

Summary

Aspects of both the theory of planned behavior and symbolic interactionism can be found in the newly discovered theory *seeking to do what's best for baby*. A similarity that was identified in both is the idea that the intention to exclusively breastfeed is influenced by opinions and beliefs external to the individual. Those opinions help a woman choose to exclusively breastfeed and the level of her commitment influences her ability to do so. While there are

similarities, there are also components of the two theories that detracted from the grounded theory finished product of *seeking to do what's best for baby*. The most notable was the failure of symbolic interactionism to account for changes in ideas and beliefs over time precluding a change in behaviors learned through trial and error. Another limiting difference was related to the linear process of the theory of planned behavior that does not take into account the flexible, back and forth of the basic social processes experienced in of the theory *seeking to do what's best for baby*.

Critique of the Theory

A critique of the new grounded theory *seeking to do what's best for baby* is conducted here using the Lincoln and Guba (1985) criteria to assess rigor in qualitative research. Critique using the four criteria for assessing a substantive ground theory set by Glaser and Strauss (Glaser, 1978) is also presented. A discussion of the limitations of the study are included.

Credibility

According to Lincoln and Guba (1985), credibility of the study relates to the alignment of findings to the actual experiences of the participants. Credibility was achieved through a precise analysis of data using constant comparison. The concepts and the substantive theory emerged from the data attained through the process set by classic grounded theory method. The concepts and descriptions of basic social processes forming the structure of the theory are derived directly from participant report. A return to the literature to expand on ideas further supported the credibility of the data ensuring credibility of the theory.

Transferability

Transferability, as suggested by Lincoln and Guba (1985), refers to the ability of the research findings to be relevant in other settings. The theory conceptualized the process of *seeking to do what's best for baby* by a designated group; however, the concepts are also

transferable to other groups of mothers practicing exclusive breastfeeding as found by sharing the findings of the study with non-participants. All women who had experienced breastfeeding could find their own experiences in the theory. Future research is needed to determine if the theory is transferable to explain other situations that are influenced by social basic processes.

Dependability

Dependability ensures that the findings are consistent and dependable despite the ongoing processes of the phenomenon being studied, according to Lincoln and Guba (1985). The researcher was careful to create an audit trail by note-taking, memoing, and sorting to demonstrate dependability of the theory. All concepts and their properties were directly traced back to the data. The audit of data provided a clear description of the process to ensure that concepts were clear and representations of the data collected were accurate.

Confirmability

Confirmability describes the degree of objectivity that is noted in the data (Lincoln & Guba, 1985). The first step in achieving confirmability was to put aside preconceived ideas and bias related to the researcher. This was done through a self-interview at the beginning of the study to prevent forcing the data (Glaser, 1989). Confirmability was identified through the audit trail, described above, by providing a clear detail of the process collecting, analyzing, and reanalyzing using constant comparison to identify that the data were not influenced or forced.

Fit, Workability, Relevance, and Modifiability

Glaser (1978) identified four criteria to assess the accuracy of the substantive theory generated by the research. The intention of the researcher thus was not to assess the data for validity, but to determine its accuracy by judging it for fit, workability, relevance, and modifiability.

Fit. “Fit” describes the relationship between the data and the concepts. Each of the concepts identified in the theory *seeking to do what's best for baby* emerged directly from the data and was traceable to the participants through the audit trail established. Careful assessment of data were conducted and no forcing of the data through researcher bias was identified. A clear relationship between the participants' stories and the concepts were found in the theory *seeking to do what's best for baby*.

Workability. Workability is the ability of the generated theory to account for the main concern of the participants in the substantive area (Holton, 2008; Lomborg & Kirkevold, 2003). *Seeking to do what's best for baby*, the title of the theory, was also the main concern identified. The concepts that emerged included the identification of basic social processes that influenced the ability of the mothers to resolve their main concern. The processes identified were able to explain, interpret, and predict the outcomes of mothers attempting to exclusively breastfeed their infants for six months while *seeking to do what's best for baby*.

Relevance. Relevance refers to the importance of the research (Glaser, 1998). The new theory, *seeking to do what's best for baby*, emerged from the data and stories collected from participants describing their efforts with exclusive breastfeeding. The concepts arose from their main concern of trying to do what they considered best for their infant through exclusive breastfeeding. The emerging concepts were generalized, but each participant was able to identify their own journey in the process of *seeking to do what's best for baby*. Furthermore, after sharing findings with non-participants, it was discovered that they had the same ability to relive and commiserate previous breastfeeding experiences through the theory.

Modifiability. Modifiability is the ability of the research to adapt and change as new data emerges or is introduced (Holton, 2008). Many revisions of the concepts, properties, and stages of the theory *seeking to do what's best for baby* occurred during the process of data collection

and analysis. The original premise that the process was a decision-making process was modified once the influence of basic social process was identified. An ongoing mixing and remixing of components and their properties was conducted to fully encompass the basic social processes and the experiences of the mothers as they navigated them. Other adjustments of the theory included the narrowing of concepts to focus on a single idea or experience. The ongoing efforts of the researcher to give priority to maintain the clarity of the data attested to the modifiability of the theory.

Limitations

The researcher identified several limitations while conducting this study. The sample size was small with only 19 participants supplying content for analysis and reaching early saturation of data. The participants were comprised of a relatively homogenous group. The nature of the study precluded participation by men and narrowed the age range to women of childbearing years with all participants of a similar age. Other group similarities were related to living in a designated rural area and distance to health care services. The participants in this study were more highly educated than anticipated, potentially due to the recruitment methods and the willingness of educated women to contribute.

Another participant-related limitation was identified when one participant self-identified late in an interview that she did not meet two of the inclusion/exclusion criteria having had a history of Buprenorphine use and her baby being admitted to NICU. The interview was completed and the data translated to field notes. The memos and coding were not affected by the inclusion of this participant's data. Indeed, there were such similarities to other data collected that the researcher was struck by commonalities despite the breach of protocol.

Recruitment of participants was identified as problematic and a limitation of the study. Initial attempts at recruiting were unsuccessful until the offer of a gift card for participation was

included in the recruitment letter. Concerns that participants joined the study for the gift card were considered. While this may have been a motivation for joining the study, the rich accounts from all participants were judged to be honest and pertinent.

Finally, the experience of the researcher was a limitation. The researcher presumptively believed there to be a decision-making process occurring that influenced exclusive breastfeeding to six months. This belief was found to be invalid early in the interviews creating a change in focus. Additionally, the researcher has personal and professional knowledge of exclusive breastfeeding which may have presented some bias into the analysis. The researcher found maintaining a nonjudgmental frame of reference challenging at times, especially when hearing of unprofessional behaviors demonstrated by health care professionals. The novice researcher did her best to remain impartial and to refrain from comment. Previous insights and experiences were eventually put aside as the theory began to emerge from the interviews and data analysis.

Implications for Nursing

The new grounded theory of *seeking to do what's best for baby* is one that has many potential implications for nurses and the discipline of nursing. While the theory speaks of the mother caring for her infant, the need for changes in education, practice, breastfeeding policy, and research was identified as essential to promoting exclusive breastfeeding and maternal success in doing what is best for her baby. Further, the need for closer scrutiny of the health care and organizational policies related to exclusive breastfeeding is essential.

The Discipline of Nursing

Newman, Sime, and Corcoran-Perry (1991) propose that the focus of the discipline of nursing is "caring in the human experience" (p. 3). Health, caring, consciousness, mutual process, patterning, presence, and meaning are concepts central to the discipline of nursing (Newman, Smith, Pharris, & Jones, 2008). In keeping with the focus and concepts, the new

grounded theory *seeking to do what's best for baby* contributes to the discipline of nursing by exploring the meaning of the situations experienced by new mothers as they exclusively breastfeed, provides an understanding of the pattern of evolving forces shaping their experiences, and guides future actions to promote exclusive breastfeeding (Newman, Smith, Pharris, & Jones, 2008).

Each of the seven concepts was identified as integral to the participatory process of knowledge development. The health of mothers and infants is impacted by long-term feeding choices with recommendations from the AAP (2012) and WHO (2013) for exclusive breastfeeding through the first six months of life. The intent of the relationship between researcher and participant was to understand all situations that promoted success or failure of exclusive breastfeeding to better understand the experience (Newman et al., 2008). A commitment to the caring relationship was established by the valuing and supporting of the participants' stories as they were shared with the researcher (Newman et al., 2008). The incoming data provided a new awareness, or consciousness, of the experiences that mothers encountered while they attempted to do what was best for baby and began to resonate as shared experiences between the participants (Newman et al., 2008). The relationship between the researcher and participants was enhanced by the researcher's commitment to understanding the meaningful events and situations being shared by the participants during this mutual process (Newman et al., 2008). The incoming data coalesced during the back and forth process of grounded theory analysis to reveal emerging patterns and relationships exposing the evolving nature of the concepts (Newman et al., 2008). The researcher was fully present during the interview process, providing an environment totally focused on the participant and her story (Newman et al., 2008). Finally, through identifying the unfolding concepts, the meaning of the whole – *seeking to do what's best for baby* – emerged (Newman et al., 2008).

The new substantive theory that emerged from the data explains the main concern of rural mothers: *seeking to do what's best for their baby*. The individual stories identified in the process transcended into a conceptual description of how new mothers navigate the basic social processes encountered while exclusively breastfeeding. The knowledge gained from this theory highlights the human experience of exclusive breastfeeding and provides nurses insight into specific measures to promote exclusive breastfeeding.

Education

Mothers in this study chose to exclusively breastfeed because they believed they were doing what was best for their infants. The theory of *seeking to do what's best for baby* suggests that to promote success, health care workers must provide mothers with comprehensive education opportunities promoting exclusive breastfeeding prior to delivery, and offer resources for continued education throughout the duration of their breastfeeding efforts. Education offered only during pregnancy will increase the rate of initiation but will not support long-term exclusive breastfeeding (WHO, 2016a). This includes elaborating on what the actual practice of exclusive breastfeeding involves. Many mothers do not understand that the introduction of cereal before six months ends their exclusive breastfeeding effort. Having an understanding of what defines exclusive breastfeeding may produce an increase in the duration of exclusive breastfeeding for some mothers.

The educational resources must also be available for families as well as mothers. Educating fathers and grandmothers can promote successful exclusive breastfeeding through both hands-on and emotional support. The lack of familial support has been shown to interfere with exclusive breastfeeding. Including families in breastfeeding education and advocating for exclusive breastfeeding may be one way to help achieve success.

Nursing and Clinical Practice

The need for consistent and standardized education for rural mothers is essential to success in exclusive breastfeeding. For this to occur, nurses must be trained to provide consistent and standardized education and care to new mothers. Additionally, this education and care must be uniform between nurses and practitioners and in accordance with CDC recommendations for breastfeeding (Baby-Friendly USA, 2012; CDC, 2015). Nurses who provide care for new mothers must complete and integrate into practice current evidence-based methods to establish early exclusive breastfeeding for mothers in their care. One method to establish consistency is to include exclusive breastfeeding policies into annual hospital competencies, assuring that nurses working with new mothers maintain consistency in practice while being provided with updates and current trends. Another method is for nurses to integrate Baby-Friendly practices into standard care for new mothers. While the implementation of Baby-Friendly policies to promote conformity of education and care in hospitals is critical, so is the need for more hospitals in rural U.S. communities to seek Baby-Friendly hospital status. This initiation does not need to be led by hospital administration. A grassroots group of bedside nurses leading the change can be a motivator of policy change in the hospital where they practice. Nurses may not have the ability to petition their organization to seek Baby-Friendly Status, but they do have the ability to integrate individual Baby-Friendly steps that are found to promote exclusive breastfeeding into practice. This can be done on both a personal and unit level to demonstrate to new mothers that the staff are united and supportive of their exclusive breastfeeding goals.

A repeated theme of a perceived lack of compassion and assistance from bedside nurses and lactation consultants was heard from participants during interviews. This failure to provide mothers with support during the first days following delivery later impacted the mothers' willingness to seek out help when *struggling* with exclusive breastfeeding. The perception of

lack of caring by nurses and lactation consultants is very concerning and must be addressed. This may be through the form of a personal and unit assessment of breastfeeding beliefs and practices. Upon identifying any issues, nurses and lactation consultants must develop a standard of practice that is both consistent and compassionate. All nurses and lactation consultants must deliver compassionate care while providing the hands-on skills and education needed for the mother to establish exclusive breastfeeding. Uniformity in care and education is required to prevent mixed messages and inconsistent practices. This includes providing mothers with information about breastfeeding resources that are available to them after discharge.

External resources that promote continued exclusive breastfeeding must be published and offered to all breastfeeding mothers. Breastfeeding education and services that are only available for mothers who are able to easily return to the hospital for help are inefficient in this age of technology. Mothers overwhelmingly reported using social media for education and support during breastfeeding, yet the sites they are exploring may not be vetted for authenticity or accuracy. Education for mothers that helps them to choose sites that are reviewed and endorsed would promote further success for this generation of mothers who seek help online as the first source of information. This opens up an opportunity for community hospitals, especially those in rural areas, to promote education and support through their own online social media sites to support breastfeeding mothers who are *needing support*, *seeking help*, and *lacking information*. A social media site managed by hospital lactation consultants would benefit patients and potentially decrease the instance of out-patient visits, as well as invite participation from mothers who do not access out-patient services.

Finally, the need to cease offering mixed messages to mothers is paramount to promoting exclusive breastfeeding to six months. This was reported as problematic by the participants in the *seeking to do what's best for baby* study. The specific concern was voiced by mothers who were

given formula following discharge from the hospital after giving birth. This gift from the hospital instead implied to mothers that they may need the formula or that they may not be capable of exclusively breastfeeding. The message was one of lack of confidence in the mothers' ability to exclusively breastfeed and another of lack of caring by the hospital. This single act discredits the institution and confuses the mothers. A second area of concern is the advanced practice nurses and physicians who promote the introduction of solids (cereal) for infants between the age of four and six months. Advanced practice nurses and physicians should comply with the guidelines of the AAP, the CDC, and WHO by removing this incorrect message from their patient literature while being consistent in providing patient advice. Acknowledging that the journey of breastfeeding is individual and specialized for each mother/baby dyad, the base line information must still be consistent and evidence-based following the set guidelines.

Breastfeeding Policy

Community, state, and federal policies related to breastfeeding must be reviewed, revised, and enforced. Participants in this study reported the lack of knowledge regarding their rights for breastfeeding in public and in the workplace. Mothers reported being allowed to breastfeed their infants or pump their breasts at work but then were forced to do so in a non-private place or in a bathroom. Laws that endorse public and workplace breastfeeding or pumping are state-specific but are all supportive in their language of advocacy. Unfortunately, the message is not publicized or enforced. Methods to communicate a mother's right should be easily found and not buried in websites of federal and state laws.

Workplace policies are also of concern to mothers who are practicing exclusive breastfeeding. Mothers reported that they must return to employment to maintain household finances as well as to retain their positions. The amount of time afforded a mother for maternity leave varies from place to place but is traditionally limited to only six weeks. This limited time

frame is a barrier that often heralds an end to exclusive breastfeeding. Policies on maternity leave must be reviewed and additional time offered to mothers who choose to remain home to exclusively breastfeed.

Research

The findings of this study exposed many gaps in literature and demonstrated many avenues of future research that would promote exclusive breastfeeding practices for rural women. A majority of the empirical literature concerning exclusive breastfeeding for rural populations is from international studies. The need for research focusing on rural U.S. populations was identified. Other areas that were identified as needing specific emphasis include: exploration of theory concepts, assessment of educational innovations, enculturating to breastfeeding, providing additional resources, and failing in exclusive breastfeeding.

Exploration of theory concepts. Each concept that emerged in the theory *seeking to do what's best for baby* suggests additional research for further exploration.

Working through. This core category is complex and is influenced by the property *being determined* and four concepts identified as basic social psychological processes. Research has been conducted that explores determination as a predictor and factor of initiating breastfeeding, breastfeeding duration, and exclusive breastfeeding. Taking this finding another step further, researchers can use the same developed instruments to identify how determination impacts the process of *working through*. Does determination predict success? In the theory *seeking to do what's best for baby*, surrendering represents the mother's belief she was unable to do what was best for her baby. How does determination impact that belief? Do mothers who surrender have low levels of determination as measured by an instrument? Are levels of determination different between different groups?

Additionally, further exploration is needed to identify how the four concepts and their properties impact each other. Is there a pattern of movement between each that has not been identified? Is there a point in one concept that determines if a mother will cease exclusive breastfeeding, *surrendering*? Is this process the same for other populations of mothers?

Struggling. A large part of the process of *working through* is contained in the concept *struggling*. *Struggling* is comprised of five properties that all impact the struggle that is experienced while exclusively breastfeeding. Additional research is suggested for each property.

Pumping instead occurs when a mother wants to continue exclusive breastfeeding but must return to employment. Doing this ends exclusive breastfeeding (WHO, 20015a). What is the number of women who are *pumping instead*? How many mothers believe that they are exclusively breastfeeding by only providing breastmilk to their infants? Should the definition of exclusive breastfeeding be amended to include providing breastmilk via bottle? Is there a different maternal or infant outcome of feeding breastmilk from the breast versus breastmilk from the bottle?

Public stigma. The participants in this study all had strong opinions about public breastfeeding and perceived that there was a stigma attached to the practice. Yet, few actually experienced public stigma while breastfeeding. This creates the question, is public stigma a residual idea or an actual experience? Where is public stigma happening? What is the response to public stigma by mothers? Is public stigma isolated by group or geographical area? Is the response different based on culture or ethnicity? Is there any current movement that is effective in discouraging public stigma? What is the effect of social media on fear of public stigma?

Searching for help. All mothers in this study sought help at one or more times during their exclusive breastfeeding experiences. Additional research is needed that investigates not only how mothers seek out help for exclusive breastfeeding issues but also what resources they

are using. The participants in this study all turned to internet resources or social media for answers to their questions rather than contacting local real-time services. The implication was that there was lack of trust from local resources, or lack of understanding of what services were available. This begs further research that explores what services are available to breastfeeding mothers. How are the services promoted? Which mothers are taking advantage of face-to-face services? Are there specific characteristics of women that use the services provided by hospitals and communities? Can services be tailored to promote increased use by low-use populations? How has social media and access to the internet impacted the use of face-to-face breastfeeding services? More discussion about social media is included in the section 'providing additional resources'.

Needing support. Participants in this study identified that they received support from many different sources. Insight into the different sources and what types of support they received from each would help practitioners target educational activities and interventions to promote exclusive breastfeeding success. Additionally, identifying current support systems would expose gaps allowing researchers and practitioners to intervene to provide the needed support to sustain exclusive breastfeeding.

Admitting fed is best. Mothers trying to do what is best for their infant turn to alternative feeding methods (formula, cereal, etc.) when they believe they are not providing their infant with enough breastmilk to satisfy them. What transpires that supports the mother's belief that she is not providing enough nourishment? Can additional education influence a mother's perception of insufficient milk supply? How do mothers determine breastmilk insufficiency? In light of the drive for exclusive breastfeeding, how do health care professionals counsel mothers who are experiencing breastmilk insufficiency?

Assessment of educational innovations. The incidence of breastfeeding initiation has increased but the understanding of exclusive breastfeeding, what it is and why it is important, has not been as successful. Many mothers believe that exclusive breastfeeding is best for their infants but the information that supports the practice or describes the benefits to both mother and infant is not known. While the need for education has been previously discussed, further research must be conducted to determine the type of educational interventions needed, effectiveness, and results of the interventions that are crucial to promoting exclusive breastfeeding. Further, the results and information gained must be disseminated to build upon the knowledge base that promotes exclusive breastfeeding.

Enculturating to exclusive breastfeeding. The majority of participants in this study had decided to exclusively breastfeed because it was how they believed their infants should be fed. This enculturating was consistent with the literature but was not fully explored. Questions that arose include: Do all mothers identify exclusive breastfeeding as a social norm in the U.S.? Is this enculturating generalizable to all populations in the U.S. or is it population-dependent? Does social media impact this belief? Answers to these questions are likely to promote a better understanding of how the decision to initiate exclusive breastfeeding is made, but would also give insight into how measures add exclusive breastfeeding to six months as a cultural and social norm.

Providing additional resources. Mothers interviewed in the *seeking to do what's best for baby* study had mixed ability or desire to access professional resources when they identified needing outside help. Mothers chose not to seek resources from professionals because they had previously experienced indifferent care, inconsistent information from health care professionals, and failure to address issues. Limited research fully explores the experiences of mothers and their unwillingness or inability to seek professional help for breastfeeding issues. This gap

reflects the lack of knowledge to help design resources and programs that would promote breastfeeding and exclusive breastfeeding for mothers. Research is also needed to identify attitudes and experiences of the professionals who provide care and resources for breastfeeding mothers. A better understanding of their perspective may shed light on what measures are needed to promote the resources that are available or create new ones.

Access to external sources is also influenced by the time and distance required to meet with health care practitioners. This barrier has been identified in previous research but few studies have identified any alternative method of providing resources. The need exists for researchers to explore other options for providing mothers with long-term support and advice while promoting exclusive breastfeeding to six months. Considering the availability and ease of current online technologies, more effort should be focused on employing telecommunication for breastfeeding support. The opportunity for novel interventions and methods of support needs to be critically evaluated by research with the results disseminated to provide a base of knowledge to further promote exclusive breastfeeding resources through telecommunication.

Failing in exclusive breastfeeding. Future research that focuses less on predictors of success and more on the actual experiences that impact exclusive breastfeeding success is needed. Literature identifying differences by geographical area was found but the causation of the differences was not. Research that is population and area specific is needed to identify why mothers in some areas fail to exclusively breastfeed to six months. The theory *seeking to do what's best for baby* identifies a basic social process that rural mothers engage in while attempting to exclusively breastfeed, but is the theory valid with other groups? What are the differences and similarities in why they do not succeed?

Little has been written that discusses how to address support of mothers who fail in their efforts to exclusively breastfeed or to acknowledge their inability to maneuver through the

obstacles in their desire to do what is best for their babies. What is the decision-making process that occurs when a breastfeeding mother returns to the workforce? How does the failure to meet a goal of exclusive breastfeeding to six months impact continued breastfeeding efforts? The knowledge that breastmilk is dose dependent is essential to share with mothers to promote the idea that “any breastmilk is better than none” and research that can highlight that message is needed.

A final area that was found to be very concerning was the identified shaming occurring when mothers choose not to exclusively breastfeed or are unable to exclusively breastfeed. This message was heard by participants in this study as well as found in the literature (Coduti, et al., 2015; Sheehan et al., 2010). The image of exclusive breastfeeding at all costs has been identified by mothers and found in the messages from both health care professionals and through social interactions. Research to further explore the concept of shaming is critical to understanding how and when it occurs. Exclusive breastfeeding is a singular journey, and the focus must be on the individual rather than the social norm or routine to guide health care resources.

Conclusions

Seeking to do what's best for baby represents a new substantive theory that explores how rural mothers attempting to exclusively breastfeed for the first six months navigate the basic social processes encountered, and resolve their main concern of doing what is best for their baby. The process is comprised of three stages that occur over time and includes a single cutting point between the first two stages: the first before pregnancy and the second after entering motherhood. Mothers are influenced in their decision to exclusively breastfeed by their families and social interactions that promote the practice. Upon deciding to engage, they find that they are faced with both basic social psychological processes and basic social structural processes that may support or hinder their success at exclusive breastfeeding. Exclusive breastfeeding ends the

process of *working through* and the mother is left with the emotional response of *succeeding* at her goal to do what is best for baby or *surrendering* to the realization that she did not do what was best. Regardless of the response, the mother will eventually move forward in her plans to do what is best for baby.

The theory *seeking to do what's best for baby* is supported by both scientific and theoretical literature. It helps to fill the gap in knowledge that was noted between the decision by mothers to exclusively breastfeed to six months and the end of their exclusive breastfeeding experience. The knowledge that previously exists does not fully explain the experience nor personalize the journey that occurs when exclusively breastfeeding. Additional research is called for to promote the practice of exclusive breastfeeding for both mothers and practitioners, as the lack of consistency in information and care impacts all mothers who are *seeking to do what's best for baby*. The issues relating to exclusive breastfeeding have not changed over the last thirty years, yet new literature identifying methods to improve the statistics are slow to emerge. This research employs grounded theory to return to the root of the problem by exploring “what was going on” and discovered several new insights that beg further exploration by all researchers to promote healthy outcomes for infants living in rural communities.

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Appendix A: Examples of Tentative Hypotheses *Inherent in the Theory*

- *Seeking to do what's best for baby* is a linear process occurring in three stages that accounts for the main concern of mothers attempting to exclusively breastfeed to six months.
- The stage of *pre-pregnancy nescience* precedes the second stage of *working through*.
- *Being determined* influences a mother's ability to succeed at *seeking to do what's best for baby*.
- The basic social structural process *family structure, customs, and hierarchy* influence the three-stage process *seeking to do what's best for baby*.
- The basic social psychological processes account for the variation in the pattern of behavior experienced by the mothers *working through*.
- *Sacrificing* is a property of *Struggling*.
- *Needing support* is negatively influenced by its property, *getting mixed messages*.
- The second stage of *working through* ends with the third stage *surrendering or succeeding*

Appendix B: Examples of Field Notes Depicting Concepts and Stages

Examples of Stage I: Pre-pregnancy nescience with influence of evolving internal conditions *enculturating, lacking knowledge, and believing.*

1FR-7/25/2017: She informed me that her family considered BFing normal and that she was expected to do it. She and her brother were BF herself for the first 9 months. She also said that her cousin was BF for a full year.

4FR-8/3/2017: She reported that she really wanted to EBF “formula is very expensive - \$400 a month that I could put towards something else like the electric bill!” She said that she had decided to EBF when she found out that she was pregnant. Her mother had BF her and her 4 siblings, her aunts, cousins, and friends had varied levels of BFing experience – some did well and others did not attempt.

1BS-8/26/2017: “With my first baby my friends were all BFing and even though my mom, aunts, and sisters hadn’t BF I knew I wanted to do it.” “I wanted to do it because of the bond I would receive, it was better for him, and the financial aspect (free)”. When 1SB became pregnant with her second child she had no thought about whether she would BF or not – “it was predetermined.”

3SB-9/4/2017: When asked the spill question 3SB responded that she knew that she wanted to EBF as soon as she found out she was pregnant. It was not something she thought about – she just knew she wanted to do it. “I don’t come from a family of breast feeders – it wasn’t something we did, I wasn’t breastfed. I just knew though that I wanted to do it.” She had many friends with children who had EBF and she never considered doing anything else. “I don’t want to sound bad, but it was also free, so why wouldn’t I do it?” She also discussed her knowledge that EBF was best for her baby. “I really wanted that bond with my baby too.”

1RN-9/17/2017: She continued to tell me about how she felt BFing was natural. I asked “when did you decide to BF?” This encouraged her to reflect – “I didn’t know much about BFing but I just knew it was what I was supposed to do – why wouldn’t I – it’s natural.” She had no education about BFing or EBFing prior to the birth of her daughter. She “latched on her first try”

Examples of Stage II: *Working through with the basic social psychological process of struggling and its property searching for help.*

2FR-7/27/2017: I had nausea every time my milk ‘let down’ which was difficult but I worked through it – I looked this up on line to determine if normal and it said it was a hormonal response that should have been relieved at 12 weeks but apparently I am very ‘sensitive’ to the hormone.

1SB-7/28/2017: While the LC did help her to attain a latch – once she was home she could not repeat it. “They tried one position then another – ‘here this should work’ and then ran out of ideas. It was not individualized to me”. She went home and started searching for help by asking

her cousin (who had a baby about the same time) and the internet. The cousin suggested that she use a breast shield “now why didn’t they suggest that in the hospital?” 1SB stated that this worked perfectly and that she continued to use a breast shield to feed her baby until she stopped BFing at 16 months.

1NM-8/15/2017: “I was new to BFing and didn’t know what I was doing!” She contacted the LC at WMC and went in for a consultation. “I met with her but I just didn’t feel comfortable with her so I went home and still was worried that I was doing something wrong”. “My (cousin? friend? – not sister or mother) gave me the contact information for a lactation consultant who makes house calls. She came all the way out here and spent about 2 hours just teaching me and helping me to BF. I believe it’s because of her that I was able to EBF for so long.”

1BS-8/26/2017: In asking about external LC support she said “I have a friend who works in the NICU and she was able to give me some advice but it didn’t help. I have read about things online too.” 1SB never contacted a formal LC after discharge from the hospital.

3SB-9/4/2017: “The first couple of months were a fog... I know that I called the LC at the hospital for advice once – I can’t remember why though.” “I never thought about stopping though – the bond that I had with BF was so strong and I enjoyed BFing even though it was a struggle.”

“I over researched...” using the internet to explore BFing.” [Did you ever ask for professional help?] “No – just from my friends and the internet”.

2BS-9/7/2017: 2BS reported that she contacted the WIC agency [is a participant through Medicaid] and they had 2BS come in to the WIC office where she received BFing advise [2BS was gesturing while saying this – she used her hands to show infant positioning on the breast, cupping hand in front of breast – completely unaware she was doing this].

Examples of Stage II: *Working through with the basic social psychological process of needing support and its property getting mixed messages.*

3FR-7/28/2017: 3FR said that she exclusively BF until 11 months. She reported that the experience was wonderful... Her baby did feed frequently (about every 2-3 hours) until she stopped BFing at 11 months. I clarified that no other food was offered and she said “Oh yes – we started fruit and veggies at four months but I exclusively breastfed her – she had no formula until 11 months.” I did not correct her understanding of EBFing.

1NM-8/15/2017: She had decided during pregnancy to BF. “I wanted to do what was best for him. I knew that BF was healthy and so that was what I was going to do. I didn’t want any bottles or formula in my house. My friends gave me bottles at my baby shower and I said – I hope you aren’t insulted but I’m going to take these back.” “The hospital must have put my name on a list because I kept getting samples of formula but I didn’t even want it in my house”.

5FR-8/20/17: “The pediatrician suggested that we supplement the formula with rice cereal at 4 months to try to ‘thicken’ the food in his stomach so he wouldn’t spit as much.”

2BS-9/7/2017: I was so tired that he [spouse] tried to give her a little of the formula that the hospital sent home with us.

2BS started introducing solid foods to baby during her 5th month. “She was reaching for things on the table, I would be putting something on the plate for her sister and she would reach for it or try to knock it out of my hands. I asked the pediatrician and he said to go ahead and give her food – she was ready.”

1WV-10/2/2017: “The pediatrician told me that I was doing a good job but that if I needed to, it was okay to give the baby [BG2] formula. I am sure it was meant to reassure me but instead it felt like they were giving me permission to use formula instead of BF. I got the same message from the hospital! They gave me a bag with two cans of formula even though they really advocated BFing. They had rooming in, they really offered me support and help with BFing, but then I went home and ‘here’s your formula’.”

1RN-9/17/2017: 1RN reported learning of the CDC recommendation for EBF until 6 months when talking to a friend. “A friend told me that I should only feed my baby BM until she was six months old – but I didn’t believe it! I looked online and I was so surprised.” 1RN was adamant that BG would only receive BM even before that “it’s how it’s supposed to be!” Even so, when at 4 months she was told by her pediatrician that she could introduce cereal – she did so. “She didn’t like it – I read about the cues that she is not ready for solids and she did them all, tongue thrusting- pushing the food out of her mouth and not being able to sit up by herself. I still tried but she really wasn’t ready.”

Examples of Stage III: Succeeding or surrendering

5FR-8/20/17: “I didn’t have a great experience breastfeeding my daughter which made me even more determined to breastfeed my son”. 5FR said that she was determined to breastfeed this baby because of her failure with her first experience.

I still feel bad that I was unable to BF him “It’s like it was ‘taken away from me’. She believes that she would have been successful at EBFing if not for this issue with her first baby. “Even so – I know that I have a much better bond with him even with the short time that I BF him – a better bond than I have with his sister.” “I really wanted to BF for a year or longer and I know I could have done it... I am sure I will be able to do it with the next baby.”
 “I want to BF my next child too.” (Already planning on EBFing next child)

1BS-8/26/2017: 1SB says she feels like she lost a lot of the bonding with this second child – “she goes to daddy”. “I feel bad about this – like I am missing out on something but its ok – I am glad that my husband is having this opportunity – but still – I feel like I lost out”. She repeated this or other statement about being “gipped” several times. I clarified that she did bottle feed with BM and she replied “oh – yes but it wasn’t the same...”

3SB-9/4/2017: 3SB’s milk supply dwindled and she finally decided to stop pumping altogether and offer all formula. “I grieved again – I had lost that last bond with her.” “Even so – I am glad that I was able to go as long as I did, I believe that it will be best for her in the long run.”
 “We are thinking that we might had a second child – I would absolutely BF again.”

1WV-10/2/2017: I really wanted to get to a year. For a little while I thought – I wasn't successful because I didn't make my year goal. But then I thought, I was too successful! I made it to 11 months and a lot longer than I did my first child.

2WV-10/3/2017: "I thought that since my first experience went so well the second and third would too. I didn't know how bad this would be. I am not sorry I BF – I know it's best for them... I am sorry they suffered.

[So if I had more children would I breast feed again?] "Yes – I would try but I would be quicker to stop and move onto a different plan rather than trying to EBF. You have to be more flexible and willing to do whatever you need to do to feed your baby."

6FR-10/20/2017: BFing is such a beautiful experience. I love being able to do this for my baby. She is healthy and growing and it's because of me. It's like a gift that I can give her. I can't imagine why other women wouldn't want to BF their babies.

1BW-11/16/2017: "I wanted to do what was best for my baby and breastfeeding just wasn't it; that didn't make me a failure."

Appendix C: Institutional Board Approval: Protocol Approval Letter

Reissued 5/24/2017

**Approval Letter Expedited**

Action Date	03/31/2017
To	Gina Maiocco
From	WVU Office of Research Integrity and Compliance
Approval Date	03/31/2017
Expiration Date	03/30/2018
Subject	Protocol Approval Letter
Protocol Number	1611337469
Title	The Decision Making Process Used by Rural Women to Exclusively Breastfeed: A Grounded Theory Research Approach

The above-referenced research study was reviewed by the West Virginia University Institutional Review Board IRB and was approved in accordance with 46 CFR 46.101b.

It has been determined that this study is of minimal risk and meets the criteria as defined by the expedited categories listed below:

Documents reviewed and/or approved as part of this submission:

Heishman Letter of Support.pdf: 2017-02-17-05:00

Rigney-Dodson Letter of Support.pdf: 2017-02-17-05:00

Bender Letter of Support.pdf: 2017-02-17-05:00

Braithwaite Letter of Support.pdf: 2017-02-17-05:00

Jagiello - Letter of Permission to Conduct Research.pdf: 2017-02-17-05:00

Jagiello - EBF survey health demographics .pdf: 2017-02-27-05:00

Consent no HIPAA.docx: 2017-03-27-04:00

Reissued 5/24/2017 to remove the comment regarding an IAA.

Approved:5-Mar-2018Expires:4-Mar-2019Number:1611337469

Appendix D: Recruitment Letter



Hello,

This letter is an invitation to consider participating in a study I am conducting as part of my Doctoral degree through the School of Nursing at West Virginia University under the supervision of Dr. Alvita Nathaniel. I would like to provide you with more information about this project and what your involvement would entail if you decide to take part.

Over the years, the importance of exclusive breastfeeding has been described as the best source of infant nutrition for infants with long term health benefits reported for both the mother and her baby. The practice of exclusive breastfeeding for the first six months of life is the gold standard; however, most mothers do not meet that goal. This is especially true of mothers living in rural areas. The purpose of this study is to develop a better understanding of the decision making process for rural women to exclusively breast feed.

You did not have to exclusively breastfeed for the first six months to participate in this study. Each person who agrees to participate will sign a consent then participate in an interview with me in a private place of your choosing. I will discuss the study details with you to make sure you understand the process. You will also be asked to fill out a brief demographic survey. After that you will have the opportunity to tell me about your own breastfeeding experience. The interview will not be taped and will last as long as you need to help me to understand your experience. We anticipate it to last about 45 minutes. A second interview may be conducted to verify the information you provided or to gather more details. Each participant will receive a \$50 Walmart gift card for each completed interview.

Your involvement in this project will be kept as confidential as legally possible. All data will be combined and reported together. I will not ask any information that should lead back to your identity as a participant. Your participation is completely voluntary. You may skip any question that you do not wish to answer and you may stop participating at any time. West Virginia University's Institutional Review Board approved this project and Valley Health Winchester Medical Center supports this research.

I hope that you will participate in this research project, as it could be beneficial in promoting a better understanding into the practice of exclusive breastfeeding for infants. Please contact me if you have any questions about this letter, would like to hear more details about this study, or would be interested in participating. Please contact Karen Jagiello: cell 540.327-7766 or e-mail Kjagiello2017@gmail.com.

Thank you for your time and help with this project.

Sincerely,

Karen Jagiello, MSN, RNA (Co-Investigator)
(540)327-7766
Kjagiello2017@gmail.com

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Approved: 5-Mar-2018 Expires: 4-Mar-2019 Number: 1611337469

Appendix E: Consent to Participate



Human Research Protocol
Only Minimal Risk Consent Form
Without HIPAA

**Only Minimal Risk
Consent Information Form (without HIPAA)**

Principal Investigator **Alvita Nathaniel**

Department **Nursing**

Protocol Number **1611337469**

Study Title **The Decision Making Process Used by Women to Exclusively Breastfeed: A Grounded Theory Research Approach**

Co-Investigator(s) **Karen P. Jagiello**

Sponsor: **Alpha Rho Sigma Theta Tau**

Contact Persons

If you have any questions, concerns, or complaints about this research or in the event you experience any side effects or injury related to this research, you should contact Karen Jagiello at 540-327-7766.

For information regarding your rights as a research subject, to discuss problems, concerns, or suggestions related to the research, to obtain information or offer input about the research, contact the Office of Research Integrity and Compliance at (304) 293-7073.

In addition if you would like to discuss problems, concerns, have suggestions related to research, or would like to offer input about the research, contact the Office of Research Integrity and Compliance at 304-293-7073.

Introduction

You have been asked to participate in this research study, which has been explained to you by Karen Jagiello. This study is being conducted by Karen Jagiello under the supervision of Dr. Alvita Nathaniel in the School of Nursing at West Virginia University to satisfy degree requirements for PhD. This study is funded by Alpha Rho Sigma Theta Tau.

Purpose(s) of the Study

The purpose of this study is to develop a better understanding of the decision making process for women in a rural population to exclusively breastfeed. Enrollment of participants will continue until no new information is learned during the interview process.

Description of Procedures

Phone: 304-293-7073
Fax: 304-293-3098
<http://oric.research.wvu.edu>

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Page | 1

Subject's
Initials _____
Date _____

Approved:5-Mar-2018Expires:4-Mar-2019Number:1611337469



Human Research Protocol
Only Minimal Risk Consent Form
Without HIPAA

This study involves completion of a consent and one interview that will ask about your experience with breastfeeding. A second interview may be needed to review the information from the first meeting or to seek out further information.

The interview will take place at a location of your choosing. You are welcome to bring your child if at a location away from your home. No notes or audio recording will be used but the researcher will compile notes after the completion of the interview. No identifying names will be placed on the notes to protect your identity. The interview will last as long as you need to fully describe your experience but we anticipate that the interview will last about 45 minutes. You may be asked to participate in a second interview to clarify or verify information from your first interview, or to provide further information.

In addition to the consent you will be requested to complete a brief demographic survey.

Discomforts

There are no known or expected risks from participating in this study, except possibly some mild frustration associated with answering the questions. You do not have to answer any question you are uncomfortable with and may stop the interview at any time if you choose.

Benefits

You may not receive any direct benefit from this study. The knowledge gained from this study may eventually benefit others.

Financial Considerations

There are no special fees for participating in this study. You will receive a \$50 gift card after the first interview and another \$50 gift card after the second interview, for a total of \$100. If you do not complete the second interview, you will only receive a \$50 gift card.

Confidentiality

Any information about you that is obtained as a result of your participation in this research will be kept as confidential as legally possible. Your research records and test results, just like hospital records, may be subpoenaed by court order or may be inspected by the study sponsor or federal regulatory authorities without your additional consent.

In addition, there are certain instances where the researcher is legally required to give information to the appropriate authorities. These would include mandatory reporting of infectious diseases, mandatory reporting of information about behavior that is imminently dangerous to your child or to others, such as suicide, child abuse, etc.

Transcripts will be kept locked up and will be destroyed as soon as possible after the research is finished. In any publications that result from this research, neither your name nor any information from which you might be identified will be published without your consent.

Voluntary Participation

Phone: 304-293-7073
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Chestnut Ridge Research Building
886 Chestnut Ridge Road
PO Box 6845
Morgantown, WV 26506-6845

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Subject's

Initials _____
Date _____

Approved:5-Mar-2018Expires:4-Mar-2019Number:1611337469



Human Research Protocol
Only Minimal Risk Consent Form
Without HIPAA

Participation in this study is voluntary. You are free to withdraw your consent to participate in this study at any time.

Refusal to participate or withdrawal will involve no penalty to you. Refusal to participate or withdrawal will not affect your future care.

In the event new information becomes available that may affect your willingness to participate in this study, this information will be given to you so that you can make an informed decision about whether or not to continue your participation.

You have been given the opportunity to ask questions about the research, and you have received answers concerning areas you did not understand.

Upon signing this form, you will receive a copy.

I willingly consent to participate in this research.

Signatures

Signature of Subject

Printed Name	Date	Time

The participant has had the opportunity to have questions addressed. The participant willingly agrees to be in the study.

Signature of Investigator or Co-Investigator

Printed Name	Date	Time

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Subject's

Initials	_____
Date	_____

Approved:5-Mar-2018Expires:4-Mar-2019Number:1611337469

Appendix F: Study Demographics Survey

Date: _____

ID #: _____

Breastfeeding Survey

Demographics:

What year were you born? _____

What is your marital status?

- Married and living with partner
- Not married and living with partner
- Divorced or separated and not living with partner
- Never married and not living with partner
- Widowed

Which of the following best describes your ethnic background?

- White
- Black
- Asian
- Hispanic
- Other: _____

What is your highest level of education?

- Elementary school
- High school graduate/GED
- Some college
- College graduate
- Graduate school

What kind of health insurance status do you have?

- Private (or through employer)
- Tricare (through US military)
- Medicaid/Medicare (government/public)
- None (pay out of pocket for health care)
- Other: _____

How many pregnancies have you had? _____

How many children do you have (including this baby)? _____

How old are your other children? _____

Appendix G: Demographics Table

Table A.1. Results of Demographic Survey

N=19		n	%
Age (Years)			
	Mean	31.10	
	Maximum	40	
	Minimum	19	
Marital status			
	Married and living with a partner	13	68.42
	Not married and living with a partner	3	15.79
	Divorced or separated and not living with partner	3	15.79
	Widowed	0	0
Ethnicity			
	White	17	89.47
	Black	0	0
	Asian	0	0
	Hispanic	0	0
	Other	2	10.53
Education			
	Elementary school	0	0
	High school/GED	3	15.79
	Some college	5	26.32
	College graduate	4	21.05
	Graduate school	7	36.84
Insurance			
	Private (through employer)	14	73.68
	Tricare (through U.S. Military)	0	0
	Medicaid/Medicare (government/public)	3	15.79
	None (pay out of pocket for health care)	0	0
	Other	2	10.53
Gravity (total number of pregnancies)			
	1	6	31.58
	2	10	52.63
	3	3	15.79
Distance to hospital from home			
	15-20 miles	1	5.26
	21-25 miles	3	15.79
	26-30 miles	8	42.11
	31-35 miles	3	15.79
	36-40 miles	1	5.26
	41-45 miles	2	10.53
	46-50 miles	0	0
	Greater than 50 miles	1	5.26
Employment			
	No employment outside of home	6	31.58
	Part-time	2	10.53
	Full-time	11	57.89
Return to employment after birth (n=13)*			
	4 weeks or less	1	7.69
	6 weeks	5	38.46
	9 weeks	2	15.38
	12 weeks	4	30.78
	24 weeks	1	7.69

* Sample of participants who returned to workforce before six months

Appendix H: Table of Literature

Table A.2. Summary of Studies in Literature Review

Author & Year		
Allen et al., 2015 (US)	Design and Purpose	Secondary data analysis from 2007, 2009, and 2011 mPINC surveys (National Census of maternity care hospitals and birth centers). To describe whether maternity care practices supportive of breastfeeding vary by level of urbanization.
	Sample	N=44-74 hospitals (excluding free standing birth centers) across survey years.
	Findings	Hospitals in less urbanized counties had lower mPINC survey scores than those in metropolitan urbanized counties for feeding of breastfed infants, breastfeeding assistance, staff training, and structural and organizational aspects of care delivery; practices indicating a pattern of lower hospital quality scores in more rural areas of the United States.
Arts et al., 2011 (Mozambique)	Design and Purpose	<u>Qualitative</u> - Phenomenology To identify the knowledge, beliefs, and practices around exclusive breastfeeding—specifically, those of mothers, fathers, grandmothers, and nurses—and to identify the support networks.
	Sample	N=342 (n=95 mothers; n= 82 mothers-in-law/grandmothers; n= 85 fathers; n=80 maternal child health nurses). Participants were from both urban and rural locations.
	Findings	Practices and beliefs around breastfeeding, the role of maternal child health nurses in infant feeding, and support networks for infant feeding were the main themes discussed. Barriers to successful exclusive breastfeeding were discovered including the lack of maternal breastfeeding support from nursing staff and family, the traditional practice of introducing non-breastmilk substances (water, traditional medicines, porridge, etc.) to infants younger than six months, and the influence of grandparents on the infant feeding method.
Bailey & Wright, 2011 (US)	Design and Purpose	To identify demographic, medical, and health behavior factors that predict breastfeeding initiation in a rural population with low breastfeeding rates.
	Sample	N = 2,323 women who delivered live infants at 2 participating hospitals in southern Appalachia (southeastern Kentucky, southwestern Virginia, northeast Tennessee, and southern West Virginia).
	Findings	51.1% initiated breastfeeding, which was significantly associated with higher levels of education, private insurance, nonsmoking and non-drug-using status, and primiparity, after controlling for confounders. Smoking status was the strongest predictor of failure to breastfeed, with nonsmokers nearly twice as likely to breastfeed as smokers and with those who had smoked a pack per day or more the least likely to breastfeed.
Bowman, 2013 (Dissertation)	Design and Purpose	Mixed methods design To explore the role of BF intention, self-efficacy, and support on duration of EBF, and b) describe the common factors among women who breastfed exclusively for at least 16 weeks.

	Sample	N=56 mothers (Quantitative) and N=15 (Qualitative) who initiated BF in the hospital following delivery.
	Findings	Mothers who breastfed exclusively for 16 weeks were older, married, and more educated than mothers who did not breastfeed until 16 weeks. Higher baseline infant feeding intention scores and BF self-efficacy scores were predictors of BF at 16 weeks. Social support for BF was not a significant determinant of EBF at 16 weeks however support from health professionals, experienced peers, and the internet was reported to be invaluable. Knowledge of benefits for infant supported maternal decision to initiate BF. Reports of receiving mixed messages from the both their extended family and the general public made BF uncomfortable but that positive peer support outweighed the negative messages. Health care professionals have a strong influence on the feeding choices that parents make.
Colledge, 2011 Dissertation (Canada)	Design and Purpose	Retrospective, cross sectional design To analyze the Canadian MES to determine the predictors of breastfeeding initiation and exclusive breastfeeding at six months.
	Sample	N = 6,421 mothers
	Findings	Independent predictors for breastfeeding initiation included: adequate information about feeding, assistance with breastfeeding initiation, postpartum maternal skin contact, baby's location in the first hour after birth, province of birth, maternal immigration, maternal smoking, maternal dissatisfaction with support from her husband/partner during labor, length of time the baby spent in a different room in the first twenty four hours, mother's level of education, and population size. Independent predictors for exclusive breastfeeding at six months were: adequate information received about formula feeding, pacifier use, contact made by a health care provider after the birth, marital status, province of birth, mother's return to work, maternal smoking, timing until first breastfeeding, maternal breast pain, maternal age, and pre-pregnancy BMI.
Coduti et al., 2015 (US)	Design and Purpose	Cross-sectional, descriptive survey design To identify characteristics of mothers at a Midwest Medical who chose to exclusively breastfeed their infants.
	Sample	N=299 (n=183 inpatient; n=76 post discharge) mothers
	Findings	Participants who exclusively breastfed were more likely to be white, older, married, have attained a bachelor's degree or higher, have a high socioeconomic standard, and have private insurance. The participant's significant other and mother influenced her decision to breastfeed.
Gewa & Chepkemboi, 2016 (Kenya)	Design and Purpose	A cross-sectional survey using convenience sample of mothers with children <5 years old living in the designated villages. To determine if mother's knowledge of breastfeeding recommendations, expectations of the consequences of EBF for child and mother, and perception of other people's support of EBF was significantly associated with EBF cessation in rural Kenya.
	Sample	N = 400 mothers of children, 0-24 months old, in rural Kenya
	Findings	Knowledge of breastfeeding-related recommendations, positive beliefs on the impact of exclusive breastfeeding on child- focused outcomes, having a more positive perception of the impact of exclusive breastfeeding on mother-focused outcomes and a more

		positive perception of acceptability of exclusive breastfeeding by important others were associated with significantly lower risks of premature cessation of exclusive breastfeeding.
Goodman, et al., 2016 (US)	Design and Purpose Sample Findings	Qualitative - Community-based participatory design To identify BF barriers and support in a rural setting. N=10 BF mothers. Participants hand selected by WIC coordinator using the local WIC database. Three major themes were identified: a) lack of realistic information about BF, b) BF time constraint, and c) lack of continued support. Early return to work was noted to be a barrier to BF by most low-income mothers in this community. Lack of support was identified by both participants and HCP however inconsistent BF information was given by HCP. Significant changes to support BF in this community occurred from findings.
Helps & Barclay, 2015 (Australia).	Design and Purpose Sample Findings	Qualitative_– Indigenist methodology To explore the factors impacting upon infant feeding choices in a rural Aboriginal Community N=8, Aboriginal women from four rural areas representing varied living circumstances. Interviews conducted while participants in third trimester of pregnancy and again between six and eight weeks postpartum identified three key themes. “I’m doing the best thing for...” which explored the decisions guiding the determination of infant feeding method. “This is what I know...” identifying how individual and community knowledge influenced infant feeding practices; and “a safe place to feed” which explored the impact of negative societal messages on the maternal decision-making process for infant feeding choices. Enculturation of the Aboriginal women into modern society has created a loss of knowledge and barriers to breastfeeding.
Herndon, 2015 Dissertation (US)	Design and Purpose Sample Findings	Non-experimental, descriptive and exploratory prospective survey To (1) test the TPB by examining the relationship of the components (attitudes, subjective norms, perceived control/ self-efficacy, and breastfeeding knowledge) to determine breastfeeding intention and initiation of rural, low income NA and AA adolescent mothers in rural communities in southeastern North Carolina; (2) determine the significant similarities and differences between breastfeeding and formula feeding adolescent groups related to the constructs; (3) explore the relationship of intention to initiation; and (4) examine the relationship between sociodemographic variables with breastfeeding intention and initiation of adolescent mothers. N=120 (n=60 NA; n=60 AA) adolescent mothers. The constructs of TPB were significant in predicting the probability of breastfeeding intention and breastfeeding initiation in rural, low income NA and AA adolescent mothers. Overall total variance explained by the model related to the prediction of breastfeeding initiation at 4 days postpartum was 73% and correctly classified 92.2% of cases. Significant differences were found related to ethnic groups, with NA adolescents initiating breastfeeding more often, being married more often, and living with a significant other more often than AAs. More adolescents who attended childbirth classes and breastfeeding classes’ breastfed than those who did not.

Hjalhmult & Lomborg, 2012 (Norway)	Design and Purpose Sample Findings	Qualitative – Grounded theory To present a theoretical account of mothers' first period at home with their newborn in Norway. N=26 mothers with newborns The overarching theme of “preserving control and integrity in their new situation” was found. Participants prioritized newborn care when faced with uncertainty or conflict using the subcategories of developing competence in motherhood, changing focus in relationships, stretching to the critical level, and seeking recognition. Maternal vulnerability and stress demonstrated by insecurity and anxiety, especially by primiparous participants, was aggravated by lack of knowledge and confidence in ability to provide infant care.
Hohl et al., 2016 (US)	Design and Purpose Sample Findings	Qualitative – Phenomenology To examine perceptions, experiences, and attitudes towards breastfeeding among Hispanic women living in rural Washington State. N=20 (n=2 born in US; n=17 born in Mexico; n = 1 born in El Salvador) Hispanic women aged 25-48 with one or more children aged 5 or older. Participants all reported that breastfeeding is a deeply ingrained cultural norm in their origins. Nine emergent themes were grouped into three overarching categories: (1) Breast is best; (2) Hispanic cultural and familial expectations to breastfeed; and (3) Adapting to life in the United States: cultural norms in conflict. Reports of lack of support for continued breastfeeding after returning to employment and the experience of embarrassment subsequent to public breastfeeding prompted the use of formula for all or partial feedings.
Ismail et al., 2014 (Malaysia)	Design and Purpose Sample Findings	Prospective cohort study To identify behavioral, normative, and control belief influencing intention to practice exclusive breastfeeding among pregnant women in Malaysia. N = 210 women who were 32 weeks gestation selected from health clinics located in both rural and urban settings. Using the tenets based on the Theory of Planned Behavior, researchers found that the strongest influence on maternal intention to breastfeed was the belief that the practice would improve the health of the infant. Financial savings and anxiety about separation from the infant also impacted the maternal decision to exclusively breastfeed. The perceived level of support (either high or low) from significant other and family impacted the decision to exclusively breastfeed. The belief that they would or would not have adequate milk supply after delivery influenced the decision to breastfeed after delivery. Most participants intended to exclusively breastfeed for less than six months (average 14 weeks).
Jacobson et al., 2014 (US)	Design and Purpose Sample Findings	Secondary data analysis from Kansas PNSS survey. To provide further insight into maternal demographics, health, and lifestyle behaviors associated with breastfeeding among women enrolled in the Kansas WIC program. N = 17,067. Convenience sample of mothers who had received benefits from the Kansas WIC program. Differences in racial and ethnic diversity in urban and rural Kansas were observed. Urban and rural women who were non-Hispanic

		black with some high school education were less likely to breastfeed. More than one-third of participants enrolled in WIC during the first trimester with 41.2% in rural areas compared to 34.6% of urban participants. Rural women had increased tobacco use during pregnancy and lower rates of initiation of PNC and prenatal vitamin use before and during pregnancy compared to urban women.
Joshi et al., 2014 (US)	Design and Purpose Sample Findings	Mixed method design. To explore factors that influence breastfeeding initiation and continuation among Hispanic women living in rural settings. N = 12, Convenience sample of Hispanic women living in rural areas. Quantitative: 83% of mothers did not take prenatal breastfeeding classes. BAPT results demonstrated an above average reported intention to breastfeed (mean 47, SD = 17) however 33% had BSES-SF scores of 50 or less indicating a higher risk for early discontinuation of breastfeeding. 41% of participants' breastfed for at least 6 months and only 1 mother breastfed for 12 months. Qualitative: The majority of participants chose to breastfeed due to the perceived health benefits for the infant. Few had knowledge of benefits for themselves. Support from the grandmother and family was important in successful initiation and continuation of BF although "interference" was also an issue. Cultural nutritional practices was noted with the early introduction of non-breastmilk. Participants also reported belief of general social disapproval for BF.
Lynch et al., 2011 (US)	Design and Purpose Sample Findings	Secondary data analysis from North Carolina PNSS. To examine breastfeeding initiation trends by race/ethnicity and urbanicity among low-income women in North Carolina from 2003-2007. N = 240,054 women who identified as Non-Hispanic white, Non-Hispanic black, and Hispanic living in rural, mixed rural, mixed urban and urban designation. Overall, 65.4% (mixed-urban counties) and 62.1% in urban counties initiated breastfeeding compared to 49.8% of women in rural counties. The association between race/ethnicity and breastfeeding varied by urbanicity level. Women in rural areas, particularly non-Hispanic blacks, are less likely to initiate breastfeeding.
Nor et al., 2012 (South Africa)	Design and Purpose Sample Findings	Qualitative exploratory study To explore mothers' experiences of infant feeding after receiving peer counseling promoting exclusive breast or formula feeding. N=17 (n=7 HIV positive; n=9 HIV negative) mothers participating in the PROMISE-EBF peer counselling intervention and recruited at 12-16 weeks postpartum. The participants did not fully incorporate the information gained from peer counseling including understanding of exclusive breastfeeding, early introduction of non-formula/non-breastmilk nutrition, and formula feeding alone considered insufficient. One notable finding was of the participants' awareness that their cultural practices and beliefs were incompatible with the exclusive breastfeeding counseling and promoted the use of formula in the HIV participants.

Sheehan et al., 2013 (Australia)	Design and Purpose	Qualitative – Grounded theory To expand on previous article by extrapolating and further detailing the analysis of the phases of the core category “deconstructing best,” and to discuss these in relation to decision-making theory.
	Sample Findings	N=37 women with infants between one and 9 weeks of age. The ideas of “best” as a measure of infant nutrition was deconstructed and seven phases identified: planning, expecting, realizing, questioning, getting on with it, defending, and qualifying. The phases were determined to be a process of decision-making that was initiated during pregnancy and continued beyond delivery with the majority of decisions to breastfeed made during the realization and questioning stages which occurred in the first weeks following birth. Support during the early postpartum period can impact the maternal decision to breastfeed.
Shroff et al., 2011 (India)	Design and Purpose	Longitudinal cross sectional design To examine whether rural Indian mothers with higher levels of autonomy were more likely to exclusively breast feed infants and have infants with better growth, after accounting for potentially confounding covariates.
	Sample	N = 600 mother-child dyads from 60 villages in the district of Nalgonda in the state of Andhra Pradesh, India
	Findings	Mothers with higher financial autonomy were more likely to breastfeed 3 - 5 month old infants. Mothers with higher participation in decision-making in households had infants that were less underweight and less wasted.
Sobel et al., 2011 (Philippines)	Design and Purpose	Mixed methods cross sectional survey To examine the association between mothers’ exposure to advertising and other information sources and formula feeding decisions.
	Sample Findings	N = 345 Households with at least 1 child under 24 months of age Quantitative: After adjusting for education and economic indicators logistic regression analysis showed that, children were more likely to be given formula if their mother recalled advertising messages, or a doctor, or mother or relative recommended it. Those using formula were 6.4 (1.8e23.1) times more likely to stop breastfeeding before 12 months. Qualitative:
Thet et al., 2016 (Myanmar)	Design and Purpose	Qualitative – Exploratory To examine the barriers to exclusive breastfeeding and how different household members participate in decision-making.
	Sample Findings	N=44 (n=24 mothers; n=10 grandmothers; n=10 husbands). Low adherence of EBF was found despite participants’ high level of process. Barriers to adherence included maternal and family belief that breastmilk was insufficient and supplementation was necessary. Common supplementation includes the introduction of water and mashed up rice prior to six months of age. Maternal return to the work force was also a common barrier to EBF.
Wiener & Wiener, 2011 (US)	Design and Purpose	Secondary data analysis of 2007-2007 NSCH. To examine for differences in the national and Appalachian prevalence of breastfeeding in rural and urban settings, and to identify health care and socioeconomic factors that may impact on this.

	Sample	N = 27,388 surveys obtained from U.S. households. Rural and urban areas were identified and weighted to reflect population densities.
	Findings	Women in rural areas and particularly rural areas in Appalachia had more women who did not breastfeed. Rural areas had a significantly lower prevalence of breastfeeding of 0.687 (CI 0.661-0.713). Appalachia was significantly lower than the national rural level at 0.576 (CI 0.554-0.598) Women with Medicaid/SCHIP had an odds ratio of 1.79 of not breastfeeding compared with privately insured women. Nationally, 26.6% (24.5 – 28.7) of children of women who did not breastfeed did not have a medical home.
Wilhelm et al., 2015 (US)	Design and Purpose	Two-group repeated measures experimental design To explore whether a motivational interviewing (MI) intervention could help rural Mexican-American mothers continue breastfeeding
	Sample	N = 53 (Motivational intervention n = 26, attention control n = 27)
	Findings	No significant differences were found between groups for any of the outcome variables (intent to breastfeed for 6 months, breastfeeding self-efficacy, and duration of breastfeeding). Though the mothers intended to breastfeed for 6 months and were confident in their ability to do so, most did not breastfeed for 6 months.

Note: AA = African American; BF=Breastfeeding; BSES-SF = Breastfeeding Self-efficacy Scale Short Form; BAPT = Breastfeeding Attrition Prediction Tool; CI= Confidence interval; EBF = Exclusive breastfeeding; MES = Maternal Experiences Survey; mPINC = Maternity Practices in Infant Nutrition and Care; NA = Native American NSCH = National Survey of Children's Health; OR = Odds ratio; PNSS = Pregnancy Nutrition Surveillance System; PNV = Prenatal vitamin; SCHIP= State Children's Health Insurance Program; TPB = Theory of Planned Behavior; WIC = the Special Supplemental Nutrition Program for Women, Infants and Children