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Factors That Influence Mothers' Decisions Concerning Breastfeeding

Kimberly M. Futrelle
Gardner-Webb University

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Factors That Influence Mothers' Decisions Concerning Breastfeeding

by

Kimberly M. Futrelle

A thesis submitted to the faculty of
Gardner-Webb University Hunt School of Nursing
in partial fulfillment of the requirements for the
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Submitted by:

Approved by:

Kimberly M. Futrelle

Sharon Starr, PhD, RN

Date

Date

Abstract

The purpose of this study was to explore factors that influence decisions concerning breastfeeding in a group of 30 mothers who are employed, place their children in a childcare center, and whose children are five years of age and under. The study utilized Fishbein and Ajzen's Theory of Reasoned Action as the conceptual framework. The descriptive study allowed for determination of the factors of attitudes, beliefs, and opinions that influence mothers' decisions concerning breastfeeding. Statistical data compiled from survey results revealed many participants believed that breast milk is less expensive than formula. However, a significant number of mothers were neutral concerning the health benefits of breast milk. The convenience sample used for this research study indicated mothers did not fully understand the benefits of breastfeeding. This study exposed lack of knowledge of mothers concerning breastfeeding and identified various factors that influenced mothers' decisions in infant feeding. By identifying factors that influence mothers' decisions about breastfeeding, healthcare providers may develop an action plan to effectively educate mothers concerning the benefits of breastfeeding.

Keywords: breastfeeding, exclusive breastfeeding, breastfeeding education, colostrum

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I want to first thank my personal Savior, Jesus Christ, for being with me every step of the way during this journey. I truly feel that without Him, I could not have mastered my dream. Proverbs 3: 5-6 reads, “Trust in the Lord with all thine heart; and lean not unto thine own understanding. In all thy ways acknowledge him, and he shall direct thy paths.” Since day one of my nursing career, God’s words have been my guide. His leadership, sustaining power, and strength have given me the ability to achieve my lifelong goal of becoming a nurse leader.

Secondly, I want to thank my husband and my parents who kept encouraging and motivating me to complete my dreams of obtaining my master’s degree. All of them have been so supportive of me during this journey. My mom has been my encourager, teacher, and cheerleader through the entire process.

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CHAPTER I

Introduction

Healthcare professionals have always considered breastfeeding to be the ideal and best feeding method for infants. Believed to be the most nutritious food for infants, breastfeeding is considered worldwide as one of the most beneficial and cost-effective preventative health measures available to pediatric patients (Pound & Unger, 2012).

According to the American Academy of Pediatrics (AAP) (2012), breastfeeding provides protection against respiratory infections, gastrointestinal diseases, and allergies.

Therefore, babies who are breastfed may suffer fewer infant illnesses; thereby, reducing the number of hospital or doctor visits. Multiple organizations recommend breastfeeding as the best source of nutrition for infants and support exclusive breastfeeding for the first 6 months of life for many reasons (World Health Organization [WHO], 2016; United States Department of Health and Human Services [USDHHS], 2014). Thought to be the first communication pathway in bonding between the mother and the infant following birth, the decision to breastfeed is often influenced by a number of positive and negative factors.

A significant impact on whether a mother chooses to breastfeed depends a great deal on the beliefs, policies, and practices of the birthing facility where the mother delivers. When primary healthcare obstetricians promote and recommend breastfeeding, mothers tend to follow the advice of their physician and at least attempt to breastfeed. Midwives and nurse care providers have great influence in encouraging the new mother to try breastfeeding. Furthermore, maternity units that offer rooming-in options for mothers help provide a conducive environment for frequent breastfeeding.

In the last decade, the breastfeeding rate in the United States has risen from 35% in 2000 to 49% in 2010. Rates continue to rise as emphasis is communicated and healthcare promotions continue to focus on the benefits of breastfeeding (Centers for Disease Control and Prevention [CDC], 2013). As evidenced by data collected, North Carolina continues to make progress in the advancement of breastfeeding. The following Tables, 1 and 2, details data concerning breastfeeding progress in several states during 2013-2014.

Table 1

Breastfeeding Rate in 2013 (Centers for Disease Control and Prevention, (2013))

State	Ever Breastfed	Breastfeeding at 6 months	Breastfeeding at 12 months	Exclusive breastfeeding at 3 months	Exclusive breastfeeding at 6 months
U.S. National	76.5	49	27	37.7	16.4
Idaho	91.8	74.5	45.5	60.3	27
Mississippi	50.5	19.7	9.1	17	5.1
North Carolina	74.9	48.5	31.9	32.7	14.8

Table 2

Breastfeeding Rate in 2014 (Centers for Disease Control and Prevention, 2014)

State	Ever Breastfed	Breastfeeding at 6 months	Breastfeeding at 12 months	Exclusive breastfeeding at 3 months	Exclusive breastfeeding at 6 months
U.S. National	79.2	49.4	26.7	40.7	18.8
California	92.8	63.1	38.4	56.1	25.4
Louisiana	56.9	30.3	12.6	25.3	13.4
North Carolina	77.2	48.3	24.5	42.6	20.7

Statement of the Problem

Internal and external factors are a large determinant in positively and negatively influencing mothers' decisions toward breastfeeding. Many mothers have the misconception that breastfeeding is human nature, convenient, and easy. They approach breastfeeding as an experiment, and if it doesn't work, they can always quit and progress to formula feeding. Unfortunately, many mothers do not realize the commitment required. Early on, these mothers with preconceived notions about breastfeeding, become frustrated and give up at the first sign of discomfort and inconvenience. This thesis explored the numerous positive and negative factors that influence mothers' decisions to breastfeed.

According to the research, the ability to breastfeed is a learned art and usually does not occur spontaneously (Harris & Miller, 2012). Breastfeeding expectations of each mother are different and sometimes not realistic. For example, some mothers feel successful if they breastfeed during the child's first years of life, while others do not feel they have succeeded if they only breastfeed for a portion of the child's first year. The communication that goes on between mother and healthcare professionals about breastfeeding, and healthcare providers' attitudes and beliefs have a great influence on the mother's participation and on whether or not breastfeeding will be successful (Harris & Miller, 2012). Healthcare providers play a major role in educating the parents concerning the benefits, techniques, and mechanics of breastfeeding.

In order to improve the awareness towards breastfeeding, the factors that influence mothers' decisions concerning breastfeeding were investigated to encourage and increase breastfeeding practices among young mothers. It can be understood from

the Theory of Reasoned Action (TRA), that it is important for women to have a positive attitude about breastfeeding. Women with a positive attitude concerning breastfeeding do not give up easily and are more determined to endure the physical challenges that are often associated with breastfeeding.

This study is important because it clarified factors that influence mothers' decisions to breastfeed. By describing breastfeeding practices and the factors that affect mothers' decisions to breastfeed, the researcher provided data for future studies about breastfeeding factors and influencers. Health educators and health providers could use this published information to better understand mothers' attitudes, beliefs, and opinions concerning breastfeeding decisions. Research information can lead to more focused parent education regarding these attitudes, beliefs, and opinions and may help promote breastfeeding across various cultures, ethnic groups, and socioeconomic groups.

Purpose

The purpose of this MSN Thesis study was to explore factors that influence decisions concerning breastfeeding in a group of mothers who are employed, place their children in a childcare center, and whose children are five years of age and under.

Thesis Question

What factors influence decisions concerning breastfeeding in a group of mothers with children five years of age and under?

Conceptual Framework

The framework of Fishbein and Ajzen's Theory of Reasoned Action (TRA) was originally proposed in 1975, and then revised by Fishbein and Ajzen in 1980 (Ajzen & Fishbein, 1980). The Theory of Reasoned Action (TRA) is the conceptual framework

that was used to guide this research study (Figure 1). The theory focuses on the behavior that is determined by the individual's intention to behave in a certain way. Through the use of a Reasoned Action approach, predictions may occur concerning a person's beliefs and behaviors. By examining the factors that influence mothers' decisions to breastfeed, the Theory of Reasoned Action approach may be applied. This approach, which takes into account the variables influencing a person's attitudes and beliefs, can accurately indicate the factors that lead to mothers' decisions concerning breastfeeding (Ajzen & Fishbein, 1980). The main sources of interpersonal influences are families, spouse, peers, environmental influencers, and health care providers. Women's attitude toward breastfeeding, family's attitudes, mothers' perceived positive cooperation of society, and a mother's belief in her own ability to breastfeed, shape and produce the mother's intent to breastfeed (Shaker, Scott, & Reid, 2004).

The application of the Theory of Reasoned Action suggests that a person's actions are based on his or her attitudes and subjective norms. A person's subjective norms are influenced and controlled by their environment, society, economics, demographics, and individual situation. Subjective norm depends on the point of view that a person thinks, that relatives or friends think, as well as, their own motivation to comply with these people (Ajzen, 2001).

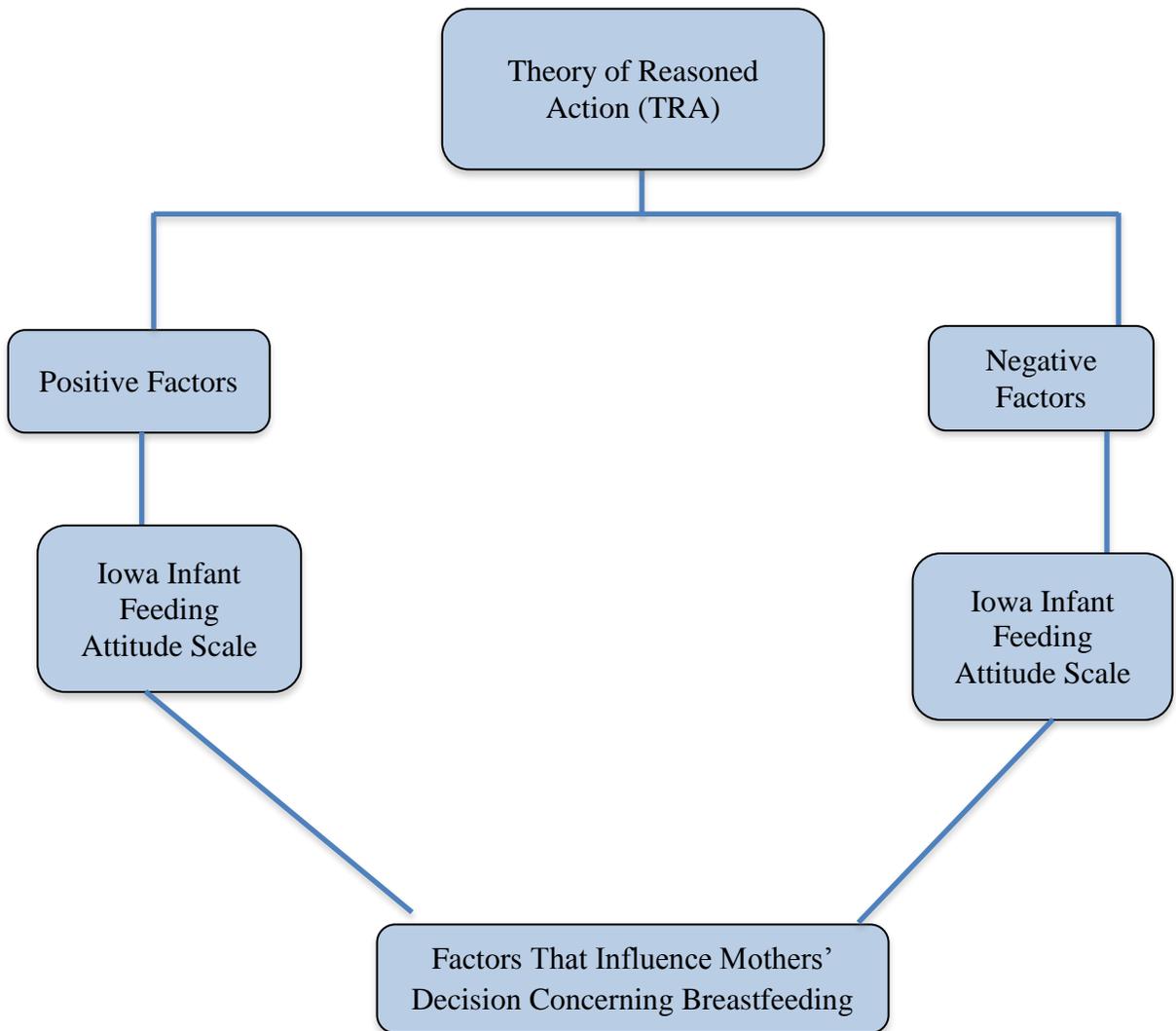


Figure 1: The Conceptual Framework- The Theory of Reasoned Action (TRA)

Definition of Terms

- Breastfeeding: “the normal way of providing infants with the nutrients they need for healthy growth and development” (WHO, 2016).
- Colostrum: yellowish, sticky breast milk produced at the end of pregnancy. Colostrum gives the infant the appropriate nutrition for their developmental process (Powe et al., 2011).
- Exclusive Breastfeeding: breast milk only, excludes water, other liquids, and solid foods (WHO, 2016).

Summary

The goal of this study was to explore factors that influence mothers' who are employed, place their children in a childcare center, and whose children are five years of age and under, decisions concerning breastfeeding. The researcher explored data collected to further understand the attitudes, beliefs, and opinions of mothers concerning breastfeeding. As a result of this study, the researcher produced conclusive data that can aid healthcare providers in providing education and developing approaches to effectively educate and inform mothers of realistic expectations concerning breastfeeding. The assimilation of valid and reliable information can empower mothers to make informed decisions based on facts and hopefully, will eliminate the many myths and inaccuracies that exist concerning breastfeeding. For it is only through desire, determination, and perseverance that breastfeeding will be rewarding and successful for mother and baby.

CHAPTER II

Research Based Evidence

Numerous pieces of literature were reviewed for the purpose of collecting descriptive data on factors that influence mothers' decision concerning breastfeeding. Although breast milk is considered to be the best nutritional choice for infants, many women still elect to use formula as the feeding choice for their baby. This study was conducted to provide data that helped the researcher understand the attitudes, beliefs, and opinions concerning breastfeeding of mothers with children five years of age and under. Positive and negative factors, such as, friends, family, healthcare providers, employment accommodations, physical limitations, and health benefits often influenced mothers' decisions concerning their choice for infant nutrition.

A literature search was conducted using Cumulative Index for Nursing and Allied Health Literature [CINAHL], World Health Organization (WHO), government websites, and Bulldog One Search. A variety of articles and studies were reviewed in response to the following keywords: breastfeeding, factors influencing breastfeeding, positive and negative factors of breastfeeding, human milk, nursing, young adults, and breastfeeding benefits. The selection of literature reviewed is categorized as: (1) definition of breastfeeding; (2) positive factors influencing mothers' decisions to breastfeed; and (3) negative factors influencing mothers' decisions to breastfeed.

Definition of Breastfeeding

According to the World Health Organization (WHO), breastfeeding is defined as “the normal way of providing infants with the nutrients they need for healthy growth and development” (WHO, 2016). Breast milk is viewed as the best form of nutrition for

infants, as its composition benefits their growth, immunity, and development. One of the World Health Organization's principles is providing lifelong access to health care starting with the mother long before pregnancy, through pregnancy, and childbirth (WHO, 2016). WHO is committed to promoting a high standard of health for people of all ages, including infants, and seeks to educate mothers and healthcare providers concerning the many benefits of breastfeeding.

Initiatives and Organizations That Encourage Mothers to Breastfeed

Healthy People 2020, is a comprehensive set of goals and objectives to guide health promotion (U.S. Department of Health and Human Services, 2014). Every 10 years, Healthy People sets targets that are promoted and released by the United States Department of Health and Human Services. By setting specific targets and objectives, Healthy People aims to motivate healthy living while monitoring and measuring progress. The Healthy People 2020 initiative has taken an affirmative stand on breastfeeding and has developed breastfeeding goals and targets for mothers and infants that are challenging, yet attainable. Healthy People 2020 established objectives, identified beginning baseline data, and projected target goals for the year 2020 (U.S. Department of Health and Human Services, 2010). The following Table 3 highlights actual breastfeeding data from 2006 and Target Goals of Healthy People 2020.

Table 3

Healthy People 2020 Breastfeeding Objectives (U.S. Department of Health and Human Services, 2010)

Objectives	Healthy People 2020 Breastfeeding Targets	
	Baseline	2020 Target
Infant Ever Breastfed	74.0% if infants born in 2006 were ever breastfed	81.9 %
Infant Breastfed at 6 Months	43.5% of infants born in 2006 were breastfed at 6 months	60.6 %
Infant Breastfed at 1 Year	22.7% of infants born in 2006 were breastfed at 1 year	34.1 %
Infant Breastfed Exclusively through 3 months	33.6% of infants born in 2006 were breastfed exclusively through 3 months of age	46.2 %
Infant Breastfed Exclusively through 6 months	14.1% of infants born in 2006 were breastfed exclusively through 6 months of age	25.5 %

Benefits of Breastfeeding for Mothers and Infants

Breastfeeding can benefit the mother emotionally and financially, as well as increase the wellness of the infant throughout his or her lifetime. As breast milk has always been recognized as the most nutritious milk for the baby, mothers, past and present, have chosen to breastfeed their infants. Throughout the literature reviewed, sources all agreed that breast milk is the number one choice for feeding infants up to six months. The following sections explained the benefits in detail and provided evidence and statistics confirming the importance of breastfeeding.

Breastfeeding benefits for infant. The World Health Organization (WHO) recommends that mothers breastfeed infants to reduce the risk of childhood infections and diseases. A mother's breast milk provides proper nutrition for infants, as it consists of the perfect mix of vitamins, proteins, and fat. In addition, breast milk contains antibodies that boost the infant's immune system, enabling the infant to better fight off infection. The components in breast milk are easily absorbed and digested by the infant, as breast milk contains living growth factors, hormones, and enzymes that aid in digestion. Research indicates breastfed babies have a lower risk of asthma, obesity, vomiting, diarrhea, respiratory infections, chronic conditions, SIDS (Sudden Infant Death Syndrome), certain childhood cancers, and type 2 diabetes (U.S. Department of Health and Human Services, 2014). Breast milk is clearly the healthier choice for infant nutrition.

Breast milk formation starts as colostrum and then changes to copious milk within the first 2-10 days after birth. Colostrum is instrumental in giving the child the appropriate nutrition and antibodies for his or her developmental process (Powe et al., 2011). In a published report from World Health Organization (WHO), breastfeeding is believed to have an association with the prevention of obesity. Furthermore, breastfeeding exclusively during the first six months of life is estimated to reduce the risk of gastrointestinal and allergic diseases and will impact growth of the infant (Horta & Victora, 2013).

According to the Centers for Disease Control and Prevention's (CDC) (2013) *Breastfeeding Report Card*, 77% of infants in the United States begin breastfeeding at birth. However, data in 2011 revealed that only 49% of infants were still breastfeeding at

six months, and 27% were breastfeeding at 12 months of age. In many instances, mothers choose to breastfeed because it is healthier for the baby and can save hundreds of dollars that would have been otherwise used to purchase formula. Researchers speculate that if 90% of infants were breastfed for at least six months, the United States would save \$13 billion dollars annually in health-care costs (Radzynski & Callister, 2015).

In 1991, World Health Organization (WHO) and the United Nations International Children's Emergency Fund (UNICEF) launched the Baby-Friendly Hospital Initiative (BFHI) to promote and increase global breastfeeding rates (WHO, 2016). This initiative consists of *Ten Steps to Successful Breastfeeding* which includes educating healthcare staff concerning benefits and techniques for successful breastfeeding, providing 'rooming in' facilities for mother and baby, and establishing breastfeeding support groups in which mothers can connect with upon discharge from the hospital. In addition, The Baby-Friendly Hospital Initiative (BFHI) promotes breastfeeding as the norm for the first six months of life (WHO, 2016).

Breastfeeding benefits for mothers. Breastfeeding has many benefits for baby and mother alike. However, mothers' decisions to breastfeed are often due to a complex number of variables. The mother's maternal knowledge, attitude, personal preference, partner support, and professional encouragement influence her decision concerning breastfeeding (U.S. Department of Health and Human Services, 2014). Additionally, the bonding that occurs between mother and baby during the early days of breastfeeding is comforting and fulfilling to mother and baby. Mothers often feel empowered and view themselves as a contributor to their baby's growth when breastfeeding. Additionally,

many mothers choose to breastfeed out of convenience, as breast milk is readily available, nutritious, sanitary, economical, and the perfect temperature.

Breastfeeding has many health benefits for the mother. It is believed that breastfeeding causes the uterus to contract and helps the mother lose weight more quickly than mothers who choose not to breastfeed. As a woman's body absorbs more calcium when pregnant and lactating, women who breastfeed have a lower risk of postmenopausal osteoporosis. Furthermore, mothers who breastfeed have a lower risk of premenopausal breast and ovarian cancer. Data over time indicates that breastfeeding decreases the risk of type 2 diabetes, breast cancer, and ovarian cancer (U.S. Department of Health and Human Services, 2014).

A cohort study, the Nurses' Health Study (NHS), analyzed the association between duration of lactation and incidence of type 2 diabetes (Stuebe, Rich-Edwards, Willett, Manson & Michels, 2005). The NHS began in 1976 and consisted of two cohorts of women enrolled in longitudinal studies of women's health. The first group consisted of mothers between 30 and 55 years of age, who had no history of gestational diabetes. In this group of mothers, the risk of developing type 2 diabetes was reduced by 15% for each additional year of breastfeeding. The second group of mothers had a history of gestational diabetes. These mothers were between the ages of 25 and 42 years old. The risk of developing type 2 diabetes in the second group was reduced 14% for each additional year of breastfeeding. Researchers conducting the study found that a longer duration of breastfeeding is associated with a reduced risk of developing type 2 diabetes in young and middle-age women (Stuebe et al., 2005).

One major benefit of breastfeeding is cost saving. Researchers speculate that if 90% of infants were breastfed for at least six months; the United States would save \$13 billion dollars annually in health-care costs (Radzyminski & Callister, 2015). Many mothers choose to breastfeed simply due to the savings, as breast milk is free compared to formula, which can cost hundreds of dollars yearly.

Factors Influencing a Mother's Decision to Breastfeed

Many organizations agree that breastfeeding is important to both mother and infant, and the practice of breastfeeding is promoted by world organizations. For example, World Health Organization (WHO), United Nations Children's Fund (UNICEF), Baby-Friendly Hospital Initiative (BFHI), World Alliance for Breastfeeding (WABA), and American Academy of Pediatrics have all taken a firm and positive stand on breastfeeding for infants (Breastfeeding Support Group, n.d). As breastfeeding continues to be the number one nutritional choice for infants worldwide, numerous countries have set goals to support, protect, and promote breastfeeding among all mothers. In the United States, breastfeeding is recognized as a major health promotion by its inclusion in Healthy People 2020, an initiative to promote better health in Americans (U.S. Department of Health and Human Services, 2014).

To obtain data and information for this study, The Iowa Infant Feeding Attitude Scale (IIFAS) survey tool was chosen. This instrument has been tested for validity and reliability through the use of three individual studies by researchers. The survey tool consists of 17 questions that measure the attitudes, beliefs, and opinions of mothers concerning the benefits of breastfeeding. Beliefs, attitudes and opinions are gathered and evaluated by the instrument. In addition, the survey tool seeks to measure the

mothers' beliefs concerning the health benefits of breast milk. Data gathered from mothers' responses will be indicative of the positive and negative factors that influence mothers toward breastfeeding (De La Mora, Russell, Dungy, Losch, & Dusdieker, 1999).

Positive factors. According to the American Academy of Pediatrics, breastfeeding is the preferred method of infant feeding for up to six months of age (WHO, 2016). Breastfeeding for many mothers is a joyful and fulfilling experience. They view the time consumed in breastfeeding as a way to connect and bond with their child, and a unique experience that only they can have with the baby. Usually, a woman with a friend or family member who has breastfed their child will retain a positive attitude and will demonstrate confidence and determination towards breastfeeding (Aghdas, Talet, & Sepideh, 2014). As mothers-to-be hear about breastfeeding experiences from friends and family, they are likely to have a desire to breastfeed themselves.

Some hospitals support breastfeeding by allowing and encouraging mothers to room-in with their infant. This is an important practice as the first two hours after birth are the optimum time to initiate breastfeeding (Aghdas et al., 2014). Through the practice of rooming-in and skin-to-skin contact, the nurse may give more hands-on time to the mother in support of breastfeeding and caring for her infant. While mother and infant are together bonding, the nurse can adequately instruct in breastfeeding technique and offer individual support and encouragement. Studies reveal that it is important for the mother to develop self-efficacy in the early stages of breastfeeding (Aghdas et al., 2014). This practice results in the mother becoming more confident in breastfeeding, thereby, transferring to self-assured behavior at home and inner determination to succeed.

Additionally, rooming-in mothers frequently discharge early, which decreases the cost of their healthcare.

A positive factor in influencing mothers' decisions to breastfeed is healthcare providers who offer positive counseling and support to breastfeeding mothers. Demirci et al. (2013) conducted a study that examined the conversations concerning breastfeeding that occurred between patients and healthcare providers during the first prenatal visit. According to Demirci et al. (2013), many women's decision to breastfeed was made before conception, and for some women they decided during pregnancy if they are going to breastfeed or not. This study was a funded parent study about patient-provider communication during prenatal care and included 69 providers and 377 patients. As a sample population, the first 172 patient visits were used for this study analysis. Audio recordings and transcripts from six midwives, 36 obstetrics-gynecology residents, and five nurse practitioners were reviewed for incidences of breastfeeding discussion, timing of discussions, and adherence to American College of Obstetricians and Gynecologists (ACOG) breastfeeding guidelines. The results revealed that breastfeeding discussions were infrequent in 29% of the visits and lasted an average of 39 seconds. Only 69% of the discussion between patients and providers regarding breastfeeding followed the ACOG guidelines. The patients who indicated a preference for breastfeeding at their first prenatal visit (n=19) were likely to have the discussion. The study concluded that breastfeeding education was suboptimal at the first prenatal visit. Unfortunately, the study failed to address the opinions of healthcare providers that may or may not have initiated a discussion on breastfeeding.

A final factor that influences mothers' decisions concerning breastfeeding is the lasting nutritional benefits of breast milk. As many mothers desire for their children to have the best health possible, they choose to breastfeed simply due to the natural antibodies and immunities that breast milk provides. Breastfeeding is one-way mothers feel they can individually connect with their child and positively affect their baby's overall health.

Negative factors. Significant factors that negatively influence the mother's perception on breastfeeding often come from the father's beliefs, attitudes, and opinions. The father's feelings toward breastfeeding may cause the mother to change her behavior to match her partner's beliefs. In some cases, fathers feel left out and resent the mother's connection with the infant. Therefore, they often pressure and influence the mother to formula feed so that they can share in the feeding responsibility (Atchan, Foureur, & Davis, 2011). Studies reveal that even if the mother breastfeeds or formula feeds her infant, the father still feels that breastfeeding in public is embarrassing and unacceptable. This attitude is due to the fact that the breast has a functional use but that the male perceives it as sexual. Paternal support is important both physically and emotionally, and some mothers will elect to not breastfeed in order to engage the father in bonding with the infant (Atchan et al., 2011).

In a recent qualitative and quantitative meta-analysis study conducted by Balogun, Dagvadorj, Angio, Ota, and Sasaki (2015), researchers revealed factors that influenced mothers' decisions to breastfeed by selecting 25 research studies that described barriers of breastfeeding from a number of countries. All evidence was collected from primary research. The study included age, educational level, religion,

family type, and mother's employment. The participants in these studies were pregnant women, and mothers who had infants between the ages of 0 to 6 months where infants received only breast milk. The study selection was restricted to studies in English from 2001 to 2014. Twenty-five research studies with data on early infancy were included, and data from developing countries were included. The Critical Appraisal Skills Programmed System was used to evaluate the methods, credibility and relevance of the literature being used for inclusion. Developed by Dr. Amanda Burls in 1993, the Critical Appraisal Skills Programme Tools & Checklists (CASP) is a website program that was used to interpret the best evidence from health research and helps make sense of the research methodologies, ensures reliability, and draws the right conclusion in a particular situation. CASP is recommended for researchers who want a quick, simple, and easy-to-understand tool for answering questions regarding a study (Singh, 2013). Studies indicated that mothers who do not breastfeed or support breastfeeding often have negative attitudes towards breastfeeding. Researchers found that older mothers, 35 years of age and older, were less likely to breastfeed as opposed to younger mothers, 20 years of age and younger. Of the 25 studies examined, the mother was in formal employment or engaged in work outside the home in 16 of the studies. The most significant barrier to breastfeeding was maternal employment, where mothers worked outside the home. Evidence shows that longer maternity leave increased the chances of mother's breastfeeding up to six months of age. A majority of the studies found that low education levels were a risk factor for mothers not choosing breastfeeding (Balogun et al., 2015).

Another major factor that negatively influences working mothers from breastfeeding was the inconvenience and absence of accommodations for working

mothers. Whereas many mothers return to work shortly after giving birth, very few employers supported or promoted breastfeeding in the workplace. Often, accommodations for a comfortable room for breastfeeding, and time to breastfeed were not provided in the workplace. Due to the awkwardness and lack of understanding by employers, mothers often chose to discontinue breastfeeding, once they returned to work. Mothers often felt that they had no choice concerning breastfeeding in the workplace.

A cohort study conducted by Mirkovic, Perrine, Scanlon, & Grummer-Strawn (2014), was performed to assess whether maternity leave duration and return status were associated with mothers' decisions to breastfeed. This study consists of 1,506 mothers who were employed during pregnancy and reported in a survey, The Infant Feeding Practices Study II (IFPII) that they intended to breastfeed for at least three months following delivery. The survey was completed prenatally, and the average age of the study participant was 29 years of age. Completers were predominantly white (86.2%) and married (79%). Only 48.6% were college graduates and 31.5% participated in the WIC program. The Infant Feeding Practices Study II (IFPSII) was a longitudinal survey conducted by the Food and Drug Administration (FDA). This study focused on infant feeding practices during the first years of life and the mother's diet during 3rd trimester and four months postpartum (CDC, 2014). As a result of this study, 28.8% of mothers did not follow through with their intention to breastfeed for at least three months. Only 54.1% returned to work full-time after delivery. This study concluded that a mother's return to employment is influenced by the amount of paid leave they are granted, and the amount of unpaid leave they can afford to take. Unfortunately, the U.S. is one of the three countries that does not mandate paid maternity leave (Mirkovic et al., 2014).

A qualitative study conducted by Rojjanasrirat and Sousa (2010), was performed to determine the perceptions of breastfeeding in low-income pregnant women, and to better understand their plan when returning to work or school. Study results helped nurses and midwives provide quality care to pregnant mothers. The study consisted of 17 pregnant women between the ages of 19-35 who were eligible for the government Women, Infant, and Children's program (WIC). The WIC program seeks to provide low-income women, infants and children with medical care, community service, and supplemental food at no cost. Women and children with nutritional risks are served through WIC. The sample criteria were women who planned on breastfeeding their infants; women already working or planning to return to work after childbirth; women with income at or below poverty level; and women who were able to read, understand, write and speak English. The women for the study were recruited from three Women, Infant, and Children's clinics (WIC) in a Midwestern metropolitan area in the United States. The results of the study identified five themes: women in the study recognized breastfeeding as being natural, facilitating closeness, and promoting health for the infant; study participants were concerned about other people's attitudes and feelings towards breastfeeding; some mothers were unsure of physical and time limitations required with breastfeeding; many participants in the study revealed a lack of support in the workplace for breastfeeding; and others felt that breastfeeding and pumping created excessive stress on the mother. (Rojjanasrirat & Sousa, 2010). As a result of this study, the researcher recommended educating employers and the public about the health and economic benefits derived from long-term breastfeeding and initiative to promote breastfeeding awareness (Rojjanasrirat & Sousa, 2010).

Researchers, Stratton and Henry (2011), conducted a study to explore the feelings of working mothers towards breastfeeding, and mothers' perceptions of their employer's acceptance and support. Qualitative methodology was used to obtain information from six business owners who employed 15 to 2,000 employees. Through the use of purposive sampling, the researchers selected the businesses for inclusion in the study. Businesses were selected from a list that was provided by the Executive Director of a local Chamber of Commerce, who employed low-income, hourly, full-time workers. The manager or owner of each company was interviewed one-on-one for approximately 40 minutes. Participants were asked to rate the acceptability and feasibility of seven suggestions for the provision of workplace breastfeeding support that were selected from the Employer Toolkit. The Employer Toolkit was collaboratively developed by "Corporate Voices for Working Families, Working Mother Media, and Abbott Nutrition" (Stratton & Henry, 2011, p.2). This toolkit provided employers with a resource that they may use to implement workplace breastfeeding support. The interviews were recorded, transcribed, and analyzed to collect data for use in the framework of three constructs of the Theory of Reasoned Action (TRA): behavioral beliefs, attitudes, and behavioral intentions. Several common themes emerged from the study. Employers agreed on the benefits of breastfeeding and demonstrated positive attitudes on the subject. However, several obstacles made breastfeeding in the workplace difficult. Obstacles named included financial and property limitations. Although the employers exhibited positive attitudes towards workplace breastfeeding, they did not intend to take action to support the practice of breastfeeding in the workplace.

In some instances, uncontrollable factors negatively influence breastfeeding. First time mothers often have trouble balancing and coping with the many responsibilities of breastfeeding and caring for a newborn. Sometimes, additional factors may positively or negatively impact the mothers' decisions concerning breastfeeding. For example, an inadequate milk supply, breast pain from feeding, and time necessary for breastfeeding influenced mothers against breastfeeding. Although breastfeeding is beneficial to mother and baby, many factors weigh in the mother's personal choice concerning breastfeeding her baby.

Summary

Breastfeeding has always been the ideal feeding choice and is the oldest feeding method for infants and young children. However, there are many factors that influence mothers' decision to breastfeed. According to Ajzen and Fishbein (1980), the Theory of Reasoned Action has its roots in psychology and is a framework that is applicable to this study. The Theory of Reasoned Action was utilized to examine the factors that influence a mother's decision concerning breastfeeding, including their attitudes and beliefs of breastfeeding. A woman's attitude and belief in her own ability to breastfeed often produced the mother's determination and commitment to breastfeed (Shaker et al., 2004). For it is only through perseverance and determination that breastfeeding was successful. Family and friends' attitudes, workplace requirements, healthcare practices, and uncontrollable factors influenced a woman's decision concerning breastfeeding.

Descriptive data was collected during this research project to explore positive and negative factors that influenced a mother's decision concerning breastfeeding. Literature reviewed in the research, explored initiatives and promotions developed to influence

mothers' attitudes toward breastfeeding their infant. In addition to the health benefits being great for mother and child, the huge benefit of healthcare cost saving was believed to be boundless for individuals and governmental agencies. As revealed in the literature, friends and family, healthcare providers, hospital practices, nutritional benefits, and cost-saving are factors that positively influenced mothers to breastfeed. Friends and family attitudes, inconveniences of the workplace, lack of education, physical limitations, and excessive responsibilities of the mother often had a negative impact on mothers' decisions concerning breastfeeding.

CHAPTER III

Methodology

The purpose of this study was to provide descriptive analysis of factors that influence mothers' attitudes, beliefs, and opinions concerning breastfeeding.

Breastfeeding is considered worldwide to be one of the most beneficial and cost-effective preventive health measures available (Pound & Unger, 2012). Despite the benefits of breastfeeding, many mothers continue to choose formula as the primary means of nourishment for their baby. Research revealed that positive and negative factors influenced mothers in their decisions concerning breastfeeding of their infants. This chapter explains the method that was used to gather data concerning mothers' attitudes, beliefs, and opinions about breastfeeding. The Iowa Infant Feeding Attitude Scale was used to gather information concerning the study.

Research Design

A descriptive research design was selected which allowed the researcher to determine the factors of attitudes, beliefs, and opinions that influenced mothers' decisions concerning breastfeeding using a cross-sectional survey. Factors measured in the survey tool included mothers' beliefs of the nutritional benefits of breast milk, beliefs of the father's role in feeding, opinions concerning convenience of breastfeeding, opinions towards infant bonding, and attitudes towards workplace accommodations, and breastfeeding beliefs in general.

Setting and Sample

The participants for this study were recruited at a local childcare center in a southeastern state. The childcare center served 53 children, infant to five years of age at

the time of the data collection. The center was located in a rural area and had been in operation for at least 30 years. This was a convenience sample with a potential sample size of 44 mothers who were employed, placed their children in childcare, and whose children were five years of age and under.

Data Collection

Permission to recruit participants was obtained from the director of the childcare center. A flyer announcing the study and informing mothers of their participation was sent home in each child's book bag on Monday of a predetermined week. The researcher went to the center the following Tuesday afternoon to meet mothers, give out the participant consent flyer and survey tool, The Iowa Infant Feeding Attitude Scale (IIFAS). The survey and participant flyer were provided in English. The researcher asked if mothers saw the announcement flyer on Monday, explained the study, and asked for each mother's participation.

Mothers were instructed to take the survey home and complete it by the end of the week. They were told that they could keep the participant flyer and were reminded to return their completed survey to the childcare office and place in the envelope marked, "Survey" located at the check in/check out desk. A sign was placed at the check in/check out desk reminding parents to return surveys by Friday. The completion of the survey instrument indicated mothers' consent in participating in the project. The researcher collected surveys from the sealed envelope at the close of the center on Friday.

Measurement Methods

The Iowa Infant Feeding Attitude Scale (IIFAS) survey (De La Mora et al., 1999) was used to explore and identify attitudes, beliefs, and opinions of mothers who were employed, placed their children in childcare, and whose children were under five year of age, concerning breastfeeding. The scale consists of seven items concerning the mothers' attitudes, beliefs, and opinions relating to breastfeeding and uses a five point Likert scale ranging from one (strongly disagree) to five (strongly agree) in measuring responses. The items were formulated to reflect a preference toward formula feeding or breastfeeding. Items favored toward formula feeding were reversed scored, and the total score was computed by summing the responses of the seventeen items. The possible range of scores for the Iowa Infant Feeding Attitude Scale is a minimum of 17 and a maximum of 85, with a higher score indicating a preference for breastfeeding (De La Mora et al., 1999).

The survey tool has been determined to be reliable and valid. Cronbach's alpha scores for this instrument ranged from .85-.86, which indicated high reliability (De La Mora et al., 1999). In previous research studies that used this tool, results indicated maternal attitudes are important and are considered to be reliable predictors regarding feeding method and the duration of breastfeeding among women who breastfeed their infant (Shaker et al., 2004). Two questions were added to the survey to determine participants' feeding choice of their infants: Did you breastfeed your child? If so, how long?

Protection of Human Subjects

The University Institutional Review Board approved the study and its procedures. Permission to conduct the study at the childcare center was obtained by the director of the center, and participants for the study were informed that participation was strictly voluntary. Consent from the participants was implied by completion of the survey. Participants were informed that their status with the childcare center was not affected in any way by their decision to complete or not to complete the survey. No identifying data was collected on the survey concerning participants.

Anonymity was maintained throughout the entire process. A participant flyer was given to each participant that explained the purpose of the study and each participant's rights. Survey results were saved on a password protected computer, and all data will be stored at the School of Nursing for three years after completion of the study.

Data Analysis

Upon receiving the completed surveys, the researcher collected the data, analyzed the responses, and evaluated the results. Through the use of appropriate descriptive statistics and frequency distributions, reliable conclusions were gathered concerning the factors that influence mothers about breastfeeding. Data was entered by the researcher and stored on a thumb drive using the Statistical Packages for the Social Science (SPSS). SPSS software version 22 was used to analyze the quantitative data.

Summary

Despite the fact that breast milk is considered to be the best nutritional choice for infants, many women continue to use supplemental formula as the primary source for their infant's nutrition. Throughout this study, the researcher sought to discover, explore,

and understand factors that influenced decisions concerning breastfeeding in a group of mothers with children five years of age and under. The Iowa Infant Feeding Attitude Scale, a reliable and valid tool for data collection, provided the researcher with quantitative data in determining attitudes, beliefs, and opinions towards breastfeeding.

As breastfeeding can benefit the mother emotionally and increase wellness in the infant throughout his or her lifetime, the data collected from this study will help healthcare professionals have a better understanding of the factors that impact mothers' decisions on breastfeeding their infant and will lead to an increased understanding for the need to educate and provide support to mothers so that they can make an informed decision about breastfeeding. By collecting mothers' input, synthesizing survey data, reviewing mothers' feedback, and publishing survey results, healthcare workers may sense the urgency in breastfeeding promotion among young mothers.

Positive and negative factors influence mothers' decisions to breastfeed. This research was designed to collect descriptive data concerning the attitudes, beliefs, and opinions concerning breastfeeding in a group of mothers with children five years of age and under. Survey results indicated that even though positive and negative factors influenced mothers' decisions concerning breastfeeding, the final decision to breastfeed ultimately remains a personal choice.

CHAPTER IV

Results

The purpose of this study was to explore factors that influence decisions concerning breastfeeding in a group of mothers who are employed, place their children in a childcare center, and whose children are five years of age and under. Results from this study can help healthcare professionals have a better understanding of the factors that impact mothers' decisions on breastfeeding their infant and assist in developing an action plan for educating and providing breastfeeding support to mothers.

Sample Characteristics

Participants were recruited from a local, rural childcare center in a southeastern state. Mothers, who placed their children, five years of age and under, in childcare, were invited to participate in the study via an announcement flyer sent home on Monday. The researcher returned to the center on Tuesday to meet the mothers, answer questions about the project, and give out the Participant Flyer and survey.

The center serves birth through five years old, and at the time the survey was conducted, 53 children were enrolled in the center. This was a convenience sample with a potential sample size of 44 mothers who could have completed the Iowa Infant Feeding Attitude Scale (IIFAS) Survey. However, 10 mothers did not return the survey, and four surveys were partially completed. The incomplete surveys were not considered for data analysis. Therefore, data was collected and interpreted from 30 mothers (see Table 4).

Table 4

Iowa Infant Feeding Attitude Scale (IIFAS) Survey Results

Number of children enrolled in childcare center.	Potential number of mothers to complete survey.	Number of mothers fully completing survey.	Number of mothers who partially completed survey.	Number of mothers who failed to complete or return survey.
53	44	30 (68%)	4 (9%)	10 (23%)

Major Findings

The Iowa Infant Feeding Attitude Scale (IIFAS) survey tool was used to explore and identify attitudes, beliefs, and opinions of mothers who were employed, placed their children in childcare, and whose children were under five year of age, concerning breastfeeding. This scale consisted of 17 items concerning the mothers' attitudes, beliefs, and opinions relating to breastfeeding and used a five point Likert scale, which ranged from one (strongly disagree) to five (strongly agree) in measuring responses. The items were formulated to reflect a preference toward formula feeding or breastfeeding.

The possible range of scores for the Iowa Infant Feeding Attitude Scale is a minimum of 17 and a maximum of 85. The results of this particular sample survey revealed mean scores with a minimum of 45 and a maximum of 72. Most of the participants, 16, scored in the mean range of 51 to 60. Only one survey participant scored a mean of 72. A higher mean score indicates a more positive attitude towards breastfeeding. Individual mean scores on the survey tool fell within a range of 27 points (Table 5).

Table 5

Individual Participant's Total Mean Score

Participant's Total Score	Number of Participants with this Mean Score
72	1
68	1
63	1
61	2
60	1
59	2
58	2
57	3
56	3
55	1
54	3
53	1
50	2
49	2
48	2
47	2
45	1

When examining actual cognitive information from participants concerning breastfeeding, the study revealed that 63% (n=30) of mothers were neutral when asked if formula is as healthy as breast milk. The majority of mothers 56% (n=30) agreed that breast milk is more easily digested than formula and 7% (n=30) of mothers agreed that formula is as healthy for an infant as breast milk.

The data collected from the IIFAS in assessing attitudes toward infant feeding methods is reliable and valid in determining trend data. The following additional information was obtained from the survey when mothers were asked, "Did you breastfeed your child and if so, how long?"

- Nineteen mothers (5.7%) answered that they breastfed their child.
- Ten mothers indicated they breastfed from birth-three months.
- Four mothers breastfed from four-seven months.
- Four mothers breastfed from eight-twelve months, and
- One mother continued feeding after the child was one year old. This mother explained that she breastfed until the child was 18 months old. This mother included the following comment on her survey, “My baby and I enjoyed this time together.”

In addition, compiled data from the completed surveys revealed that 11 mothers (3.3%) strictly formula fed their child.

Summary

The purpose of this study was to explore factors that influence decisions concerning breastfeeding in a group of mothers who are employed, place their children in a childcare center, and whose children are five years of age and under. The survey enabled the researcher to gather pertinent data in order to draw conclusions and analyze factors that influence mothers' decisions concerning breastfeeding in this sample population. This research study, explored, compared and analyzed the attitudes, feelings, and beliefs of working mothers concerning breastfeeding their infant.

CHAPTER V

Discussion

The purpose of this study was to explore factors that influence decisions concerning breastfeeding in a group of mothers who are employed, place their children in a childcare center, and whose children are five years of age and under. Participants in the study completed the Iowa Infant Feeding Attitude Scale (IIFAS) survey tool, a 17 item scale measuring mothers' attitudes towards breast and formula feeding with regards to the health and nutritional benefits, and cost and convenience of each method.

Implication of Findings

A convenience sample that included 44 mothers, who were employed, placed their children in childcare, and whose children were five years of age and under, were asked to complete the 17 question Iowa Infant Feeding Attitude Scale (IIFAS) survey. The survey was used to explore and identify attitudes, beliefs, and opinions towards breastfeeding. Two additional questions were included on the survey for the purpose of collecting pertinent data specific to this population: Did you breastfeed your child? If so, how long? The childcare center had 53 children enrolled and a potential sample size of 44 mothers. At the conclusion of the one-week survey window, 34 mothers had completed and returned the survey to the childcare office. Of the possible 44 participants, 10 mothers did not return the survey, and four surveys were not complete, and therefore, were not included in the survey results. The completion rate for the survey was 30 mothers (68 %).

According to the U.S Department of Health and Human Services (2014), mothers who choose to breastfeed find that it is more convenient for them Survey results on

several items supported this fact found in the literature. Twelve participants answered the item on the survey stating, “Formula-feeding is more convenient than breast-feeding,” in agreement, and 13 participants disagreed. Five participants selected a score of neutral on this particular item. In addition, nine participants answered the item on the survey stating; “Breast-feeding is more convenient than formula-feeding,” in agreement, and 10 participants disagreed. The highest score was neutral, as 11 participants selected neutral and were indecisive. This data aligns with the fact that 11 mothers solely formula fed their baby. According to Johnston and Esposito (2007), mothers who work full time have similar initiation rates for breast feeding as those who do not work; however, they tend to breastfeed for shorter amounts of time than those who work part time or are stay at home mothers. In reviewing survey data results, it is understandable that it is more difficult and less convenient for working mothers to breastfeed for an extended amount of time. Data from the 30 mothers who completed the survey revealed that 19 mothers initiated breastfeeding, but only nine mothers’ breastfed following three months of age.

Low breastfeeding rates can negatively impact economic status of families, communities, and the nation (Johnston & Esposito, 2007). One question on the survey addressed the economical benefits of breastfeeding when stating, “Breast-feeding is less expensive than formula.” Fourteen mothers agreed with this statement, 10 disagreed with the economic benefit of breast milk, and six were neutral. As a significant number of mothers agreed with this statement, it is evident that some mothers may choose to breastfeed due to cost-savings. Researchers venture to predict that if 90% of infants were breastfed for at least six months, the United States would save \$13 billion dollars annually in health-care costs (Radzaminski & Callister, 2015).

Research shows that babies who are formula fed become sick more often and tend to be more overweight than breastfed babies (Treadway, 2006). As revealed in one research study, “The cornerstone of health for an infant begins with being breastfed” (Busch, Logan & Wilkinson, 2014, p. 495). Although breast milk is more beneficial to infants, 12 mothers marked neutral on the survey statement concerning breast milk being healthier for babies than formula. On the survey statement, “Formula is as healthy for an infant as breast milk”, 19 mothers scored neutral. Based on survey results, the mothers in this particular study may lack information regarding the numerous health benefits of breast milk.

Application to Theoretical/Conceptual Framework

The conceptual framework used for this study was Fishbein and Ajzen’s Theory of Reasoned Action (TRA). The findings from the study were consistent with the conceptual framework. This theory suggests that a person’s actions are based on his or her attitudes and subjective norms. A person’s subjective norms are influenced and controlled by their environment, society, economics, demographics, and individual situation. Subjective norms depend on the point of view that a person thinks, that relatives or friends think, as well as, their own motivation to comply with these people (Ajzen, 2001). This approach takes into account the variables that influence a person’s attitude and beliefs, which can indicate the factors that lead to mothers’ decisions concerning breastfeeding. Attitudes, beliefs, and opinions about breastfeeding often impact mothers’ decision to breastfeed.

Limitations

The research and collected data revealed several limitations in this particular study. The study took place in a small rural childcare center that has a limited representation of ethnic groups and cultures. Because the sample size was a convenience sample, generalizations of the findings were limited to working mothers, who have children in childcare, and whose children are five years of age and under. The limited number of participants may have not adequately represented the majority of mothers' attitudes, concerns, and opinions concerning breastfeeding. In order to address this particular variable, surveying a larger number of participants and more specific questions concerning factors that influence mothers' decisions concerning breastfeeding would be more beneficial.

The survey did not provide data concerning specific factors that influenced mothers' decisions concerning breastfeeding. This particular variable should be considered in future research projects in order to fully explore mothers' breastfeeding decisions. Additional factors for consideration in future breastfeeding studies would be the perception, influences, and decisions of non-working mothers concerning breastfeeding and pertinent demographic data concerning survey participants. These variables could help future studies further explore and accurately interpret the attitudes, feelings, and beliefs of working mothers concerning breast feeding.

Another limitation of this study was that religious affiliations and income barriers were not accounted for in the study. This study was conducted in a Christian childcare center located in a southeastern state and may not be generalized to other states. Additional research involving a larger sample size in a non-religious childcare center may

reveal more variables to assist in better determination of factors that influence mothers' decisions to breastfeed. Furthermore, data concerning the demographics of participants should be explored. Questions concerning income level, educational level, and parental type of employment would provide pertinent data for use in interpreting demographic factors.

Implications for Nursing

Identifying factors that influence mothers' decisions concerning breastfeeding will assist health professionals in providing better advice and education to mothers concerning their option for infant feeding. All mothers who seek prenatal care should be instructed on the positive benefits of breastfeeding. Healthcare providers must assume responsibility for informing mothers of the facts and importance of breastfeeding in promoting infant health and nutrition. Providers, lactation nurses, and nurse educators may use the knowledge obtained from this study, and additional studies, to better understand mothers' attitudes, beliefs, and opinions concerning breastfeeding decisions. This information can lead to more focused parent education regarding these influencers and may help promote breastfeeding across various cultures, ethnic groups, and socioeconomic groups.

The literature suggested that the mother's maternal knowledge, attitude, personal preference, and professional encouragement influence her decision concerning breastfeeding (U.S. Department of Health and Human Services, 2014). Numerous research studies revealed that healthcare provider's support of breastfeeding is important in increasing breastfeeding rates among mothers, and many providers do not demonstrate clear support of breastfeeding, or they lack adequate knowledge about breastfeeding

(Witters-Green, 2003). Information presented in this study further indicates the importance of women's healthcare providers implementing a concerted effort to educate mothers concerning the many benefits of breastfeeding, as well as provide encouragement for nature's intended means of infant feeding.

Recommendations

Comprehensive research is needed to gather information and to understand working mothers' perceptions and beliefs concerning breastfeeding. More information could be obtained if research was expanded to include a sample of non-working mothers. Additional research may compare attitudes, beliefs, and feelings of mothers in a profit versus nonprofit childcare center. Furthermore, a comparison between breastfeeding mothers and non-breastfeeding mothers could provide additional findings. Finally, including non-working mothers in this type of study may enhance their awareness and provide data for comparison of working versus non-working mothers' attitudes, beliefs, and opinions concerning breastfeeding.

Conclusion

The goal of this study was to explore factors that influence mothers' who are employed, place their children in a childcare center, and whose children are five years of age and under, decisions concerning breastfeeding. As evidenced by data collected, some misconceptions exist in working mothers' knowledge concerning the benefits of breast milk. The analysis of information collected via a survey tool provided valuable information to reveal to healthcare providers the importance of educating mothers on the benefits of breastfeeding and factors that influence their decision to breastfeed.

As a result of this study, the researcher produced data that can assist healthcare providers in providing effective education that will inform mothers of breastfeeding facts, and give them realistic expectations concerning breastfeeding. The assimilation of valid and reliable information can empower mothers to make informed decisions based on facts and may eliminate the many myths and inaccuracies that exist concerning breastfeeding. While breastfeeding is ultimately a maternal decision, it is often swayed by multiple factors, both positive and negative. Many external and internal factors influence mothers' attitudes, beliefs, and feelings concerning breastfeeding.

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