The Role of the Mass Media in Women's Infant Feeding Decisions

A Dissertation Presented

by

PAULA BYLASKA-DAVIES

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PAULA BYLASKA-DAVIES

Approved as to style and content by:

_____
Susan Sullivan-Bolyai

_____
Rosemary Theroux

_____
Erica Scharrer

Date: June 29, 2011

_____
Paulette Seymour-Route, PhD, RN
Dean
University of Massachusetts Worcester
Graduate School of Nursing

DEDICATION

The Lord is my strength and my shield; my heart trusts in him and I am helped. My heart leaps for joy and I will give thanks to him in song.

Psalm 28:7

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ABSTRACT

THE ROLE OF THE MASS MEDIA IN WOMEN'S INFANT FEEDING DECISIONS

2011

PAULA BYLASKA-DAVIES

B.S.N., UNIVERSITY OF MASSACHUSETTS AMHERST

M.S.N., STATE UNIVERSITY OF NEW YORK AT BINGHAMTON

Ph.D., UNIVERSITY OF MASSACHUSETTS WORCESTER

Directed by: Professor Susan Sullivan-Bolyai

Breastfeeding has been established as providing the best and most complete nutrition for newborns, as this method promotes the infant's health and supports infant growth (American Academy of Pediatrics [AAP], 2005). Mass media have been suggested as powerful and universal means of communication with the potential to impact social norms. Thus, this qualitative descriptive study explored, within the context of the Socioecological Framework, women's decision making on whether to breastfeed or bottle-feed their infants and the effect of mass media on their decision.

Data were collected in individual audiotaped interviews with participants recruited from the Massachusetts Breastfeeding Coalition and UMass Memorial Medical Center. Interview data were compared to text and visual representation from 12 Internet sites on parenting and infant feeding. Data analysis was conducted simultaneously with data collection and was continued until saturation was achieved. The comparison findings

demonstrated that the emerging themes from the participant interviews reflected the information represented on the Internet sites.

The main theme *Media Matters Not* suggested that mass media did not influence infant feeding decisions for this group of mothers. What did have an important impact on infant feeding decisions was the information and emotional support provided by partners, family, and HCPs (subtheme of *Influences on Decisions).* The participants offered suggestions of media messages they would like see in the future such as public service announcements of women breastfeeding their infants. In addition, the participants discussed media issues that had potential for influencing infant feeding decisions (*Media Messages—Good and Bad),* emphasized the need for public opinion to be altered so that breastfeeding in public would be viewed as more acceptable, *(Community/Public Opinions),* and described suggestions for enhancing media messages about breastfeeding (*Recommendations for Future Media Messages)*. The implications for nursing practice, public policy, and future research related to the topic were discussed.

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CHAPTER I

STATE OF THE SCIENCE

Introduction

Breastfeeding has been established as providing the best and most complete nutrition for newborns, as this method promotes the infant's health and supports infant growth (American Academy of Pediatrics [AAP], 2005). Breastfeeding has many secondary benefits for the infant and mother. The infant's overall health, immunity, growth, and development are promoted by being breastfed. Breastfed infants have a lower incidence of ear infections, respiratory disease, allergies, ulcerative colitis, Crohn's disease, diabetes, and Sudden Infant Death Syndrome. Mothers may experience decreased postpartum bleeding, reduced risk of premenopausal breast cancer, and reduced risk of developing osteoporosis (AAP, 2005).

Breastfeeding Benefits

The importance of breastfeeding to maternal-child health is underscored by aggressive governmental and professional support. First, the US government proposed in *Healthy People 2010* a goal of increasing the percentage of mothers who breastfeed their infants in the initial postpartum period to 75% (U.S. Department of Health and Human Services [USDHHS], 2000). Second, they proposed increasing the percentage of mothers who continue to breastfeed their infants through the first 6 months of life to 50%. Finally, they proposed increasing the percentage of mothers who continue to breastfeed their infants up to 1 year old to 25%. They have also added sub-objectives to have 60% and 30% of mothers exclusively breastfeeding at 3 and 6 months postpartum, respectively

(USDHHS, 2010). Exclusive breastfeeding consists of feeding the infant only breast milk, without supplementation of food or drink, not even water, except for vitamins, minerals, or medications (AAP, 2005).

Supplementing breastfeeding with formula impacts breastfeeding and breast milk supply (Li, Fridinger, & Grummer-Strawn, 2002). The infant's energy needs are satisfied by the supplement, which results in a reduction of the frequency and vigor of sucking by the infant at the breast. The consequent decrease in stimulation to the breast results in less milk production and therefore less available milk for the infant at the next feeding, thus requiring more supplementation for the infant to achieve satiety (Li et al., 2002).

Methods to promote, protect, and support breastfeeding are provided in the AAP policy statement on breastfeeding, which encourages pediatricians to promote breastfeeding as a normal part of daily life that should be supported by family and society (AAP, 2005). Breastfeeding is also supported by the American Academy of Family Physicians (AAFP), which considers breast milk the optimal form of nutrition for infants. The AAFP provided input to the USDHHS in compiling its blueprint on action for breastfeeding (Meyers, 2001).

To achieve the goals of *Healthy People 2010,* the USDHHS established an action plan with a framework that recognizes breastfeeding as the normal and preferred method of feeding infants and young children (USDHHS, 2000). According to the AAP and USDHHS, successful achievement of these goals mandates that healthcare providers examine factors that may support breastfeeding women in initiating and continuing this health-promoting behavior. One identified factor that needs further exploration is how the

mass media may affect women's decisions to either initiate or continue breastfeeding their infants. Therefore, the purpose of this study is to explore women's decision making about breastfeeding or bottle-feeding their infants and the effect of mass media on their decisions. This chapter will present the state of the science pertaining to mass media, health behaviors, and breastfeeding.

Current State of the Problem

According to several recent reports American women breastfeed less often, and for shorter periods than recommended by the USDHHS and AAP (USDHHS, 2011), thus diminishing the possible health benefits to both the breastfeeding woman and her infant. The latest initiation rate for breastfeeding, as reflected by the percentage of infants born in 2005 and 2006 who were initially breastfed was 77% (McDowell, Wang, & Kennedy-Stephenson, 2008). Despite the benefits and importance of breastfeeding, continuation rates fall short of the *Healthy People 2010* goal of 50% and 25% for 6- and 12-month-old infants, respectively; only 36% of postpartum women were still breastfeeding their infants at 6 months (McDowell et al., 2008) and only 17% at 12 months (Johnston & Esposito, 2007; McDowell et al., 2008). Rates for exclusive breastfeeding are even lower; only 76% of US mothers who chose to breastfeed exclusively breastfed their infants at hospital discharge, and less than 17% at 6 months of age (Centers for Disease Control, 2010).

Factors Influencing Breastfeeding

Evidence supports that breastfeeding is a complex phenomenon influenced by such factors as parental preference (Shaker, Scott, & Reid, 2004), healthcare providers

(DiGirolamo, Grummer-Strawn, & Fein, 2003), social support (Dennis, Hodnett, Gallop, & Chalmers, 2002), and employment status (Johnston & Esposito, 2007). Another influential factor suggested by both the AAP (2005) and USDHHS (2000) was the mass media. These institutions have proposed using mass media to help increase public awareness of the medical and psychological mother-infant benefits of breastfeeding (AAP, 2005; USDHHS, 2011).

Given the recent US rates for initiating breastfeeding, and even lower rates for continuing breastfeeding (Centers for Disease Control [CDC], 2010), efforts are needed to explore the modifiable factors (positive influences or barriers) that contribute to women's decisions to both begin and continue to breastfeed their infants over time. One such factor is the role of mass media in these decisions.

Mass Media

"Mass media" refers to the system of communications utilized to transfer information to both specific and general audiences, as well as communicate simultaneously to individuals or thousands of numbers of people (Livingstone, 2005; Vidanapathirana, Abramson, Forbes, & Fairley, 2005). Media include print media such as newspapers, magazines, brochures, and analog broadcast models such as radio, and originally television. Media have recently been rapidly transformed to rely on digital communication technology. Examples of these media include the Internet, computer or video games, online publications, web logs, podcasts, the iPhone®, and most recently television (Information Age, 2008, February 25).

Outdoor media include billboards and signs, placards inside and outside of commercial transportation modes, flying billboards, blimps, and skywriting. Commercial advertisers make extensive use of logo-bearing blimps around sports stadiums. Each of these media has the potential to reach large audiences with messages or advertisements (McDermott & Albrecht, 2002).

Another media form is the vast communication network mediated by computers and the telecommunications industry. The most recent form of mass communication is the Internet, which has led to dramatic changes in this society. The first client Internet browser in 1991 led to the World Wide Web, bringing the Internet widespread recognition (Livingstone, 2005).

Rapid advances in information technologies have occurred in conjunction with the utilization of computers, consumer electronics, voice messaging, email, and cellular phones by the public. These advancements have had a significant impact on both organizations and individual users of technology. Individual ability to connect and communicate with others has increased exponentially with the abundance and relative ease of access to technology (Mundorf & Laird, 2002). Communications with an intended audience are operated either synchronously, which requires simultaneous involvement of sender and recipient, or asynchronously, with the receiver later obtaining the communication (Fotheringham & Owen, 2000).

Each of these and many other forms of technological advances has significantly affected the communication abilities of people living in the 21st century. These advances in mass communication have changed the ability of humans to communicate messages,

news, and important information. For example, health information can be communicated to others within an instant (Pew Internet and American Life Project, 2009). These advances, however, may ultimately have negative consequences if information is not accurately transmitted.

Mass media serve numerous functions such as education and enrichment, shaping public opinion, advocating or supporting policy, public service announcement, and entertainment. More than one medium with the same theme or content can be combined in multimedia to communicate with many people. Media can tie communities together by providing messages to groups with similar interests and ideas (McDermott & Albrecht, 2002; Vidanapathirana et al., 2005).

Media and Health

The mass media can be a powerful tool to raise public awareness of health issues and has been implicated as a factor influencing numerous health behaviors (Primack, 2004). One approach to influencing behavior is social marketing, which applies commercial marketing strategies and media to promote public health (Evans, 2006). For example, social marketing has been used to promote use of child safety seats (Ebel, Koepsell, Bennett, & Rivara, 2003) and sun protective measures (Smith, Ferguson, McKenzie, Bauman, & Vita, 2002). Mass media have also been reported to influence health behaviors such as decision making regarding use of hormone therapy (Theroux & Taylor, 2003), self-treatment of vaginal symptoms (Theroux, 2002), HIV testing and counseling (Vidanapathirana et al., 2005), and eating disorder symptomatology in adolescent girls (Vaughan & Fouts, 2003).

The media can impact and promote change in health behaviors. Given the strong presence of media in our society, the information presented in the media shapes beliefs, attitudes, and perceived norms (Fishman & Casarett, 2006). Although the media have raised public health awareness and provided educational information, entertainment programming has been faulted for portraying unintended messages about adolescent sexuality (Brown & Walsh-Childers, 2002), organ donation beliefs (Morgan et al., 2005), and cinematic portrayal of tobacco use and modeling behaviors for adolescents (Tickle, Sargent, Dalton, Beach, & Heatherton, 2001). Another example was the portrayal in a popular television series, *Chicago Hope*, of a breastfed infant dying due to dehydration and starvation. This program portrayed a rare condition known as insufficient milk supply, which the producers claimed was needed to educate viewers on the "risks associated with breastfeeding" (Bentley, Dee, & Jensen, 2003).

Information technology is increasingly being used in healthcare to assist in clinical decision making and improve healthcare safety and quality, thus empowering both the clinician and patient (Hersh, 2004). For example, patients are able to communicate via e-mail and receive rapid responses to health questions (Slack, 2004), and physicians have access to multiple sources of patient data online for easy access (Bates & Gawande, 2003). The health-enhancing benefits of communication technology have been demonstrated by the ready availability of patient educational and health promotion information on the Internet. Interactive health communication involves advances that incorporate everything from telephone services to synthetic virtual environments, and continues to evolve in its capabilities (Patrick, 2000).

A tremendous number of easily accessible web sites currently offer health information to both individuals and healthcare professionals. The Internet not only empowers patients by making information available to help improve their health, but may also be implicated in promoting harmful health practices. For example, web sites have been found to contain information that encourages young women to become anorexic or bulimic (Andrist, 2003).

Mass media have been used to organize communication in public communication campaigns, which are purposive attempts to inform, persuade, or motivate behavior change of large targeted audiences (Rice & Atkin, 2002). These campaigns utilize both formative and summative evaluations to ensure that media messages will effectively engage the targeted community. These campaigns achieve their objectives and ultimately effect change by applying a combination of theories on social change, media advocacy, and persuasion theory for success (Rice & Atkin, 2002).

Mass media are also used as the basis for health-communication strategies in social marketing, which seeks to promote public health by using commercial marketing strategies to influence health behavior (Evans, 2006). These strategies incorporate behavioral theory, assessment of factors underlying message receptivity, and strategic marketing of messages to change the target audience's behavior. Other marketing strategies include message placement, promotion, dissemination, and community level outreach. When planning health communications, the marketer must decide whether to utilize audience segmentation or tailored communications. Segmenting the audience allows the message to be delivered to sub-groups with specific sociodemographic,

cultural, or behavioral characteristics. Tailored communications are a more specific, individualized form of segmentation (Evans, 2006). Although social marketing practices to change health behavior may be beneficial, they have to compete with other health messages and with product marketers. For example, cigarette marketers offer seductive digital images of smoking, and cable television, the web, and videogames offer opportunities for comorbid behavior (Evans, 2006).

Mass Media and Breastfeeding

Breastfeeding is not widely supported by the mass media, portrayed positively, or perceived as a cultural norm in the United States. Breasts are currently viewed in the mass media culture as sexual objects (Ward, Merriwether, & Caruthers, 2006). As such, breasts are used as a marketing tool to sell products from beer to automobiles and are portrayed by the entertainment industry for sexual appeal or satire rather than as sources of infant nourishment (Ward et al., 2006).

Pregnant women and new mothers in today's marketplace are bombarded with media messages to bottle or formula feed their infants (Page-Goertz, McCamman, & Westdahl, 2001). The message that bottle-feeding is expected is emphasized through the availability of products to support bottle-feeding, and via the printed and visual information about necessary calcium and iron fortification of most infant formulas (Foss & Southwell, 2006; Page-Goertz et al., 2001). Women receive negative messages about breastfeeding not only through media such as television commercials, Internet sites, and printed advertisements, but are also the target of marketing strategies such as providing free samples and coupons for formula.

Media portrayal of formula feeding as the norm is one of many barriers to breastfeeding among American women (Meyers, 2001). The importance of breastfeeding is recognized by the AAFP, which encourages family physicians to promote and support this feeding practice (Meyers, 2001). Similarly, the AAP (2005) outlines the roles of physicians in promoting and protecting breastfeeding and recommends encouraging the media to portray breastfeeding as positive and the norm. Encouraging the media to portray breastfeeding as desirable and achievable for all women has also been recommended by the USDHHS (2000).

International Code of Marketing of Breast-Milk Substitutes

Global strategies to support breastfeeding as the norm and to optimize maternal-child health and nutrition were outlined in a manifesto, the Innocenti Declaration, co-sponsored in 1990 by the US Agency for International Development (United Nations Children's Fund/World Health Organization [UNICEF/WHO], 1990). Signing this document signaled the US commitment to recognize the benefits of breastfeeding and the adoption of breastfeeding policies by many professional organizations, including the AAP, the American College of Obstetricians and Gynecologists, and the American Public Health Association (USDHHS, 2000).

To ensure that mothers worldwide are not discouraged from breastfeeding, the World Health Organization (WHO) endorsed the International Code of Marketing of Breast-milk Substitutes, which banned the use of advertisements and promotion of formula or provision of free samples to pregnant women, mothers or their families (WHO, 1981). Unfortunately, the Code was not adopted by the US where formula

advertisements and marketing continued, utilizing many forms of mass media. Finally the code was adopted in 1994, but many aspects of the code were not enforced or are overlooked in the United States. For example, there is the continued provision of free samples of formula for many health care providers or institutions, and aggressive marketing efforts by the formula manufacturers (Bentley, Dee, & Jensen, 2003). According to the Government Accountability Office, the amount spent to advertise infant formula in 2003 was more than $50 million (Kaufman & Lee, 2007).

Media Influence on Breastfeeding in the U.S.

The relationship between media coverage and breastfeeding rates was examined among women in the United States through content analysis (Foss & Southwell, 2006). The hypothesis that media coverage would negatively affect breastfeeding rates was tested by comparing infant feeding articles and formula advertisements in *Parents*® magazine to breastfeeding rates in the year after each issue was published. Articles and advertisements were analyzed in 87 issues of *Parents*® magazine over 28 years. Breastfeeding rates were retrieved from an annual national survey. As the frequency of "hand" (bottle) infant feeding advertisements increased in *Parents*® magazine, the rates of breastfeeding tended to decrease ($\beta = -0.20$, $p<0.05$). The findings, though significant, did not provide direct evidence of causation, and a single publication was examined, which does not adequately represent media portrayal of infant feeding. This finding supports the need for more research on infant feeding decisions and the media, such as qualitative studies with more in-depth analysis of advertisements, and times-series studies

that analyze how infant-feeding messages have changed over time (Foss & Southwell, 2006).

The effect of formula advertisements on breastfeeding patterns was examined in a sample of 547 pregnant women who had been given different types of materials about infant feeding during their first prenatal visit (Howard et al., 2000). The women were randomized into two groups: one group received a diaper bag of formula-company educational materials, coupons, and free samples as well as breastfeeding information; the other received a diaper bag with breastfeeding-promotion materials without coupons or samples. The intervention had no effect statistically (1.4% difference) on women's decision of infant feeding. In fact, 61% of the total sample of women had chosen a feeding method before pregnancy, and only 11% changed their decision during pregnancy (unrelated to the distributed materials). Although this study consisted of a predominantly white, educated group of women, it suggests that written infant feeding media materials may not be as influential as previously thought, and supports further exploration of the importance of media on infant feeding decision making.

Media Influence on Breastfeeding in Other Countries

A social marketing project was conducted in Australia to increase awareness of breastfeeding in public and to identify any potential strategies to support breastfeeding in public (Hughes, 1999). Pre-intervention strategies included surveys and face-to-face interviews (n = 206) to pre-test posters and graphics, which were later revised based on feedback. The intervention consisted of hanging posters in buses for 2 months. After the intervention, the project was evaluated by face-to-face interviews with 199 community

members. The authors suggested the campaign might have had more effect if it had supplemented other breastfeeding promotion strategies. It was reported that the intervention minimally influenced attitudes about breastfeeding in public, and that many had reported the posters had reinforced positive attitudes. No statistical information regarding the findings was included and data regarding the public perceptions, attitudes, or social norms noted via the survey was incomplete (Hughes, 1999).

The media have influenced breastfeeding in other countries. For example, the influence of mass media on infant feeding patterns was compared in two sub-Saharan African countries, Nigeria and Uganda (Ukwuani, Suchindran, & Cornwell, 2001). Of the two countries, Nigeria is more modernized and more economically developed, with both countries having a breastfeeding initiation rate of more than 97%. This secondary analysis of data from health surveys of more than 2000 women in each country examined the influence of mother's employment status, place of residence, and exposure to mass media on breastfeeding patterns. Exclusive breastfeeding was found by multivariate analysis to be negatively affected by urbanization, media exposure, and other factors. Rather than exclusively breastfeeding their infants, these women supplemented feedings with formula or artificial milk. Although media exposure was suggested as a factor, it was not included in the logistic regression, and the statistical findings were not presented. One limitation to the study was that participants were not surveyed about watching television or listening to advertisements for infant feeding practices; however, the authors noted that in previous studies, women in Nigeria reported media as a major source of information about infant feeding (Ukwuani et al., 2001).

Mass media representations of infant feeding in the United Kingdom were examined in television programs and newspaper articles (Henderson, Kitzinger, & Green, 2000). Content analysis identified 235 references to infant feeding in the television sample and 38 references in the newspaper sample. Findings were coded as either visual or verbal. Bottle-feeding was portrayed as less problematic and was shown more often than breastfeeding. In fictional television programs, breastfeeding was portrayed as problematic, funny, and embarrassing. In contrast, bottle-feeding was present in all types of television programming, and problems or risks of bottle-feeding were rarely mentioned. Bottle-feeding representations in advertisements portrayed positive male involvement in parenthood. References to breastfeeding in newspaper articles presented problems with breastfeeding and solutions or suggestions for resolution. Most references to breastfeeding were verbal, and most references to bottle-feeding were visual. Representations on television and in advertisements suggested that bottle-feeding was the best and most convenient method of infant feeding (Henderson et al., 2000).

Attitudes Toward Breastfeeding

Breasts and breastfeeding have historically symbolized nurturance and a means of promoting the survival of infants; however, for many decades in recent American culture, breasts have been regarded as sexual objects. In numerous cultures around the world breastfeeding is completely accepted and normalized; breasts do not have a sexual connotation (Trocola, 2005).

Commitment to and advocacy for breastfeeding have been proposed by the Innocenti Declaration, an international agenda set by the WHO and UNICEF to protect,

promote, and support breastfeeding (UNICEF/WHO, 1990). According to the declaration, attaining societal support requires reinforcing a "breastfeeding culture" and vigorously defending against incursions of a "bottle-feeding culture." Restrictions and influences that manipulate perceptions and behaviors toward breastfeeding must be removed to empower more women to breastfeed (UNICEF/WHO, n.d.).

According to anecdotal reports of breastfeeding women, they are often the target of hostile remarks and stares while feeding their infants, leading to feelings of frustration and harassment. Breastfeeding women are often forced to move to uncomfortable or unsanitary areas, such as dressing rooms or bathrooms, to continue breastfeeding. Others have been refused service or have been asked to leave public establishments. A woman who was breastfeeding her child was asked to leave an airplane after refusing a flight attendant's demand that she cover up while breastfeeding (Bazar & Hemingway, 2006). Rather than cause a scene, the woman left the plane voluntarily. Social ostracism and the potential of criminal prosecution for breastfeeding in public deter many women from this health-promoting behavior.

Many people in our culture are uncomfortable viewing an infant breastfeeding in public, yet are not ill at ease when an infant is bottle-feeding, which has been the norm for decades in the US. American society is tolerant of women's breasts being exposed seductively in advertisements, television, and movies, but it does not tolerate the public display of a breast for feeding an infant. For breastfeeding to be considered the cultural norm, healthcare leaders, politicians, and the media must combine efforts (Shannon, O'Donnell, & Skinner, 2007).

Embarrassment or stigma associated with breastfeeding in public has been reported as a barrier for women to continue breastfeeding (Li et al., 2002). Societal norms and attitudes toward breastfeeding were explored in a secondary analysis of data from 2351 responses to a national survey on lifestyle and health-related topics, which included 12 questions related to breastfeeding. In response to a key item related to embarrassment of breastfeeding in front of others, more than 25% of women agreed that this method of feeding was embarrassing. The authors concluded that breastfeeding in public is viewed as unacceptable because it involves exposure and manipulation of the breast, which is considered by some as an erotic sexual object. To decrease mothers' feelings of embarrassment when they need to feed an infant in public, the authors suggested that public perceptions of breastfeeding must be changed (Li et al., 2002).

Study Aims

The role of mass media in breastfeeding promotion or cessation has received minimal attention in the literature. Understanding the role mass media play in women's decision making about initiating and then continuing to breastfeed over time may assist nurses and other healthcare professionals to promote healthy infant feeding choices. Since little empirical literature was available on this topic, a qualitative descriptive design utilizing a socio-ecological framework was warranted. Such a design and framework would allow for an exploration of possible media related factors influencing behaviors, and might provide new insights into the impact of mass media on breastfeeding decisions. Therefore, to review, the purpose of this study was to explore women's decision making

about infant feeding and the influence of mass media on their decisions. The aims of this study were the following:

1. Explore what types of mass media at the institutional, community and/or policy level were identified by women as positively or negatively influencing their breastfeeding decisions.

2. Examine the mass media images/messages identified by the women for context, visual message, power, influence, and cultural sensitivity.

3. Explore other contributing intrapersonal and interpersonal factors associated with breastfeeding decisions that could be incorporated into mass media images/messages.

Summary

Breastfeeding has been established as the best and most complete nutrition for newborns as this method promotes health and supports growth and development of the infant, as well as providing significant health benefits to the woman.

In early American history, breastfeeding was the preferred method of infant feeding. At the start of the 20th century, infant formula was developed, and by the 1960s infant formula was recommended by pediatricians as superior to breastfeeding and was commercially prepared and packaged in bottles.

Initiating or stopping breastfeeding has been found to be influenced by modifiable factors such as support from partners, family members, and peers; employment status; and healthcare providers. Conversely, early cessation of breastfeeding has been related to negative feedback or a lack of support. Breastfeeding is also influenced by institutional

and public policies; many states have adopted legislation that protects breastfeeding mothers from segregation, discrimination, and persecution.

The mass media abound with images and messages that have been studied for their impact on numerous health behaviors and decision making regarding health behaviors. The mass media and related technology are the instruments for transmitting mass communication. Humans are now able to communicate messages, news, and important information, including health information, to others within an instant, but if this information is not accurate the consequences may be negative. Maternal-child healthcare organizations have suggested that the media be used to promote breastfeeding and to increase awareness of the benefits of breastfeeding. However, few studies prior to this one have examined the specific role of mass media in infant feeding decisions.

In order to fill this identified gap in the literature, further research was warranted. A qualitative descriptive study allows for a deeper understanding of the perspectives of pregnant women planning to breastfeed or bottle feed, and postpartum women who are currently breastfeeding or bottle feeding and the role of mass media. The mass media may contribute to initiating and continuing this health-promoting behavior that ultimately provides many health benefits for both the woman and her infant.

CHAPTER II

CONCEPTUAL FRAMEWORK

Introduction

This chapter describes the study's framework, the Socioecological Model for health promotion. This model was based on Urie Brofenbrenner's Ecological Theory (1979), which proposed that individual behavior is affected by multiple levels of influence. The Socioecological Model incorporates both individual and social factors as components of the theory. The chapter will describe this model in detail and how it relates to factors influencing breastfeeding and mass media.

Ecological Theory

Brofenbrenner (1979), a distinguished developmental theorist, proposed that human development was the product of an interaction between humans and their environment. According to Brofenbrenner's theory, psychological growth and behavior are influenced by the environment at multiple levels: micro-, meso-, exo-, and macrosystem levels (Brofenbrenner, 1979, pp. 22–34).

The microsystem, the first of these environmental systems of influence, comprises the face-to-face interactions experienced by the individual, such as home and day-care settings. The mesosystem is the system of microsystems, i.e., it interrelates the settings in which the individual participates such as school and neighborhood groups. The exosystem includes settings with which the individual is not directly involved, but whose events affect the developing individual. The exosystem comprises a parent's place of work or parental social networks. The macrosystem refers to the cultural beliefs and

values that influence the lower-order systems. To exemplify the macrosystem, Brofenbrenner utilizes the school setting as an example. A school classroom in France and a school classroom in the United States serve the same purpose and may be similar in appearance and function, but ultimately may be differentiated by cultural influences. Intersocietal contrasts exist between these relations of subsystems (Brofenbrenner, 1979; McLeroy, Bibeau, Steckler, & Glanz, 1988).

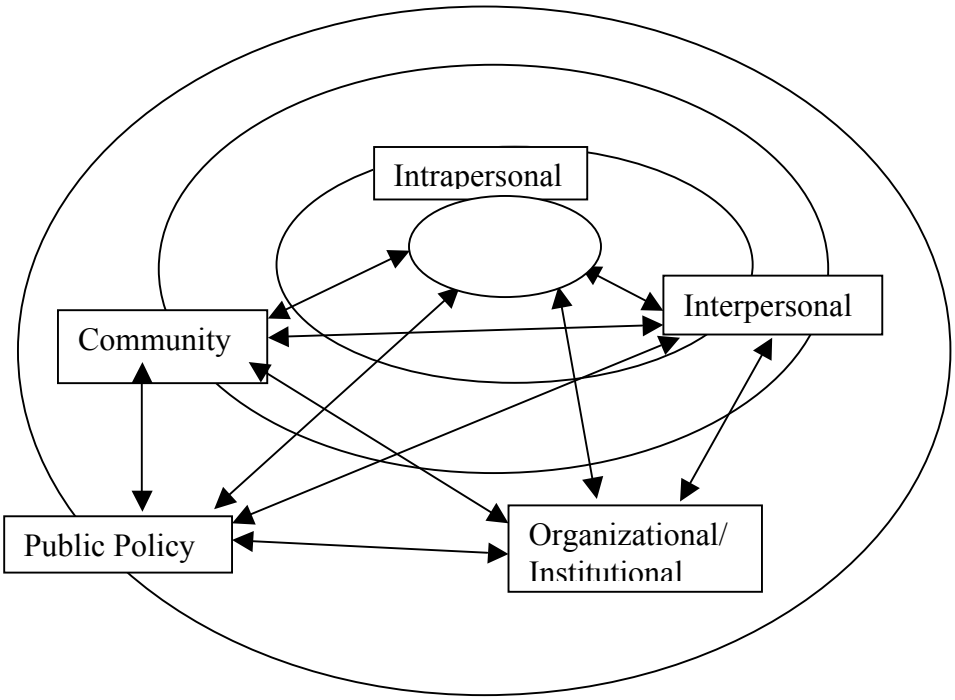
Social Ecological Model

Social ecology evolved from earlier frameworks such as Ecological Theory, which were more closely aligned to human development, biological processes, and geographic environment (McLeroy et al., 1988). The Social Ecological Model affirms that individual behavior is influenced by many other systems and groups and provides greater attention to the socioeconomic, institutional, cultural, and political contexts of people-environment relations. This model provides a set of principles needed to understand the interrelations among personal and environmental factors in human health and illness (Figure 1). In this model, behavior patterns are viewed as influenced by factors at five levels: (a) intrapersonal, (b) interpersonal, (c) institutional, (d) community, and (c) public policy (McLeroy et al., 1988). These factors will be described in detail below.

This framework was applied and further delineated to describe the factors influencing individual health behaviors as either macro-level or micro-level (Bentley et al., 2003). The micro-level factors include individual beliefs, social and personal

networks, cultural norms, the workplace, and community; the macro-level factors include institutional and public policies (Bentley et al., 2003).

Figure 1. Social Ecological Model



Efforts to modify individual health practices are often encumbered by economic, social, and cultural constraints. Socio-ecological approaches to health promotion integrate strategies of behavioral change and environmental enhancement within a broad systems-theoretical framework. The interdependence of environmental conditions within settings, i.e., their physical and social aspects, is understood to be capable of exerting independent and common effects on individuals (Stokols, 1996). The Social Ecological Model has been utilized in various health-promotion studies (Bentley et al., 2003) to

examine various levels of social influence on behavior, including friends and family as well as neighborhood, informal, and formal organizations.

Intrapersonal Factors

The first level of influence in the Social Ecological Model comprises intrapersonal factors, which include individual and immediate determinants of behavior such as knowledge, personality traits, and attitudes (McLeroy et al., 1988). Using a social ecological perspective to organize the findings of their literature review, Fleury and Lee (2006) examined the social and contextual correlates of physical activity in African American women. They found that physical activity in this population was influenced by individual characteristics such as perceived functional ability, socioeconomic status, educational level, motivation, self-efficacy and limited access to structured exercise facilities (Fleury & Lee, 2006).

The Social Ecological Model was also used to examine the challenges related to changing behaviors associated with the development of obesity and type 2 diabetes (Whittemore, Melkus, & Grey, 2004). The ability to change these behaviors was linked to individual characteristics such as knowledge, skills, beliefs, and attitudes (Whittemore et al., 2004).

Individual characteristics such as age, education level, employment outside the home, and race/ethnicity have been reported as significant factors for US women to initiate breastfeeding (Hill, 2000). Infants born to young mothers were less likely to be breastfed than those born to older mothers. The breastfeeding rates of women under 20 years of age were significantly lower than those of women 30 years and older.

Breastfeeding rates were also higher among college-educated women, those not employed outside of the home, and Caucasian women than among women who were less educated, employed outside the home, and from other ethnic backgrounds (CDC, 2010; Hill, 2000).

Breastfeeding rates are also influenced by parental attitudes and knowledge of breastfeeding (Shaker et al., 2004). The attitudes of both parents were identified as a strong predictor of infant feeding choices, with parents of breastfed infants having more positive attitudes (63.8 vs. 55, $P<0.001$) toward breastfeeding than parents of bottle-fed infants (Shaker et al., 2004). According to Ahluwalia, Morrow, and Hsia (2005), an intrapersonal factor contributing to successful breastfeeding and reinforcing a woman's decision to breastfeed is discussing perceptions and feelings during the prenatal period with healthcare providers.

The social ecology model was utilized in this study to examine the intrapersonal factors, e.g., beliefs and attitude that influence women's decisions about feeding their infants and the types of mass media messages they identify as influencing their decision.

Interpersonal Factors

In the Social Ecological Model, interpersonal factors refer to an individual's interactions with other individuals, family members, and healthcare providers, as well as formal and informal social networks such as family, peer groups, and support systems (McLeroy et al., 1988). The social support provided by these groups plays a role in influencing behaviors related to managing diabetes (Whittemore et al., 2004) and to participating in physical activity (Fleury & Lee, 2006).

Similarly, support from friends and family members are crucial to breastfeeding success. Women whose grandmothers had breastfed can offer advice and reassurance to women regarding infant feeding (Grassley & Eschiti, 2008). Expectant fathers can also participate in choosing a feeding method for their infants and supporting the process (Freed & Fraley, 1993).

Another significant source of support to the breastfeeding mother is peers. For example, breastfeeding mothers can find "mother-to-mother support" or peer counseling through the La Leche League International (www.lalecheleague.org), an organization founded in 1957 by 7 breastfeeding mothers (Chapman, Damio, Young, & Perez-Escamilla, 2004; Lawrence, 2002). In this study, interpersonal factors such as family and peer-support systems, their role in women's decision making about feeding their infants, and the power of messages in mass media images identified by the mothers were explored.

Institutional Factors

In the Social Ecological Model, institutional factors include social institutions and organizations with formal and informal regulations, beliefs, and practices for operation (McLeroy et al., 1988). Examples of institutional factors include the workplace, healthcare setting, or faith organizations, which can significantly influence health behaviors. For example, the unmet health needs of many individuals can be assisted by school environments and church-based programs (Whittemore et al., 2004). Churches can also assist in networking and promoting awareness regarding health-promoting behaviors (Fleury & Lee, 2006).

Many women make the decision to breastfeed their infant and establish their breastfeeding goals early in their pregnancy and may be influenced by the recommendations, teachings, educational literature, and commercial handouts from their healthcare providers (Dettwyler, 2004). The advice and support offered to postpartum mothers regarding infant feeding are also affected by the healthcare professional's personal opinions or experiences (Dettwyler, 2004).

Support of breastfeeding by physicians and other healthcare providers has improved rates of early initiation of breastfeeding and total duration of breastfeeding (OlaOlorun & Lawoyin, 2006). Important factors in the success and continuation of breastfeeding were a knowledgeable and supportive healthcare provider, health education programs related to breastfeeding, and the nurse and/or lactation counselor providing assistance to women while they breastfeed their infant (OlaOlorun & Lawoyin, 2006).

Another healthcare provider characteristic identified as impacting women's breastfeeding decision making and outcomes was perceived attitude of the healthcare provider toward breastfeeding (DiGirolamo et al., 2003). Providers' failure to promote breastfeeding or perception of a neutral attitude among hospital staff was associated with more women stopping breastfeeding early (OR 5.92, CI 3.28,10.68), before 6 weeks postpartum, or not breastfeeding beyond 6 weeks (DiGirolamo et al., 2003).

Another significant factor in a woman initiating and continuing to breastfeed her infant is the policy of the institution where she delivers her infant. Indeed, breastfeeding rates have increased, complications have been reduced, and mothers' healthcare experiences have been improved by the Baby-Friendly Hospital Initiative (BFHI), which

was launched by the WHO and UNICEF to transform practices in maternity hospitals worldwide (Philipp & Radford, 2006). The BFHI facilitates, protects, and supports breastfeeding without commercial influences such as providing free samples of formula. Hospitals are designated as *Baby-Friendly* if they adopt and comply with the BFHI Ten Steps to Successful Breastfeeding. The Baby-Friendly designation recognizes that the institution is fully committed to providing the optimal environment for breastfeeding mothers. The BFHI has been dramatically successful in developing countries, but of the more 19,000 Baby-Friendly hospitals worldwide, fewer than 500 are in industrialized nations. As of 2005, a mere 46 hospitals in the United States reported maintaining the Baby-Friendly status (Philipp & Radford, 2006). In this study, the influence of mass media, both positive and negative, on women's breastfeeding decisions was explored at the institutional level.

Community Factors

In the Social Ecological Model, community factors refer to the relationships among community-based organizations and civic associations such as a cultural group or political association (McLeroy et al., 1988). For example, a social ecological perspective was adopted to identify determinants of risk or protective factors for HIV/AIDS among American Indian and Alaskan Native tribes (Duran & Walters, 2004). Community-level factors such as geographic and cultural distance of these people were cited as barriers for local planning councils and health agencies working with these populations (Duran & Walters, 2004). Similarly, the lack of safety in African American neighborhoods made women living there afraid, creating a barrier to exercise (Fleury & Lee, 2006).

Several barriers for women's breastfeeding experience have been related to the workforce (Johnston & Esposito, 2007; Wambach et al., 2005). Women who are breastfeeding infants may have to return to work soon after delivery due to economic necessity (Wambach et al., 2005). For these women, societal support of breastfeeding in the workplace has a great impact. A return to the workforce has been cited as a primary factor in early breastfeeding cessation. The transition from a maternity leave of absence back to the workplace can be eased by an employer who is supportive of breastfeeding (Wambach et al., 2005). Other factors that contributed to early cessation of breastfeeding included lack of support from both fellow workers and employers, no time off to breastfeed an infant or to pump breast milk, and lack of a designated area in the work setting for pumping and storing breast milk (Johnston & Esposito, 2007).

Employers can be pivotal in creating a supportive environment to continue breastfeeding. Several large corporations have lactation support programs that have kept breastfeeding rates of employed women at levels similar to their unemployed counterparts (Neilsen, 2004). These programs often feature educational opportunities such as breastfeeding classes, lactation rooms equipped with a breast pump, sink, and a small refrigerator, on-site daycare, and flexibility in scheduling. Women committed to continuing breastfeeding without workplace support have reported the need to express milk in their car and storing the breast milk in a portable cooler (Neilsen, 2004). In this study, both positive and negative influences on women's breastfeeding decisions were explored at the community level and the role of mass media in this level of influence was also explored.

Public Policy Factors

Lastly, the public policy level refers in the Social Ecological Model to regulatory channels at the local, state, and national levels (McLeroy et al., 1988). Many regulatory policies, procedures, and laws are designed to protect the health of the individual and community. For example, nutritional labeling and a proposed tax on non-nutritious foods were suggested as a policy approach to preventing and managing diabetes (Whittemore et al., 2004). Similarly, breastfeeding has been promoted worldwide by the WHO and UNICEF in an initiative called the Innocenti Declaration (UNICEF/WHO, 1990). This manifesto outlines global strategies needed to support breastfeeding as the norm for infant feeding and sets the global goal of optimal maternal-child health and nutrition. By signing this document, the US signaled its commitment to recognize the benefits of breastfeeding and to promote the adoption of breastfeeding policies by many professional organizations, including the AAP, American College of Obstetricians and Gynecologists, and American Association of Public Health (USDHHS, 2000).

Breastfeeding mothers are protected in many states by legislation that prohibits their segregation, discrimination, and persecution (Chang & Spatz, 2006). Despite some variation from state to state, this legislation often includes amendments to indecency laws that exclude breastfeeding as a violation. At the federal level, legislation has been enacted that allows women to breastfeed in any federal building or on any federal property. Other bills have been submitted to protect breastfeeding rights and breastfeeding women from discrimination. Furthermore, a bill that would offer tax incentives for employers who provide lactation services at their place of business has been forwarded for legislative

approval (Chang & Spatz, 2006). In the study, public policy influences, both positive and negative, were explored on women's decision making about feeding their infants and the role of mass media in this level of influence.

Factors Related to Initiating and Continuing Breastfeeding

Breastfeeding has been established as the ideal method of infant feeding and provides multiple physical and psychosocial health benefits to both women and infants. Initiating and continuing breastfeeding are influenced by personal reasons, systems, and groups. The social ecology framework was used to review the macro-microlevel factors interacting to influence breastfeeding beliefs and decision making among low-income African American women in Baltimore (Bentley et al., 2003). Supportive data were derived from ethnographic and quantitative data collected during an intervention study (Bentley et al., 1999) as well as examples from the media. The social ecological framework was suggested to be utilized for future research that explores the role of grandmothers, fathers, and healthcare providers related to breastfeeding decision making (Bentley et al., 2003).

Summary

In summary, the Social Ecological Framework provides an understanding of the interrelations between health behaviors and personal and environmental factors. The framework has been successfully integrated into various health-promotion programs, e.g., diabetes management and exercise in African American women.

Breastfeeding is an important example of a health-promotion practice with many positive benefits for both women and their infants. Breastfeeding is a complex

phenomenon influenced by multiple socioecological factors. Although breastfeeding rates in the US have improved over the past 20 years, early cessation rates remain high, indicating a need for further research to fully comprehend this health-promotion activity. Healthcare providers need to understand the many factors that influence breastfeeding to tailor and direct interventions to promote and support this behavior.

Mass media have been suggested as a powerful and universal means of communication with the potential to impact social norms. Thus, this qualitative descriptive study proposed to explore, within the context of the social ecological framework, women's decision making on whether to breastfeed or bottle-feed their infants and the effect of mass media on their decision. This study fills a knowledge gap by exploring the experiences of pregnant and postpartum women's decisions to feed their infants and the influence of mass media on their decision. The results of this study may offer a new perspective on breastfeeding decisions that can be utilized by healthcare providers to encourage women to breastfeed, or for those working on breastfeeding initiatives.

CHAPTER III

METHODS

Overview

The purpose of this chapter is to describe the methods that were used for this study. The design, sample, setting, data collection procedures (including the interview process), data management, and data analysis will be described. Trustworthiness of the data and ethical considerations in human subject research will also be identified. To review, the purpose of this study was to explore women's decision-making experiences about breastfeeding or bottle-feeding their infants and the effect of mass media on their decisions. The aims of this study were the following:

1. Explore what types of mass media at the institutional, community and/or policy level were identified by women as positively or negatively influencing their breastfeeding decisions.

2. Examine the mass media images/messages identified by the women for context, visual message, power, influence, and cultural sensitivity.

3. Explore other contributing intrapersonal and interpersonal factors associated with breastfeeding decisions that could be incorporated into mass media images/messages.

To achieve these aims, a qualitative descriptive approach was used. Data were collected from two sources: face-to-face interviews with pregnant and postpartum women and Internet sites pertaining to parenting and infant feeding methods. In this context, the

Internet was chosen to represent mass media since more than 61% of adults look online for health information (Pew Internet & American Life Project, 2009).

Study Design

Qualitative Description

A qualitative descriptive design was used to explore women's decision-making process on initiating breastfeeding or bottle-feeding and the effect of mass media on their decisions. Qualitative descriptive research contributes to understanding human thought and behavior, and describes the firsthand experience of the participant (Ryan-Nichols & Will, 2009). Since little empirical literature described what types of mass media may influence women's decisions regarding infant feeding, this phenomenon warranted a rich description provided by a qualitative descriptive design.

A qualitative descriptive approach directly provided the women's perspective of the phenomenon since it provides a comprehensive descriptive summary of events as told by the participants (Sandelowski, 2000, 2010). Although qualitative description is a method that does not allow for a high level of interpretation, it does offer a precise description of events, as well as an accurate account of the meanings of the phenomenon (Sandelowski, 2000, 2010; Sullivan-Bolyai, Bova, & Harper, 2005).

Qualitative description has many undertones of and similarities to other qualitative approaches but is its own unique qualitative method (Sandelowski, 2000). For example, data in this study were analyzed by constant comparison (Glaser & Strauss, 1967; Lincoln & Guba, 1985), an analytic method commonly associated with grounded

theory studies. Unlike grounded theory, however, qualitative description does not seek theory development as an end product (Sandelowski, 2000; Sullivan-Bolyai et al., 2005).

Healthcare studies utilizing qualitative methods generate "knowledge situated in the intra and interpersonal" environment of the participant (Kearney, 2001). According to Sandelowski (2000), qualitative description is a pragmatic approach for nursing research because of its precise account of complex events that surround many health-related issues. In this study, the information examined was rich in complexity, encompassing familial, social, and environmental factors. The findings, which were generated by examining women's decision making about infant feeding within the Socioecological Framework (Stokols, 1996), provided women's perspectives of how their decisions were influenced at intra- and interpersonal, professional, and cultural levels.

The findings may allow healthcare professionals working with pregnant and postpartum women to better understand their decision-making process about how to feed their infants. Knowledge gained from this study may be utilized by nurses and healthcare professionals to provide informed care and to promote the healthy behavior of breastfeeding, which will ultimately benefit not only breastfeeding women but also their infants and family members (Earle, 2002).

Data Sources

Qualitative descriptive studies may use multiple sources of data (Sullivan-Bolyai et al., 2005); therefore, data were collected from both face-to-face interviews and Internet sites. All data were examined using qualitative content analysis, which is a superior approach when using a qualitative descriptive research method (Sandelowski, 2000,

2010). Qualitative content analysis enables the researcher to examine data for contextual meaning, unlike quantitative content analysis, which focuses on counting text and statistically analyzing the findings (Sandelowski, 2000). In qualitative content analysis, themes and patterns are generated from the data, frequencies are noted, and the data are systematically managed (Hsieh & Shannon, 2005; Zhang & Wildemuth, 2009). Both the manifest and latent (subtext) content of written text and images of infant feeding found on the Internet added richness of the findings.

Sampling

Women participants were recruited by purposive sampling, a type of non-probability sampling that enrolls study participants with similar experiences (Speziale & Carpenter, 2007). This sampling technique is commonly used with qualitative description because it ensures participants who can share specific and comprehensive information on the topic, thus sharpening the focus of the findings (Milne & Oberle, 2005). In this study, a purposive sample included women who shared their breastfeeding decision experiences and the media influence on these decisions (Lincoln & Guba, 1985).

An initial purposive sample of 20 women was recruited from the Massachusetts Breastfeeding Coalition (MBC) and from community members seeking services at UMass Memorial Medical Center (UMMMC) in Worcester, MA. This sample size was based on similar studies that utilized a qualitative descriptive design (Nelson, 2009; Sword, Busser, Ganann, McMillan, & Swinton, 2008). Sampling continued until data were saturated; i.e., until no new information was shared during the interview process (Kuper, Lingard, & Levinson, 2008; Lincoln & Guba, 1985).

Internet sites were also sampled (Ribisl, Lee, Henriksen, & Haladjian, 2003), for information related to infants, parenting, and infant feeding. These sites were sampled by searching Google, the top search engine for 2009 (comScore, 2009), using the terms "parenting," "baby," "infant feeding," and "breastfeeding." Additional Internet sites were included if they were identified by the women participants.

Massachusetts Breastfeeding Coalition. The MBC is a nonprofit organization formed to coordinate the efforts of diverse breastfeeding advocacy groups across the state (MBC, n.d.). Breastfeeding women can contact the MBC by phone or e-mail and utilize its many web site resources. One community resource found on the MBC web site was ZipMilk, which listed breastfeeding services by zip code. These services included lactation consultants, support group meetings, Nursing Mother's Council, and WIC program coordinators. The coalition included over 50 individual providers and many large member organizations such as the Massachusetts Department of Public Health, the LaLeche League of MA/RI/VT, and Harvard Vanguard Medical Associates.

Coalition members meet each month around the state to network and report on their work. These meetings are open to providers of lactation care and individual breastfeeding women. The coalition also presents an annual daylong conference with educational sessions and networking opportunities for healthcare providers across the state (MBC, n.d.).

The researcher recruited breastfeeding women directly and indirectly via MBC members who provide lactation consult services to these women. At the monthly meetings, the researcher briefly described the study purpose, gave an overview of the

research, and copies of the pamphlet on participant recruitment (Appendix A). The purpose of this pamphlet was to guide MBC members in helping the researcher recruit participants. The pamphlet described the study, study procedures, information on protecting human subjects, contact information for the researcher, and a contact information form to be completed by women willing to participate in the study. Any questions regarding the study were directly answered by the researcher.

Women who agreed to participate returned the pamphlet with their contact information to the MBC member, who placed the pamphlet in an envelope that was collected by the researcher at a later date. Alternatively, potential participants chose to contact the researcher directly by phone or e-mail.

The researcher also used the MBC listserv to contact members who provide services to women. Permission to access this listserv had been given by the MBC president, Dr. Melissa Bartick (Appendix B). Letters were sent to members asking them to assist in the recruitment process. The researcher also attended the yearly MBC conference in October 2009 to network with and to establish relationships with individual MBC members.

UMass Memorial Medical Center. Pregnant and postpartum women were recruited from the inpatient Maternity Center and Family Education Department at UMMMC in Worcester, MA, a moderate-size city in New England. More than 4000 infants are born each year in the Maternity Center. The hospital also offers comprehensive maternal child care, including prenatal care, parent-family education classes, and lactation support. The Family Education Department offers classes such as

childbirth preparation, breastfeeding, and newborn care to an estimated 600 attendees each year.

The researcher had secured preliminary approval to recruit participants from the nurse managers of the Maternity Center and Family Education Department, who were sent letters describing the purpose of the proposed research. A meeting followed to further explain the research study and answer any questions. Before recruitment began, the researcher arranged for meetings with the nursing staff, lactation consultants, and nurse educators to introduce the study and to answer questions. These providers were asked to distribute the recruitment pamphlet (Appendix A) to pregnant and postpartum women who were seeking services at the hospital. Women who agreed to participate returned the pamphlet with their contact information to the provider or chose to contact the researcher directly.

The researcher regularly e-mailed providers and MBC members to update them about progress made in recruitment, to reinforce the importance of their recruitment efforts to the success of the study, and to praise their efforts in the process (Sullivan-Bolyai et al., 2007). The researcher also arranged to pick up any completed pamphlets that were collected. Once women agreed to participate, the researcher set up an agreeable time and place to screen the participants, and if they met the inclusion criteria and agreed to sign a consent, then the researcher conducted face-to-face interviews.

Inclusion Criteria

Women were included in the study if they met these criteria: (a) English speaking, (b) age 18 years and older, (c) currently breastfeeding and/or using breastfeeding

services, or bottle feeding (d) pregnant and deciding on the method of infant feeding, and (e) had delivered an infant and not yet chosen either breastfeeding or bottle feeding. Women were included regardless of marital status, financial status, or educational background. Since the women were recruited not only from UMMMC but also the MBC, they were expected to have a range of demographic characteristics. Worcester is the fourth largest city in New England, with a population that is 77% white, 15% Hispanic, 7% black, and 5% Asian. The racial/ethnic distribution of Massachusetts is 82% white, 8% Hispanic, 6% black, and 4% Asian (U.S. Census Bureau, 2009).

Internet sites were included in the study if they met these criteria: (a) were in the top 10 sites retrieved from Google searches, (b) were listed with a ".com" domain, indicating a commercial organization, and (c) had linkages on their home page leading to infant feeding or breastfeeding.

Exclusion Criteria

Women were excluded from this study according to these criteria: (a) non-English speaking, (b) experiencing complications of pregnancy, and (c) had experienced complicated or preterm deliveries. The first exclusion was based on the researcher speaking only English. The second and third exclusions eased the burden of arranging interview times for women and infants who required additional and intensive hospitalization, multiple medical interventions, and multiple appointments with healthcare personnel.

Internet sites were excluded from this study if they (a) contained the domain "org," (b) were retail sites (even if they ranked higher in the search results than included

sites e.g., Gap, Babies"R"Us), (c) contained a vast number of blogs and message boards (e.g., iVillage), (d) were religion affiliated (e.g., ChristianityToday.com), and (e) were directed by editorial boards to other than commercial interests (e.g., WebMD). These criteria were chosen to keep the sample as homogeneous as possible, to maintain a secular sample, and to focus on commercial organizations.

Data Collection

Data were collected from two sources: face-to-face interviews with pregnant and postpartum women and from Internet sites on parenting and infant feeding methods. These two data sources allowed the researcher to triangulate data; i.e., to compare the interview content with the written text and visual data obtained from Internet sites. This contextual validation helped to establish credibility of the findings (Lincoln & Guba, 1985).

Triangulation was also achieved by recruiting participants from two settings: the MBC and UMMMC. Data from these two groups of participants provided an in-depth understanding of the phenomenon under study (Denzin & Lincoln, 2000).

Face-to-face interviews. Once a woman agreed to participate, she was offered a choice of meeting locations, either in her home or in a public setting. Public settings included office space, local libraries, and community conference rooms used for support group meetings. Each site chosen for meetings was both comfortable and convenient to put the participant at ease as well as private so that the participant felt free to speak to the researcher. The researcher scheduled no more than two interviews on any given day to ensure that she remained focused and attentive to each participant.

A face-to-face interview was conducted after the participant signed informed consent (see Ethical Considerations below). Each interview was audiotaped and lasted approximately 1 hour, with additional time allotted as necessary to complete the interview. An interview guide (Appendix C) was followed. Participants were encouraged to speak freely, with the researcher nodding and reflecting on comments at times to facilitate affirmation of the participant. Probes were used to encourage rich descriptions or to clarify participants' statements (Lincoln & Guba, 1985).

Before the interviews, the researcher collected data using a brief demographic questionnaire (Appendix D) on participants' characteristics such as age, number of children, breastfeeding experiences, along with the specific types and frequency of media usage.

The researcher also used field notes to record observations during the data collection process (Morse & Richards, 2002). Immediately after each interview, the researcher recorded information not audible during the taped interview. This information included participants' gestures, vocal intonations, and physical expressions. These nonverbal communications were later incorporated into the interview transcript (Crist & Tanner, 2003). Other important data were recorded, including the researcher's thoughts and perceptions on the interview process. These data comprise the researcher's reflexive journal (Creswell, 1998).

Internet data collection. Since no standards were available for sampling data from the Internet (Ribisl et al., 2003) various methods were combined for this study (Petch, 2004; Ribisl et al., 2003). Data were collected from Internet sites for 1 month

(May 2010). Selected web sites were assessed once a week for both written text and visual representations of infant feeding. The home page of each site was accessed and links to infant feeding were followed. Any articles and written text were copied into a Microsoft Word® document. Visual data such as pictures or advertisements related to infant feeding were noted, and any written text included with the pictures was also copied onto Microsoft Word ® for analysis. The text was then further reduced to its basic content or paraphrased into statements that were utilized in content analysis (Schilling, 2006).

Data Management

Upon completion of each interview, the audiotapes were listened to for accuracy and ease of listening, and were then forwarded in person to a professional transcriptionist for verbatim transcription. To ensure participants' privacy, the transcriptionist deleted the files after the audiotapes and transcripts were received by the researcher. The researcher then read each transcript while listening carefully to the audiotape to ensure accuracy and make any changes needed. The transcript was copied and any identifying personal information was deleted or changed. Each new (copied and depersonalized) transcript was coded, given a pseudonym, and all other personal identifiers were excluded to assure anonymity. The code sheet was stored and secured with the original transcripts, field notes, and audiotape in a locked file cabinet in the researcher's office to ensure participants' privacy. The information from the web sites was also copied into Microsoft Word® documents, labeled, and stored as individual files.

Data Analysis

The data obtained from participants interviews and Internet sites were examined by qualitative content analysis, which allowed the researcher to explore meanings and to comprehend the social reality of text (Zhang & Wildemuth, 2009). This method involved several systematic steps: immersion in the data, selection of the unit of analysis, creation of categories and a coding scheme, assessments of reliability and validity, and revisions to the steps as the process continued (Downe-Wamboldt, 1992; Hsieh & Shannon, 2005; Mayring, 2000).

Data immersion. Immersion in the data began with listening to the audiotaped interviews and simultaneously proofreading a hard copy of text. This step was repeated a number of times as the researcher developed a holistic understanding of the interview content. Key concepts or key phrases were noted and underlined, and notes were made in the margins (Hsieh & Shannon, 2005; Sandelowski, 1995). The same process was used for text copied from Internet data.

Unit of analysis. The first identified unit of analysis was the transcribed interview. The transcripts from each interview first were analyzed as a whole, summarized, and smaller units of text from transcripts were identified for further analysis. The unit of analysis for data collected from Internet text was the homepage of each web site plus two "clicks" to information or articles that refer to infant feeding or breastfeeding (Petch, 2004). For example, a Google search using the keyword "parents" resulted in the web site Parents.com. The homepage of this site offered numerous topics for review. One "click" from the homepage of Parents.com using the keyword "babies"

resulted in another long list of topics listed that pertained specifically to infants. The second "click" brought the reader to information on either breastfeeding or infant feeding. The content analysis of pictures or visual information from the Internet was analyzed (Zhang & Wildemuth, 2009), using the attached coding schemata (Appendix E).

Categories and coding scheme. Coded categories were created by grouping similar content and labeling each to reflect the theme of the category. Additional main categories were created by grouping subcategories with similar content. The categories were generated inductively since no a priori theory exists related to the topic (Elo & Kyngäs, 2008).

The interview and Internet data were subjected to constant comparison, a technique often utilized in grounded theory studies and qualitative descriptive studies (Glaser & Strauss, 1967; Lincoln & Guba, 1985). This method lent itself nicely to this study in which different sources of data were compared to each other during the process of data collection and analysis. As the interview data were analyzed and coded, they were compared to the previously coded data from the Internet (Glaser & Strauss, 1967; Lincoln & Guba, 1985). The text in each category was also evaluated using the constant comparison method. Comparing each category allowed for a deeper understanding of the assignment of categories and functions as a form of pre-testing the category scheme (Downe-Wamboldt, 1992; Zhang & Wildemuth, 2009).

This coding process was tested early in the analytic process on a small sample of text initially collected from the Internet. This test determined if the coding assignments

were clear and helped establish the validity of the coding scheme. Additional tests for credibility and confirmability are presented below (see Trustworthiness).

As each step in the analysis was conducted, the data were reciprocally shaped to help inform each subsequent textual analysis (Sandelowski, 2000). This simultaneous process of analysis continued throughout the study. In addition to content analysis of qualitative data, demographic data were analyzed using descriptive statistics in SPSS computer software. The demographic information further informed the results of content analysis.

Trustworthiness

Trustworthiness ensures rigor of the findings of a qualitative study (Lincoln & Guba, 1985), analogous to reliability and validity for quantitative data. The findings of a naturalistic paradigm must demonstrate that results with the study sample are applicable to others. Furthermore, the findings of a naturalistic inquiry must be reproducible, valid, and unbiased. Trustworthiness can be ensured by four strategies: credibility, transferability, dependability and confirmability (Lincoln & Guba, 1985).

Credibility

Credibility of the findings were achieved in this study by member checking, triangulation, negative case analysis, and peer debriefing. Member checking involves clarifying with the stakeholders that the findings accurately reflect their thoughts (Lincoln & Guba, 1985). The member check is a review of emergent themes identified by the researcher after analysis of the transcripts (Lincoln & Guba, 1985; Speziale & Carpenter, 2007). The study participants were asked to join a group discussion of the

findings in a convenient location such as a hospital conference room. Participants unable or unwilling to join in a group discussion were asked for an additional telephone interview.

Triangulation. Triangulation is a method of ensuring that the data is valid by employing more than one method of examination or more than one source of data (Denzin & Lincoln, 2000). This study triangulated different sources of information (individual interviews and Internet sites) and participants were also recruited from two different sites: the Massachusetts Breastfeeding Coalition and UMass Memorial Medical Center.

Negative case analysis. Negative case analysis in qualitative inquiry is comparable to error variance or outliers in quantitative research (Lincoln & Guba, 1985). The data obtained from these cases are different or contradictory to previous findings. For example, the researcher seeks a participant who does not believe that her infant feeding decisions were not influenced by mass media. Negative case analysis leads to either revisions or confirmation of previous findings (Lincoln & Guba, 1985).

Peer debriefing. The researcher engaged in peer debriefing by periodically discussing the research process and findings with a colleague experienced in caring for breastfeeding women and who was also conducting research at the doctoral level. In addition, expert reviews were arranged with two objective readers, namely the researcher's dissertation chair and co-chair. This process involved the objective readers independently reading and coding several transcripts. Their findings were compared to those of the researcher. These findings were recorded and discussed in detail. Both

methods assisted in keeping the steps taken by the researcher honest and transparent (Lincoln & Guba, 1985).

Transferability

Another component of trustworthiness, transferability, or the ability to transfer the study findings to another, is similar to generalizability in a quantitative study. Transferability was supported by providing a detailed description of the steps taken throughout the process as well as descriptions of the content obtained from the completion of this study (Lincoln & Guba, 1985).

Dependability and Confirmability

Dependability is similar to reliability in quantitative research. Confirmability is the extent to which the study findings can be confirmed by others. Dependability allows the researcher to address any changes made over time to the original plans to the research study, whereas confirmability helps to ensure accurate representation of the participant's experiences. To ensure dependability and confirmability, all documents and notes were maintained by an audit trail. The doctoral committee chair and co-chair reviewed the work periodically throughout the process, thus providing the researcher a means to discuss explicitly decisions and any changes made throughout the study. All communications and written work reviewed or sent by the committee members were saved for later review as necessary (Denzin & Lincoln, 2000; Koch, 2006). Transcripts of audiotaped interviews, textual reflections, thematic analysis, and reflexive journal were maintained in files by the researcher. Each of these data sources comprised the components of the audit trail.

Reflexivity

Reflexivity is the process whereby the researcher acknowledges firsthand involvement with the subject matter and examines thoughts about and experiences that subject matter throughout the study. To reduce the risk of bias, which may reflect the researcher's assumptions and experiences related to the topic of interest, reflexivity was implemented throughout the study and documented by journaling thoughts, perceptions and decisions during the research process (Dowling, 2006).

The researcher is a nurse who has worked with breastfeeding women for more than 15 years and has advocated on numerous occasions for initiating and continuing breastfeeding. Successfully initiating and continuing exclusive breastfeeding requires that women receive social support from family, peers, healthcare providers, and society at large. The researcher had witnessed examples of social support being undermined by mass media, e.g., by advertising and marketing of infant formula, hospitals providing free samples to new parents, mailings and posters of infants being fed formula. Additionally, the researcher had noted positive representations of bottle feeding in the media, e.g., magazines distributed in childbirth preparation classes with portrayals of bottle feeding as effortless, and with fathers and smiling family members assuming responsibility for this method. Other noteworthy portrayals included greeting cards displayed with pictures and drawings of infants drinking from bottles, and balloons delivered to hospital rooms shaped like baby bottles.

This researcher remained aware of thoughts and perceptions related to the topic of breastfeeding throughout the entire process of conducting this research study. The

researcher met at regular weekly intervals with the chair and co-chair of the dissertation committee and journaled personal thoughts and perceptions throughout the study.

Ethical Considerations/Human Subject Protection

Before collecting data, the researcher sought approval of the study from the Institutional Review Board of UMass Medical School. During initial contacts with participants, the researcher explained a summarized version of informed consent. The consent form was distributed to participants. Any questions regarding the study were answered prior to or during the consent process. Interviews did not commence until signed consent had been obtained from participants. The consent explained that the participant was free to withdraw from the study at any time, that withdrawal from the study would not interfere with any contact, information, or resources associated with MBC members or healthcare providers at UMMMC.

All identifying information were removed from transcripts, which were coded, and no personal data were attached to the transcripts. The research was considered non-invasive and no physical harm was expected to the participants as a result of participation in the study. If during any discussion with the researcher information was disclosed of trauma or depression, the women was referred back to the MBC member or primary care physician for assistance. The researcher had 15 years of experience as a registered nurse working with postpartum and breastfeeding women. Thus, the researcher was qualified to identify potential immediate harm to the women or infants.

Attrition

To decrease the possibility of attrition (participant dropout), the researcher implemented several strategies. First, flexibility of scheduling interviews was a priority. Evening and weekend interviews were offered to participants with commitments during the daytime weekday hours. Convenient interview locations were also offered to each participant to decrease the need for additional travel time. Each participant was also given a $20 gift card from Target® as a thank you for participating in the research.

Summary

A qualitative descriptive study was conducted to explore women's decision-making experiences about breastfeeding their infants and the influence of mass media on their decisions. Qualitative description provided a rich understanding through firsthand descriptions without high levels of interpretation. The study was undergirded by the Socioecological Framework. Data were collected in individual audiotaped interviews with participants recruited from the Massachusetts Breastfeeding Coalition and UMass Memorial Medical Center. Interview data were compared to text and visual representation from Internet sites on parenting and infant feeding. All data were coded and analyzed for themes and common meanings. Data analysis was conducted simultaneously with data collection, and continued until saturation was achieved. The trustworthiness of the data was achieved by ensuring their credibility, transferability, dependability, and confirmability. Field notes and a reflexive journal were also maintained as part of the analysis and became components of the audit trail.

CHAPTER IV

RESULTS

Introduction

To better understand the role of the mass media in infant feeding decisions, a qualitative descriptive methodology was utilized to explore mass media influence on women's decision making about breastfeeding or bottle feeding. The results of this study yielded a rich description of women's experiences as well as a review of the available Internet data that is related to this topic. The primary theme found in all the interviews was *Media Matters Not,* with a subtheme of *Influences on Decisions.* Sample demographics, a summary of media use, and a detailed description of the themes are included. A description of each of the Internet sites, along with quotes derived from the sites, and individual participant quotes are also included to exemplify the themes that emerged from the data. Although not related to the study's specific aims, three important media-related categories emerged from the participants' discussion: *Media Messages—Good and Bad*; *Community/Public Opinions*; and *Recommended Media Messages*.

Internet Data

To begin, 10 Internet sites were analyzed according to the coding schemata (Appendix E). The chosen sites related to infant feeding and parenting. The sites were identified by typing in key words on the search engine Google; the key words were *parenting*, *baby*, *infant feeding*, and *breastfeeding*. Ten original Internet sites were identified, pertinent information was copied to Microsoft Word and analyzed. Each site was analyzed for the tone and visual representations of infant feeding. Pictures of

mothers and infants were noted along with advertisements for any item related to infant feeding. The original 10 sites were Baby.com, Babycenter.com, Babyzone.com, Breastfeeding.com, Kellymom.com, Mayoclinic.com, Mothering.com, Parenthood.com, Parenting.com, and Pediatrics.about.com. Overall, most of the findings from the Internet sites were homogeneous. Eight of the 10 sites contained graphics, showed photographs of infants and mothers, were multicultural, and contained infant feeding advertisements. Nine out of 10 had a positive tone and one was neutral. Seven of the 10 sites included information on both breastfeeding and bottle-feeding, and three were aimed at a solely breastfeeding audience.

Additional Internet sites that were identified by the participants and met the inclusion criteria were also analyzed; the two additional sites analyzed were AskDrSears.com and Parents.com. A total of 12 sites were reviewed. Most of the Internet sites that were mentioned by the participants were included in the original data set. Table 1 displays the Internet sites described and the total number of times that it was identified by the participants.

Table 1

Internet Sites Viewed by Participants

	n
Babyzone.com	1
Babycenter.com	7
Breastfeeding.com	1
AskDrSears.com	1
Kellymom.com	3
Mothering.com	3
Parents.com	2
Parenting.com	1

Three of the identified sites, Breastfeeding.com, Mothering.com, and Kellymom.com, were intended to target a breastfeeding audience. It was apparent that these Internet sites were pro-breastfeeding and projected the message that "breast is best." Breastfeeding.com, as the title suggests, had a logo that contained the phrase "the number one site for breastfeeding advice." The site contained many links to articles or key features related to breastfeeding. Expert advice from physicians and lactation consultants was readily available to the reader of this site. The negligible information on this site that related to infant formula served merely as a comparison to breastmilk and allowed a discourse on the superiority of breastmilk to infant formula.

The next Internet site, Mothering.com, was mentioned by three participants. As indicated by its purpose statement, this was an original and contemporary site, and it was obviously a pro-breastfeeding site. There were no articles or links to bottle-feeding. It had many pictures of infants and older children being breastfed. A tab located on the homepage directed the reader to breastfeeding articles and included a link to lactation activists, referred to as lactavists, with articles such as "The Breastfeeding Manifesto," "Ban the Bags," and "Eco-Mamma."

The third pro-breastfeeding Internet site, Kellymom.com, was identified by three participants and by the Internet search. The homepage contained inviting, soft colors, and lowercase letters, which created an ambiance of a homemade site, rather than, as found on other web sites, a commercial product with large glossy pictures. "Breastfeeding and parenting" was written just below the title, clearly indicating what the web site offered. There were no advertisements on the home page. Two links were noted on the homepage:

one was for parenting and the other specifically for breastfeeding. Inspirational messages regarding babies and parenting written in a poetic style were also found on the homepage. Links for healthcare providers and for the lay person were both provided. Multiple articles related to breastfeeding were easily found within one click from the homepage as well as forums that were self-described as "gentle, empathetic, safe, respectful, caring place for parents to come and connect but not debate." Many women posted photographs of themselves and their infants on the site. These positive, smiling images were easily accessible for others to view.

The remainder of the identified sites provided information for both breast and formula feeding. Babycenter.com was identified the most frequently (n = 7) by the participants as a site that was reviewed and searched for information. Numerous tabs were included on the homepage that directed the reader to articles whose topics ranged from pregnancy, stages of childhood, community, registry, and shopping. "Breastfeeding Basics" was one click from the "Baby" tab. When the tab was clicked, it led the reader to 24 articles and 61 questions listed under the subheading "Expert Answers." In contrast, only half as many topics and questions were listed under the "Formula" subheading. Many photographs of mothers and infants appeared on this site as well as many advertisements for infant formula that showed contented, sleeping infants. A link led the reader to an additional Internet site named Baby.com. Baby.com is owned and managed by Babycenter.com, and it also contained numerous articles on both formula and breastfeeding. Overall, both sites had a positive tone toward breastfeeding and were

commercially driven with a variety of glossy and professional advertisements, including those by the popular formula companies.

AskDrSears.com was identified by one of the participants and was not part of the original analysis. AskDrSears.com, along with two other sites, Pediatrics.about.com and Mayoclinic.com. were written by healthcare professionals with information presented for the lay person. Mayoclinic.com and Pediatrics.com were more clinically oriented; the homepages had white backgrounds and were very stark, with only a few pictures and advertisements. No advertisements for infant formula were present on either site. In contrast, AskDrSears.com was a family-run company in which four members of one family offered expert medical information. Along with the medical information there were advertisements for the Sears brand of vitamins, supplements, food products, and books. No other advertisements were noted on this site other than those with the family brand name. It had a family orientation rather than the neutral and clinical tone of the other two sites. All the site names indicated information provided by medical professionals, rather than those written by lay persons or commercially driven interests.

Three sites with similar names were analyzed: Parenthood.com, Parenting.com, and Parents.com. Parents.com was identified by two participants, and Parenting.com was identified by one. Overall, these sites were positive in tone. An example of the positive tone was an article titled “Breastfeeding: Good for Baby and Mom.” Another article titled “Breastfeeding Problems and Solutions” indicated that breastfeeding may become problematic, but the article provided many suggestions to support the continuation of the process of breastfeeding. All three of these sites contained numerous articles related to

breastfeeding and formula feeding, but the majority pertained to breastfeeding. All three of these sites contained photographs, and one had a video of smiling infants feeding on their mother's breast. Parenthood.com did not have pictures of infants being bottle-fed, but the others did. The Parenthood.com site also contained a vast number of blogs and discussion forums.

The last of the Internet sites analyzed was Babyzone.com. This site was owned and operated by a subsidiary of the Walt Disney Internet Group. The tone of this site was positive, as reflected in the description, "Premier destination for highly personalized content and tools that seamlessly cover the journey from preconception to pregnancy and parenting your new baby." The homepage was whimsical and cute. There were numerous colorful advertisements and, in addition, an advertisement for sweepstakes to entice the reader to provide information such as infant due date and an e-mail address. In comparison to other web sites, the breastfeeding information was more deeply embedded; it required four clicks to obtain that information rather than the requisite two clicks of the other sites. The site provided information regarding both breastfeeding and formula feeding, but it also contained a greater number of articles and links to breastfeeding information than to formula feeding.

In summary, 10 Internet sites were analyzed according to the coding schemata (Appendix E). The sites were identified by typing in key words on the search engine Google; the key words were *parenting*, *baby*, *infant feeding*, and *breastfeeding*. Additional Internet sites identified by the participants were also examined. The sites were analyzed for the tone and visual representations of infant feeding. Pictures of mothers and

infants feeding were noted along with advertisements for any item related to infant feeding. Nine of the Internet sites were positive in tone toward breastfeeding, and one was neutral. Three sites were targeted specifically to breastfeeding audiences; the remainder included both infant formula and breastfeeding information. Three of the sites were written by healthcare professionals for the lay reader. All the Internet sites included photographs, articles, and advertisements related to infant feeding.

Interview Data

Participants

Twenty women were recruited for participation in the study. Data collection ensued over a period of six months. The infant feeding method chosen by each of these women is outlined in Table 2. Of the 20 women, 17 initiated breastfeeding their infants or were planning to breastfeed, two of the breast feeders transitioned to bottle-feeding with infant formula, and one who breastfed her first child planned to bottle-feed her next. Two women chose to bottle-feed from the start, and one woman was undecided at the time of the interview.

Of the 20 women interviewed, five were pregnant. Three of these pregnant women were expecting their first child, one woman was expecting her second child, and one woman her third. Eleven of the women had given birth within the prior six months. The ages of the infants, designated by their mothers as either currently breastfeeding or bottle-feeding, ranged from 2 days old to 22 months old.

Table 2

Infant Feeding Choice

Current Infant Feeding Method	(n = 15)	
Breastfeeding	11	55%
Bottle-feeding	4	20%
Pregnant and Chose Feeding Method	(n = 4)	
Plan to Breastfeed	3	15%
Plan to Formula Feed	1	5%
Pregnant and Undecided	(n = 1)	
Undecided	1	5%
		100%

A homogeneous sample of women agreed to participate in this study. The women were considered older on the spectrum of childbearing age, highly educated, and the majority were married. The vast majority of the women were white; only one woman identified herself as Hispanic, although one woman who reported herself as white was born in Brazil and came to the United States at age 18. A summary of the demographic data of the participants is included in Table 3.

Table 3

Demographics of Participants (N = 20)

Age	mean	median	range
	32.1	31	26–38
Marital Status			
Married	18		
Divorced	1		
Separated	1		
Educational Level			
Doctorate Degree	1		
Master's Degree	9		
Bachelor's Degree	9		
Associate Degree	1		
Race			
White	19		
Hispanic	1		

Each of the women was asked to report her media consumption. A summary of the participants' media consumption is included in Table 4. Each of the women (n = 20) reported television exposure with up to five hours per day of viewing, the average spent watching television each day was 2 hours. All of the women (n = 20) had access to the Internet in their homes and the spent an average of 2 hours each day on the Internet. The average movies viewed per month was reported as 2. The women also reported spending

an average of 1 hour per day reading the newspaper and less than one quarter of an hour a day reading magazines.

All of the women (n = 20) described exposure to media related to infant feeding. Ninety percent of the women (n = 18) reported receiving coupons or formula samples as well as brochures or mailings specific to formula. Social media utilization related to infant feeding was reported by 65% of the women (n = 13).

Table 4

Media Consumption

Media Consumption	mean	median	range	SD
Hr. Day TV Viewed	1.93	2	<1 hr.–5	1.47
No. Devices Internet Access	2.75	2	1–6	1.44
Hr. Day Internet	2.31	2	<1hr.–6	1.44
Hr. Day Reading Newspaper	0.35	1	0–2	0.58
Hr. Day Reading Magazine	0.65	0.25	0–2	0.68
Movies viewed per month (DVD, Video, TV)	2.45	2	0–8	1.93

Media Exposure Specific to Infant Feeding	(n = 20)	%
Formula Samples/Coupons	18	90 %
Mailings/Brochures	18	90%
Posters	2	10%
Social Media	13	65%
Books	2	10%

Face-to-face interviews were conducted with each of the participants as well as follow-up conversations with five of the 20 participants to seek clarification and confirmation (trustworthiness) that the data analysis reflected their thoughts and perspectives.

Trustworthiness

Credibility of the findings was achieved in this study by member checking. During the data analysis phase of the study, contact was made with each of the study participants. The participants were then invited to join a group discussion or to participate in an additional telephone interview to review the findings. Five participants, two of whom were bottle-feeding their infants and three of whom were breastfeeding, agreed to individual phone interviews. A summary of the thematic findings was sent prior to the phone calls to those five women who agreed to participate via telephone interview. The summary was utilized as a guide during the conversations. All of the women (n = 5) who participated in member checking reaffirmed the previously identified information and reported that the identified themes accurately described their thoughts.

During the member check the women agreed that the themes, descriptions of the related categories, and the comments included in the summary were similar to their experiences. Comments from one participant included “It sounds consistent with what I said,” and another reported, “Sounds like us.” Additional emerging themes were not identified during the process, but participants further described their experiences.

In addition to the member checks, trustworthiness was achieved through triangulation and peer debriefing. Triangulation of the data sources, both Internet data

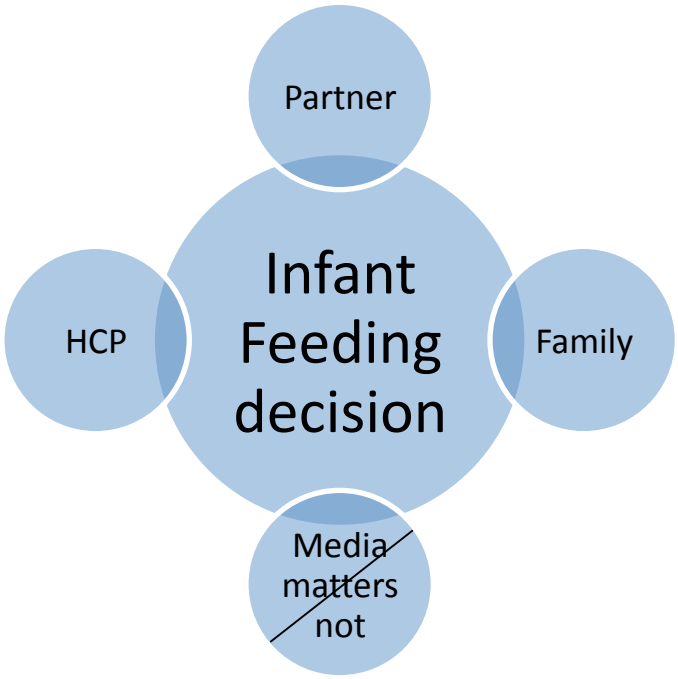
and face to face interviews data collection were conducted. Two different locations were utilized to recruit participants; UMMC and the MBC. Peer debriefing was conducted by utilizing objective expert readers to read and critique the entire process of data collection and analysis.

Negative case analysis was sought during the data collection phase to ensure trustworthiness. A priori it was thought that the mass media would influence women's infant feeding decisions. However, as data collection and simultaneous analysis ensued, the findings were not as expected. Rather the negative case included two participants whose perception was that mass media did have an influence on infant feeding decisions.

Themes.

The main theme specific to infant feeding decisions that was identified by the participants was *Media Matters Not*, with a subtheme of *Influences on Decisions* (including partner, family, and healthcare provider). Figure 2 represents the thematic structure of the data analysis.

Figure 2. Thematic Structure of Data Analysis



In the main theme, 90% of the mothers (n = 18) described how infant feeding decisions were not influenced or determined as a result of media exposure. Instead, their infant feeding decisions were informed and supported by their partner, family, and healthcare provider (HCP). *Influences on Decisions* is included as a subtheme.

Media matters not. Media was defined as a means of communication; the communications or messages were sent via photographs, written text, or portrayals, and the messages were either overt or implied (Vidanapathirana et al., 2005). All the participants (n = 20) reported exposure to mass media throughout their lives. At the start of each interview, the participant was queried regarding her media utilization. Examples of media usage provided by the participants included television programs, movies,

printed media such as magazines or brochures, and the Internet. Many (n = 14) reported that, during pregnancy and following the delivery of their infant, they sought out media specifically related to infant feeding and parenting. *Media Matters Not* contained three identified subtexts that included printed media, the Internet, and commercial interests.

Printed media. Participants (n = 8) discussed the written information regarding infant feeding received from healthcare providers at prenatal appointments or childbirth education classes. Others identified books such as *What to Expect When You're Expecting* and other popular books and magazines aimed at expectant parents (n = 10). Two of the participants described how the information regarding infant feeding found in the printed media reinforced their decisions and provided additional practical information regarding the mechanics of infant feeding, but that it did not actually influence the decision. One participant stated:

> I read a lot of pregnancy books in general and the *What to Expect* book and *Your Pregnancy Day to Day* and all those, and they typically had a section on breastfeeding and formula feeding in them, and my decision was already made that I would at least try it—and those books kind of reaffirmed what I had thought and gave me more tangible information on them.

Another participant stated that reading information during her pregnancy, in combination with the influence of a sister who had delivered an infant one month previously, did have an influence on her decision making:

> When I was pregnant with my first one, I was just reading a lot of different things. . . . I think that is what really influenced me. And my sister, she had a baby right before me and she really had a strong mind about it too. . . . So both of those things.

One other participant described her experiences with reading magazines and books related to breastfeeding. She said, "The more I was reading about it . . . it seemed like a better idea."

Internet. Use of the Internet was described by participants (n = 11) as media utilized for information related to parenting and infant care. The participants described searching for information related to all topics of parenting, not solely for infant feeding information. For example, one participant stated, "I spent a lot of time on the CDC web site and the World Health Organization site; I have done a lot of vaccine research." Another participant described her use of the Internet during the pregnancy of her second child. She described her search for any updated information, reporting, "As I am starting this new pregnancy . . . it has been four years."

Participants did report utilizing the Internet specifically for information related to infant feeding, but not related to choosing a method of infant feeding. One participant described her experiences with Internet searches, "I used to check Parents.com, that was when I was pregnant, but I haven't gone on it since. . . . I just do like Google searches related to breastfeeding." Another participant offered descriptions of Internet searches completed to answer questions she had regarding the growth and development of her

infant following the delivery. She stated, “If I am worried that she is too thin and there’s some feeding article . . . ”

Other participants (n = 2) reported researching online and the information related to infant feeding supported their decision, but they denied that the information obtained online had any influence when choosing a method. A participant stated, “Maybe some of my research may have reinforced how much I was disgusted by formula, but whether I read that or not, I still would have breastfed. It served to reinforce what I was going to do.” Another participant expressed a similar sentiment related to infant feeding decisions and information found on the Internet. She stated:

> Never in a million years thought I wouldn’t breastfeed, of course I am going to breastfeed. Like I said, I never went online and said, Okay what is the best way here. Of course breastfeeding was never a question.

Advertisements. The participants described portrayals of advertisement of infant formula related to decision making. In addition, formula samples and coupons received from healthcare providers or directly from manufacturers perceived as a means of marketing or advertisement of the product were discussed. The participants were asked if the samples had an influence on infant feeding decisions, and one participant stated, “No, they didn’t have any kind of influence on breastfeeding.” Another woman described formula advertisements with regard to influencing infant feeding decisions. She stated:

> I think those commercials are basically . . . in my opinion anyway, were if you were geared toward, if you are bottle-feeding, then they try to get you to buy it. I

don't think if it was whether or not you had made a decision as to bottle-feed or breastfeed.

One participant, a breastfeeding advocate, described an advertisement that she noted for a brand of bottle. She described the specific slogans and visual images promoted by the advertiser, and, although she was able to quote the advertisement and describe its vivid details, she related that the advertisement did not sway her decision regarding breastfeeding. Her exposure to this advertisement rather helped her when choosing a bottle for her pumped breast milk. In addition, another mother described formula advertisements that she had seen on television and stated, "I'm not easily influenced by advertisements. . . . I've been watching the 'Baby Story' and *Enfamil* does a lot of advertising." Another woman described her experiences with formula advertisements: "I think only of formula . . . I would never recall seeing anything about breastfeeding. I have a friend who was a lactation consultant, so I had that kind of influence." Another stated, "I really don't pay too much attention to them. I don't think that any of the marketing that any of those formula companies are doing would influence my decision." Two of the participants had initiated breastfeeding their infants and had transitioned to bottle feeding their infants with infant formula. The rationales provided for the transition were medically related and were not as a result of receiving formula samples, coupons or mailings.

One of the women in the study, who had previously decided to breastfeed, provided an example of what she believed was a positive portrayal of breastfeeding in the media. She further speculated that the portrayals may have had an influence if she had not

already chosen to breastfeed. The woman referred to a recent portrayal of a main character on a situation comedy who was breastfeeding an infant. The participant said, "Having the likable character do it . . . that was great, and it would have influenced me."

Ninety percent of the participants (n = 18) stated that these media examples did not have a significant role in their individual infant feeding choice. Several of the breast feeders and the bottle feeders (n = 9) stated that the decision regarding infant feeding method was made before pregnancy. Some of the participants were unable to articulate an exact time when the choice was made but instead made comments such as "I never really thought of anything other than breastfeeding," "Breastfeeding was always what I wanted to do," "The decision was never a question," and "I always assumed I would."

Instead, the factors that did inform their decision included support from partners, family, and healthcare providers. The influences that led to the infant feeding decision reported by the participants follow.

Influences on infant feeding decisions was a subtheme under *Media Matters Not* that emerged in the analysis, as the participants further described important influences in the infant feeding decision. Three main influences that emerged from the data were identified by the mothers: partner, family, and HCP support. Thus, support from others emerged as an important factor vs. media. Support has been defined in the literature as encouragement or assistance in infant feeding by partners, family, and healthcare providers (Dennis et al., 2002).

First, partners were recognized as having a key role in support of the choice of infant feeding method. The participants identified their partners supporting them

throughout the process both emotionally and in a physical manner. This emotional and physical support helped the mothers confirm their choice was a good one and provided the encouragement necessary to seal the decision. “He was really supportive . . . he went and learned about it as well and he agreed and he wanted to be supportive . . . that really helped me to be successful at breastfeeding.” Another participant reported similar circumstances, “Especially with the first one, I didn’t know what to do, and he would help me like hold the pillows so I could place the baby in the right position, and just to be there and be patient, it takes time.”

Another important infant feeding decision influence came from the informational and affirmational support provided by family members. Five of the participants described family members’ previous experiences with breastfeeding and that those experiences and conversations with family members provided support, which resulted in the choice to breastfeed. “My brother and I were both breastfed. My mother did, my aunts did that, and my sister-in-law, when she had her children, she breastfed.” As well as “My mom breastfed me. . . . I decided I was also going to breastfeed . . . [my mother] was one of the main [support] ones because I don’t really know much about how anyone else was fed as a baby.” Others reported that family members had not previously breastfed an infant but were supportive of the participant’s decision: “My mother didn’t nurse; she was very supportive of our decision.” One participant who decided she would bottle-feed her infant also referred to family members: “My sister has four kids; they were always bottle-fed, we were bottle-fed. It wasn’t really a big decision—it was kind of assumed I would bottle-feed.”

Finally, healthcare providers were identified as another significant source of positive support. Basic health and infant feeding information that was shared by healthcare providers was identified as significantly influencing their feeding decisions. Informational support offered by the physicians, midwives, and nurses was discussed by several of the participants (n = 6) in the study. The information was given by providers orally and in the written format through brochures and handouts they supplied. One participant reported that a pediatrician was verbally encouraging of the choice to breastfeed. Thus, coupling information with emotional support had an important influence on infant feeding decisions in this sample of mothers.

> The doctor was very positive—the pediatrician—that was one question I asked when we met with him a few months before he [the baby] was born; I asked him when we were going through the process of selecting a pediatrician. I asked him his thoughts on breastfeeding and he was very supportive of it, and he said that there were lots of things he could do for me and lots of ways he could support me.

Comparison of Internet and Interview Data

A comparison of the Internet and interview data was completed. The Internet data was coded according to the coding schemata (Appendix E); articles and advertisements found on the Internet sites were copied and pasted into individual files. The coded Internet data was then reviewed and compared to the themes that emerged from the analysis of the interview data. The Internet sites the researcher identified and analyzed were the same sites identified by the majority of the participants during the interviews (Table 1). The comparison of the Internet data and the interview data was an ongoing

process as each of the interviews were completed and the transcripts were analyzed. Further comparison of the data occurred when all interviews were completed and themes were identified within and throughout the data. The Internet sites the researcher identified and analyzed were the same sites identified by the majority of the participants during the interviews.

The Internet as a form of media was utilized by all the participants. Articles included on the Internet sites reflected the clustering of information that emerged from the participant data; this included *Media Messages—Good and Bad*, *Health Benefits, Celebrity, Commercial Interests,* and *Community/Public Opinion.* In addition, advertisements and photographs on the Internet sites exemplified the themes identified in the participant data. Examples of articles found on the Internet sites follow.

References to the health benefits of breastfeeding were numerous. All the articles on the Internet sites related to breastfeeding included statements proclaiming the health benefits associated with breastfeeding. "The Benefits: Healthy Babies, Healthy Moms" and "Breastfeeding Is Best for Your Baby and It's Good for Your Health Too."

Advertisements for infant formula were found on many of the Internet sites and were analogous to those described by the participants. The advertisements included sleeping infants pictured with text such as "Doing what's best for your baby is our priority" and "#1 brand fed in hospitals." Many of the advertisements included tabs for additional information; when selected, the reader was asked to include personal data such as e-mail address or home address for mailing of coupons and samples.

An example of an article found on the Internet that exemplified the important support received from family and healthcare providers was titled “Breastfeeding Support 101: New mothers need a lot of support from friends, family, and medical professionals.” Articles related to public opinion were reflected on Internet sites; this theme was illustrated in the titles “Handling Criticism about Breastfeeding” and “Breastfeeding in Public: The Debate Rages On”. Bottle-feeding information reflecting a lack of support appeared in the title “Breastfeeding vs. Bottle? Is It Any Wonder That Bottle-feeding Moms Sometimes Feel as if They're Under Siege?”

The celebrity media stories included in the participant interviews were not current on the Internet sites during the original analysis. However, a site named Bestforbabes.org was identified by one of the participants. On the homepage, a link entitled “Celebrity & Everyday Breastfeeding Role-Models” led the reader to an article about Salma Hayek breastfeeding another mother’s infant. Many references to celebrity and infant feeding were noted on the parenting Internet sites. One of the Internet sites included an entire section on its homepage entitled “Celeb Parents.” The links to additional information included “Celebrity Parents,” “Celebrity Single Parents We Adore,” “Famous Parents of Twins,” and “Our Favorite Celebrity Dads.” The homepage also included photographs of celebrities with their children. Another Internet site had a link on the homepage titled “Celebrity Baby Names,” and a click on the link brought the reader to an exhaustive list of celebrities and their spouses, along with the boy and girl baby names they had selected for their children.

Breastfeeding, Public Opinion, and Future Media Messages

Although this sample of mothers did not feel that media played an important role in their infant feeding decisions, they had many opinions on how media could be perceived by others, and they had recommendations of how it could be altered to project a more positive light on breastfeeding in communities. This information emerged in three main categories: *Media Messages—Good and Bad*; *Community/Public Opinions on Breastfeeding*; and *Recommendations for Future Mass Media Images.*

Media messages—good and bad. *Media Messages—Good and Bad* was a theme that emerged from participants' recollections on infant feeding information through mass media, such as images and/or messages. Each of the participants was asked during the interview to describe any mass media images, messages, and portrayals that related to infant feeding. The participants presented many examples of media, both negative and positive, and described the messages found in electronic and printed mediums. Messages were both overt and embedded in the examples provided. The M*edia Messages—Good and Bad* theme contained subtexts that include comedy and satire, celebrity, commercial interest, sexualization, and stigma.

Comedy and satire. One of the examples of mass media messages of breastfeeding indicated by the participants (n = 8) was that breastfeeding was considered comedic. Comedic representations were noted in television programming and in movies. One participant commented, "There's always someone who has pumped their breast milk and put it in the staff refrigerator at work and someone squirted it in their coffee." Four of the participants identified a comedic representation in the movie *The Grown Ups,* which

was current at that time. In that movie a 4-year-old child was shown breastfeeding. Several men were witnessing the breastfeeding, and a sarcastic and comedic dialogue ensued. Another comedic movie, *Meet the Fockers*, was identified by two of the participants; the noted satire was presented as a male simulating breastfeeding. "There was a father who had a synthetic breast . . . he would put this harness on and so the grandfather could nurse the baby at the breast. . . . It felt like they were making a mockery of breastfeeding."

Four of the participants referred to portrayals on the television situation comedy *The Office*. An episode portrayed one of the characters using a breast pump in the office. "It was a mother who was pumping at work and someone made a comment, and she said 'take a picture—it lasts longer.' It was looked down upon that she was pumping." Another participant referred to a main character on the series who was attempting to breastfeed her newborn. The participant said, "That was a breastfeeding scene and she was having trouble latching on—that was a hilarious scene." In contrast, another participant described viewing the same sitcom that portrayed breastfeeding by a main character described in a positive manner. The participant expressed that the images and messages portrayed on the program may have a potential impact on infant feeding choice. She also stated that it was encouraging to see the representation of breastfeeding on mainstream popular television programming:

> I think where Pam was breastfeeding it would have had a positive influence on me just because she is cool, pretty, and she is the one that you are supposed to like so

> that would have had a positive . . . But definitely having the likable character do it, yeah, of course that was like oh that's great, and it would have influenced me.

Celebrity. Participants discussed the portrayal of celebrities in the media as it related to breastfeeding and the potential that these portrayals had on infant feeding decisions. One woman identified a story of a celebrity on a humanitarian trip who was filmed breastfeeding a child in an African country. The story received national attention; the participant referred to the story that she had read in a magazine found in a waiting room of the dentist. The media messages were interpreted as both positive and negative by the participant.

> *People* magazine in the office had an article about Salma Hayek, the actress who had taken this humanitarian trip to Africa, and she got all this hullabaloo because she was at this clinic somewhere and she started breastfeeding another person's baby. . . . They literally showed a picture of her nursing this black child at her breast . . . but there was all this hullaballoo and all this commentary . . . people saying, oh that was so gross that she would be feeding another person's child. And other moms would say how wonderful that she was breastfeeding this child, you know what a womanly thing that she is doing and how great that is . . . young women would want to be like, and these Hollywood stars are very beautiful and have their lives together and are able to take these trips to Africa and do these humanitarian works, and so it was possibly a positive model.

Another media example was a celebrity who mentioned pro-breastfeeding during an interview for a popular magazine. This quickly became national news. The celebrity's comments were portrayed in multiple media formats such as television and the Internet, and included negative commentary and criticism that she would dictate her personal beliefs to other mothers. One participant viewed the commentary and read the article on the Internet on the day of the interview. She expressed disdain for the comments made by the celebrity during the interview.

> The only thing that is sticking in my mind is today on the news is the whole thing with Gisele, Tom Brady's wife. She believes that there should be a worldwide law requiring all mothers to breastfeed for the first six months no matter what, which honestly kind of pissed me off because, whatever I decide to do, it has to be my choice, and some people really want to breastfeed but can't and other people due to like medications or health issues it is actually more dangerous to do it, so it kind of hit me the wrong way.

Commercial interests. All the participants (n = 20) identified advertisements for infant formula they had seen on television, in magazines, or on the Internet. The participants were asked to relay anything they could remember about the advertisements. Two were able to report the color or attractive images associated with the product and the placement of an infant in the advertisement. Others reported the underlying message rather than the overt picture. Those who discussed infant formula messages reported reading or hearing the message that "breast is best" followed by a statement that, although breastfeeding may be the most advantageous for the infant, other benefits could

be rendered as a result of formula feeding an infant. Six reported that the infants in the advertisements were happy and content.

One of the breastfeeding participants related an advertisement for infant formula she had seen that promoted the fact that formula-fed infants sleep for longer periods of time than breastfed infants. She expressed her concern that perhaps this message could be a deterrent to breastfeeding.

> The one that did get to me is the restful formula because it makes it seem like well if I give them this they are going to sleep through the night, so even to someone breastfeeding that seems really great—instead of feeding him every two hours in the night, I can just give him that and get a full night's sleep.

Six of the participants reported receiving infant formula in the hospital discharge bag "I was given some in the hospital to take home." Five reported free samples and printed information in the diaper bag provided during a routine visit to their pediatrician or obstetrician. One participant interviewed in the hospital had delivered an infant two days prior and when asked about free samples stated, "I got a baby bag . . . from my doctor and a bunch of stuff here in the hospital."

Eleven participants reported that formula samples and coupons were mailed out to their home as a means of marketing the product. Some of the samples and coupons were unsolicited, and others were the result of registering online or in person. Three participants reported registering for infant products and gifts from merchandisers such as Babies"R"Us. "When you come to register they give you a booklet and an envelope with coupons and in there, there are coupons for Enfamil. They don't give you any written

information about breast versus bottle." One of the participants currently breastfeeding discussed the impact that the samples may have on infant feeding decisions, and she related the negative impact for women who are uncertain as to which method to choose.

> I don't think it should be done at all. Because if the formula is right there and you are having an issue it is so much easier to just say Okay I will just give them the formula—the baby has to feed every two or three hours.

Sexualization. Sexualization of the breast was discussed by most of the study participants (n = 15). Participants reported that the lack of support for public breastfeeding was related to this culture's sexualization of the breast. They spoke of sexualization of the breast found ubiquitously in the media and utilized often in advertising. Examples of women's breasts portrayed in advertising ranged from advertisements for clothing to automobiles to liquor. The participants reported that these images were portrayed everywhere in American culture and that these representations of the breast led to breasts being viewed as sexual objects rather than for nurturing/feeding an infant. The participants reported that the media promoted this message and that it could negatively influence women who were choosing to breastfeed an infant.

One participant stated, "Talking about sitcoms and movies, I think the breast is always portrayed as a sexual object rather than something that is useful." Another described an experience at a shopping mall; referring to a poster in one of the mall windows, she observed, "You see so much flesh . . . you can see teenagers practically having sex to sell clothing at the mall and that's acceptable, but to have a woman sitting in the mall nursing her infant is somehow scandalous." Seventy-five percent (n = 15) of

the participants expressed this sentiment. Of those who identified this theme during the interview, only one was a bottle feeder. The remaining 25% did not mention this theme, (n = 5); three were bottle feeders and two were breast feeders.

Stigma. Two of the participants referred to a case in the media where a woman on an airplane who was breastfeeding her infant was asked by the flight attendant to stop breastfeeding. The flight attendant reported that the act of breastfeeding an infant in public was offensive to some of the other passengers on the plane. The breastfeeding passenger was forced to disembark the plane because she had refused the flight attendant's request. The participants expressed distress that such an event occurred. Two of the breastfeeding participants referred to an *American Baby* magazine article whose author had stated that "it was creepy for her to breastfeed," and then went on to describe the negative effects on the body due to breastfeeding.

Health benefits. A positive message noted in the media by the participants was the benefit of breastfeeding for the child's long-term physical and mental health. Five of the participants reported that they understood breastfeeding was healthier for the infant versus formula feeding. "I started researching the differences between breastfeeding and bottle-feeding. I realized that there was such a difference in nutritional value on babies—immunity, antibodies." One participant reported knowing about the protective immunity of breast milk for protection against Crohn's Disease and ear infections; and another participant mentioned the contributions of breast milk to higher IQ levels. They reported that, nutritionally, breast milk was overall healthier than infant formula.

> Just the health benefits of it—we both have asthma, not that that has anything to do with whether or not we would nurse, but, you know, I did some research that says to give them every benefit. . . . Why not?

All of the participants (n = 20) stated that they had seen or heard advertisements for infant formula, and many (n = 9) reported that "breast is best" is included by the formula companies in their advertisements. That phrase, however, is then followed by a statement that suggests that not all women are able to breastfeed or choose to breastfeed, and therefore formula offers an option for those women. One of the participants articulated "Healthy" when asked to describe the message that was portrayed in an infant formula advertisement.

> Healthy. When I think about formula, the first thing that you see in an ad is "plus vitamin D and DHA," and they are kind of trying to assure people but they can give the same nutrients as breastfeeding—so why not bottle-feed?

Many of the participants (n = 11) had gone on the Internet to read about infant feeding. Message boards and blogs were also viewed by participants. Stigma associated with infant feeding was expressed by some of the participants (n = 7) who read posts on a popular Internet site. One participant reported that the posts on message boards and blogs included negative and polarizing comments in relation to infant feeding. Those who breastfed their infant and posted messages were often adamant that others should do the same. Bottle-feeding mothers expressed concern regarding the comments posted by others. One of the participants stated:

> I think there is a general feeling out in media today whether it be on web sites or even some of the literature and pamphlets that you can find that almost makes you feel like you are a bad person if you don't choose to breastfeed.

Community/Public Opinions emerged as a category and was described as a lack of support for public breastfeeding and a return to the workplace. This category was identified by participants, but it was not noted as an influence to mothers' infant feeding decisions. A lack of support of public breastfeeding, defined as an uncomfortable feeling, a need for seclusion during breastfeeding, and a lack of societal acceptance of public breastfeeding, was frequently mentioned. Many of the participants discussed public breastfeeding (n = 16). A need to cover the breast and the infant during public breastfeeding was identified. One participant stated that she had no intention of covering her infant during feeding and stated that it was important to continue to visualize the infant while feeding. "Even myself, like in the beginning it was my hang-up of not wanting to be in public nursing . . . just felt uncomfortable. I wouldn't want to offend anyone, I wouldn't want to attract attention to myself." Another participant identified the need to breastfeed out of view of the public.

> I wouldn't leave to do it, I think as long as I didn't have it all "out there," I would just deal with it. . . . I wouldn't leave a restaurant and go to a secluded place just not to be seen breastfeeding my child.

An additional concern regarding public breastfeeding was raised by participants. They discussed the need to mandate acceptance of breastfeeding. The laws regarding

breastfeeding in public, allowing women the right to breastfeed in public locations, were identified by participants (n = 5). One stated, "I think they passed a law that it is legal to nurse . . . I mean it is just natural, it just is, there is nothing legal or illegal about it."

Public opinion and the lack of support in the workplace culture were also identified as concerns by many (n = 8) of the participants during the interviews. Concerns were discussed with the researcher but once again, none of the participants reported that it affected their decisions. A lack of space for the pumping and storage of breast milk was identified by one participant as a deterrent to breastfeeding for women who must return to the workforce while their infants are still breastfeeding. One participant stated that she spoke with a human resources representative: "When I first got back to work, and I asked him if I could pump, and the male HR said I could do it in the bathroom." Another participant mentioned that she is currently on a leave of absence from the workplace but discussed concerns for others regarding a return to the workforce.

> I think that that is another thing, going back to work. . . . I have seen a lot of my new mom friends struggle with pumping at work and keeping up the supply, and maybe they're provided a room to pump at work, but it is not really that nice, or maybe they're not and they pump in their car.

Public opinion was expressed by a participant on a level more social than personal regarding the workplace and breastfeeding. She expressed frustration by the lack of support that is provided to working women who must take time away from the workplace to pump breast milk to retain an adequate supply.

> I always find it interesting the people that our society supports but . . . doesn't find a problem with people taking breaks to go have a cigarette, which is very unhealthy, yet people don't seem to be sometimes understanding a woman taking a break to pump . . . you know, it's like kind of backward.

Recommendations for future mass media images was the final category that emerged from the data. Participants stated that representations of infant feeding in the mainstream media, other than advertisements for formula, were scarce, particularly representations of breastfeeding. Participants identified recommendations for future mass media messages. Normalization of breastfeeding emerged as a recommendation for "something that makes it seem normal." Participants reported a desire to have portrayals of breastfeeding as routine, "making it more of a popular thing to see." These types of portrayals would then become the standard, deeming breastfeeding as normal and ordinary. "So much could be put into the media. Just showing women breastfeeding . . . show women breastfeeding not being such an unusual thing, putting the support out there, advertising types of support." Additional comments regarding the normalization of breastfeeding included:

> I think a lot of people go to the bottle. I don't even blame them because they don't ever see anyone breastfeeding in public, and so it is weird, and they don't see it ever and I think if there were more images, then . . . if more people did it there would be fewer hang-ups about it

Other participants stated that bottle-feeding, not breastfeeding, is presently portrayed in this country as the norm. Examples cited by participants included symbolic representations of bottles used as party favors at baby showers or on restroom doors, indicating that the bottle symbol is synonymous with baby. Another example was described by a participant reading to her young toddler. A *Barbie* book contained a story that described Barbie's friend feeding a baby from a bottle, and it "struck" the participant that representations of bottle-feeding were portrayed as the norm for infant feeding in most storybooks read by young children.

More direct methods of education regarding the benefits of breastfeeding portrayed in the media were suggested by participants. Four of them suggested breastfeeding could be included as a topic for a public service announcement to promote breastfeeding in women. One of the participants compared a public service announcement with breastfeeding as the topic to other public health education that is currently present in the media. The participant stated:

> It would be nice if you saw more pictures of women breastfeeding. . . . They always have like little advertisements sometimes when you go to the mall or at the bus stop or something like that. They have public awareness ads about vaccinations and about not smoking and about obesity and all these things.

Summary

Analysis of 12 Internet sites, ten original and two additional sites suggested by the participants related to infant feeding, and 20 face-to-face participant interviews were conducted. The main theme *Media Matters Not* suggested that mass media did not

influence infant feeding decisions for this group of mothers. What did have an important impact on infant feeding decisions was the information and emotional support provided by partners, family, and HCPs (subtheme of *Influences on Decisions).*

Participants reported personal experience with various types of media in relation to infant feeding. Their examples included television programs, movies, printed media such as magazines or brochures, and the Internet. The participants reported further that the examples of infant feeding identified in the media did not have a role in their individual infant feeding choice. Examples of portrayals of infant feeding and the messages included in these portrayals included messages both positive and negative. The participants offered suggestions of media messages they would like see in the future such as public service announcements of women breastfeeding their infants.

The findings from the participant interviews were compared to the Internet summaries. The comparison findings demonstrated that the emerging themes from the participant interviews reflected the information represented on the Internet sites. Tables of the Internet sites viewed by the participants, infant feeding choices, and demographics of the participants are included. A summary of media consumption by the participants was compiled and is also included.

In addition, the participants discussed media issues that had potential for influencing infant feeding decisions (*Media Messages—Good and Bad),* emphasized the need for public opinion to be altered so that breastfeeding in public would be viewed as more acceptable, *(Community/Public Opinions),* and described suggestions for enhancing media messages about breastfeeding (*Recommendations for Future Media Messages)*.

Chapter V

DISCUSSION

Introduction

The purpose of this study was to explore, by means of a qualitative descriptive method, the influence of mass media on women's decision making about infant feeding. The study's major findings will be discussed in relation to the framework and to the empirical literature utilized for this study. The chapter will also include directions for future research, implications for practice and health policy, and the study limitations.

Theoretical Framework

The Social Ecological Framework (Stokols, 1996) was utilized to undergird this study, which explored the influence of the media on infant feeding decisions. The intrapersonal, interpersonal, community, institutional, and policy levels of factors that may influence breastfeeding among women were examined (Bentley et al., 2003). The intrapersonal factors, such as age and educational level, were consistent among the women who participated in this study. The ages and educational level of these women were consistent with the empirical literature regarding the demographics of women who choose to breastfeed; breastfeeding rates are highest amongst women 30 years of age or older, and college educated women (CDC, 2010). Interpersonal factors were identified by the participants, such as the influence of family members, and the institutional factors, such as the distribution of formula by hospitals prior to discharge. The community factors, such as a return to the workplace, as well as the policy level by means of legislation aimed at public breastfeeding, are all examples of the levels of factors

included within the framework (Stokols, 1996). While these components of the framework were identified by the women participants, these factors did not transcend into the media representations or media exposures that were experienced by the women. Although the framework was beneficial for the development of the interview guide and assisted the researcher with the structure of the interviews, other models or frameworks would be better suited to undergird similar studies conducted in the future. For example, The Theory of Planned Behavior (Ajzen & Fishbein, 1980) may be utilized to examine the influences on this health promotion behavior. The theory explains the relationship between behavior, beliefs, attitudes and intentions. The Theory of Planned Behavior includes subjective norms, or the approval/disapproval of significant others related to the action. It further incorporates culture and environment into the constructs to help explain the likelihood that a person will behave in a certain manner (USDHHS, 2005). Media related to infant feeding could be explained as a social influence that contributes to subjective norms and normative beliefs included in the framework.

Media and Other Influences on Decisions

A priori, it was expected that media would have an important role in infant feeding choice. Media has been influential with other health behaviors, such as decision making, self-treatment, and the adoption of unhealthy behaviors. Mass media has been reported as one of the primary sources of information and had a direct influence on women's self-treatment of vaginal infections (Theroux, 2002). Exposure to sexual content in the media has also been associated with the initiation of early adolescent sexual activity (Brown et al., 2006). An increase in sun protection behaviors for children

in response to mass media campaigns was noted in the literature. The findings suggested that mass media interventions are effective in influencing health behaviors related in particular to sun protection (Smith et al., 2002). The portrayal of tobacco use among movie stars admired by adolescents contributed to tobacco use among this age group (Dalton et al., 2003; Tickle et al., 2001). Although the literature has reported the importance of media and its influence on health behaviors, this was not the case with the women participants in this study with regard to their infant feeding decisions.

In this study, the important role of the partner in infant feeding decisions was consistent with previous studies that explored the role of the father. Women have reported that the father of the infant, or partner, had a significant impact on infant feeding decisions such as initiation, continuation, or cessation with transitions to bottle-feeding (Pisacane, Continisio, Aldinucci, D'Amora, & Continisio, 2005; Shaker et al., 2004; Shepherd, Power, & Carter, 2000; Susin & Giugliani, 2008). Family members were also included as an influential factor in infant feeding decisions; this factor was consistent with the findings in the literature (Brodribb, Fallon, Hegrey, & O'Brien, 2007; Kong & Lee, 2004). The data from this study reinforced the support of partners and family as influential to the infant feeding decisions. Previous studies reported the inclusion of fathers in the breastfeeding process is important for initiation and continuation of breastfeeding and lead to the father providing emotional and practical support for the breastfeeding woman (Susin & Giugliani, 2008).

Healthcare providers influence breastfeeding women's decisions regarding infant feeding practices through the use of formula supplementation. Samples of formula given

to patients from healthcare providers and hospitals suggest to patients that supplementation with infant formula is an acceptable alternative to breastfeeding. Distribution of formula in this manner also promotes the message that formula is the suggested choice over breast milk (DiGirolamo et al., 2003; Dusdieker, Dungy, & Losch, 2006; Rosenberg, Eastham, Kasehagen, & Sandovai, 2008). Rather than continuing to promote breastfeeding, or working with women to correct any breastfeeding problems, formula supplementation is suggested by providers. Supplementation of breastfeeding with infant formula feedings ultimately interferes with milk supply and leads to early cessation of breastfeeding. Hospitals and healthcare providers continue to distribute samples of infant formula despite recommendations from leading healthcare experts and breastfeeding advocates to eliminate these practices (Bartick, Stuebe, Shealy, Walker, & Grummer-Strawn, 2009; USDHHS, 2011). Consistent with the previous descriptions in the literature, more than half of the participants in this study reported receiving infant formula during prenatal visits and hospitalization. According to the CDC, nearly 25% of infants who are breastfed are supplemented with formula before two days of life, and 37% are given formula supplementation by three months (CDC, 2010).

The Baby Friendly Hospital Initiative is vital to the support of breastfeeding initiation and continued success (Philipp & Radford, 2006). The initiative suggests 10 strategies that hospitals adopt to promote breastfeeding. Baby Friendly Hospitals do not provide formula distribution by means of free samples. This practice, along with others, such as having a supportive and knowledgeable staff available to women during hospitalization, promotes the successful initiation and continuation of breastfeeding by

women when compared to women who delivered at a hospital that did not adopt this initiative (DiGirolamo, Grummer-Strawn, & Fein, 2008; Merewood, Mehta, Chamberlain, Philipp, & Bauchner, 2005; Philipp et al., 2001). The women in this study did not seek care from either of the two Baby Friendly institutions in the state of Massachusetts, (Boston Medical Center and Cambridge Health Alliance), and therefore an evaluation of these practices on breastfeeding support cannot be determined.

The current literature suggests that healthcare providers should devote time for infant feeding education during routine prenatal visits (American College of Obstetricians and Gynecologists, 2007). Despite the recommendations of prominent health organizations, it was reported that physicians inquire regarding the choice of infant feeding method at the first prenatal visit but that sufficient counseling, support, or education does not occur by obstetric and family practice physicians (Dillaway & Douma, 2004; Dusdieker et al., 2006). In addition, the timing of the healthcare provider's discussion with women regarding breastfeeding as an option should occur prior to achieving pregnancy. The first gynecologic exam has been suggested as an opportune moment to begin education regarding the structure and function of breasts and breastfeeding. The benefits offered to both the women and their infants provided by breastfeeding, regardless of the childbearing plans should be included during subsequent gynecologic examinations rather than at an obstetric or at a busy pediatric visit (Nichols-Johnson, 2004). The literature notes that the decision to breastfeed or bottle-feed an infant is often made before achieving pregnancy (Arora, McJunkin, Wehrer, & Kuhn,

2000; Earle, 2002). Consistent with these findings, many of the participants of this study reported that the choice of infant feeding method was made prior to achieving pregnancy.

The use of the Internet for health information regarding a variety of health issues has been reported in the literature (Diaz et al. 2010; Lagan, Sinclair, & Kernohan, 2010; Matros et al., 2010). Often blogs and comments posted by readers accompany the information. Social media, such as Facebook, have a dramatic impact on American culture in America and other countries worldwide. Hundreds of millions of users worldwide visit this site, which enables the user to network with friends and social groups; of all Americans online, 46 % use social networking sites (Lehart, 2009). Recently, social groups have been created on Facebook for the purpose of sharing donated breast milk by means of a milk bank. These milk banks serve as a conduit for breastfeeding women to donate pumped breast milk for those in need by means of connections formed on Facebook (Block, 2010; Gordon, 2010). The participants in this study all reported frequent use of the Internet, and many described searching online for information regarding parenting and infant care as well as reading blogs and message boards on Internet sites related to the content. In addition, the study participant's use of social media, such as Facebook was described.

Although the participants noted that the media did not influence their decision, many noted comedic and satirical portrayals of infant feeding in the media. According to Henderson et al. (2000), breastfeeding representations in the media are often satirical or comedic, while its counterpart bottle-feeding was portrayed as normal and without difficulty. The researchers found that breastfeeding was portrayed as problematic,

embarrassing, and funny. Although breastfeeding offers the most health benefits for infants, this method of infant feeding was not portrayed as positive. Breastfeeding representations are fewer, and often they are negative in comparison to bottle-feeding representations (Kitzinger & Kitzinger, 2001).The majority of references to breastfeeding were verbal while those of bottle-feeding were visual, indicating that the public does not desire to witness the act of breastfeeding. A lack of acceptance of breastfeeding in media portrayals contributes to a lack of acceptance by the general public (Henderson et al., 2000). The comedic and satirical portrayals may hinder societal support of breastfeeding and counter the positive messages of the health benefits. This finding is disappointing to the efforts put forth by healthcare providers who support this important health-promoting behavior by women.

Visual representations of bottle-feeding in formula advertisements were described by the women in this study. This form of media exposure was consistent with the empirical data regarding the advertisement of infant formula, and the perception that formula feeding is the norm (Bentley et al., 2003). A link was made between the increased frequency of formula and bottle advertisements and a decrease in breastfeeding rates (Foss & Southwell, 2006). Advertising and marketing of formula remains prevalent in the United States. The Government Accountability Office (GAO) reported that $43 million was spent on formula advertisements in 2004 and more than ten thousand advertisements for formula were portrayed in print and television advertisements (USGAO, 2006). The health benefits of breastfeeding for mothers and infants were described by many of the women participants. The immunity and protective factors of

breast milk were included in the participant descriptions. Fortunately, breastfeeding was the most common choice for infant feeding among the study sample. Although the message regarding the benefits of breastfeeding was received through advertising and other sources, some women still chose to bottle-feed.

Additional support offered by the workforce is important for breastfeeding women. The adoption of a Baby Friendly workplace for women who find it necessary to return to the workplace during the infant's first year of life can contribute to more successful breastfeeding outcomes (Mills, 2009; Wyatt, 2002). A majority of women initiate breastfeeding in the United States; however, the rates drop dramatically by the first three months (CDC, 2011). According to federal policy, women are mandated to receive a 12-week, or 3-month, leave of absence, according to the Family Leave Act (US Department of Labor, 2011). It is after this mandated period that breastfeeding rates drop dramatically, in part due to a return to the workforce (Click, 2006; Wyatt, 2002). More support in the workplace is necessary for women to transition back to work and to continue to provide this important health benefit for their infants.

Breastfeeding in public places is not always a positive experience for women; embarrassment or stigma has been reported as a barrier for women to continue breastfeeding (Li et al., 2002; Ogbuanu, Glover, Probst, Liu, & Hussey,2011; Sheeshka et al., 2001). Embarrassment has led some women to avoid breastfeeding in public or to provide supplements via a bottle (Forster & McLachlan, 2010). Controversy related to public opinion of breastfeeding has been reported in the news media further adding to the stigma (Everett, 2010; Gootman, 2011; Weiss, 2011).

Two key recommendations were explored with the participants of this study; the women suggested the normalization of breastfeeding and future public service announcements (PSA). One suggested strategy for the normalization of breastfeeding and its ultimate acceptance by the public was the provision of additional representations of normal and uneventful breastfeeding portrayed in a wide variety of media. The Surgeon General's Call to Action (USDHHS, 2011), is a newly revised framework for national action to support breastfeeding. The report outlines strategies and calls for clinicians, employers, communities, researchers, and government leaders to work together to achieve the goals outlined in the document. One of the goals included in the document is the establishment of a social marketing campaign to promote breastfeeding in the general public (USDHHS, 2011). Thus the important benefits of breastfeeding shared by mothers in this study, it is hoped, will be presented in a national campaign.

Table 5

Implications for Practice, Policy, and Research

Practice	**Research**	**Policy**
1. Workplace education 2. Inclusion of fathers/partners	1. Cultural and geographical diversity 2. Bottle feeders 3. Blogs, message boards, and social media	1. Baby Friendly Hospital Initiatives 2. Normalization/PSA

Implications for Practice

Table 5 summarizes the key study implications for practice, research and policy. The literature suggests that the current education of healthcare providers may not be satisfactory for meeting the needs of breastfeeding women. Periodic continuing education with updated information regarding this health behavior is warranted (Creedy, Cantrill, & Cooke, 2008; Dillaway & Douma, 2004, Geraghty, Riddle, & Shaikh, 2008). Limited knowledge and the deficiency in breastfeeding education and skill could lead to early supplementation of infant formula, and ultimately the early cessation of breastfeeding (Creedy et al., 2008; Hillenbrand & Larsen, 2002). Therefore, a need to offer additional educational programs for healthcare providers on a regular basis is indicated.

Fathers and partners were influential in the decision making and continued promotion of breastfeeding for the women participants in this study. Inclusion of these support persons during all routine prenatal and postnatal visits is an important intervention to be considered by healthcare providers. Flexibility in scheduling and welcoming by means of a personalized letter may encourage the partner to accompany the pregnant woman at prenatal and postnatal visits, and in particular those that include discussion of infant feeding. Such interventions will ensure that these support people feel included and knowledgeable regarding the decision and the continued process of infant feeding.

Implications for Research

The vast number of breastfeeding resources in the progressive state of Massachusetts, such as breastfeeding counselors, lactation consultants, postpartum

doulas, and peer counselors, provide services readily available to support a breastfeeding mother. For example, organizations such as the MBC, whose mission it is to coordinate and disseminate breastfeeding information to women across the state free of charge, provided services to many of the participants in this study. Other states or geographic locations across the country may not have such services readily available, and thus the perceptions of support by individuals in those regions may provide more diverse findings. Future research in other geographic areas with fewer resources and in rural areas where services are not as readily available may result in very different findings.

Both the present study findings and existing literature help to explain why some women choose to breastfeed rather than formula feed their infants; yet further investigation is warranted to explore the perceptions and beliefs of the women who choose to formula feed. The small sample of bottle-feeding women included in this study does offer limited information, but additional interviews with women who have chosen bottle-feeding are indicated. A detailed investigation of the women who transitioned from breastfeeding to bottle-feeding is also warranted. The American Academy of Pediatrics recommends that a woman breastfeed exclusively for the first year of the infant's life (AAP, 2005). Although more than 70% of American women do initiate breastfeeding, supplementation with infant formula has occurred in 25% by the second day of life (CDC, 2011). Additional research should be conducted to explore the reasons for early cessation and strategies that may encourage breastfeeding.

A culturally diverse sample of women is indicated for any future research conducted related to this topic. The sample of women who agreed to participate included

nineteen women who identified themselves as white, and one woman who identified herself as Hispanic. Infant feeding choices and perspectives related to infant feeding may differ with a more diverse sample of participants.

The participants in this study described the utilization of the Internet related to parenting and infant care. Social media utilization was also reported, and this interactive medium continues to evolve dramatically over time. The numbers of users of this medium also continue to grow daily. Milk bank networking on Facebook has been reported recently in the media. The potential impact on health behaviors by social media networks, such as Facebook, particularly as it relates to infant feeding, should be explored in the future.

Implications for Policy

Nurses must work at the state and national level to facilitate the inclusion of media regarding messages to promote breastfeeding. The message "breast is best" was expressed many times by the women during their interviews. This was expressed among both the breast feeders and the bottle feeders, and yet infant formula is relied upon by many as an alternative that provides equal nutritional benefit, or as a convenient supplement to breastfeeding. Further messages should be visually incorporated into PSAs to ensure that breastfeeding becomes the norm.

The formula samples provided to women at hospitals may contribute to decision-making behaviors by patients. Breastfeeding women may perceive these as an unintended message that formula feeding is of equal benefit to their infants since the samples are provided by healthcare providers at healthcare institutions. Nurses should become more

active in supporting the adoption of the Baby Friendly Health Initiative (BFHI), the initiative proposed globally by UNICEF and the WHO in 1991 (UNICEF/WHO, 1990). The Baby Friendly status has resulted in an increased support for breastfeeding and better breastfeeding outcomes (Philipp & Radford, 2006). Actions taken by nurses to eliminate the common practice of providing discharge bags containing formula samples can contribute to more successful breastfeeding outcomes and requires further intervention by nursing.

Study Limitations

The nearly homogeneous sample recruited for participation is acknowledged as one of the limitations of this study. The age, race, and marital status of the women lacked diversity. Future studies should include a culturally diverse sample; young mothers, including adolescents and single mothers. This would provide more precise information for developing breastfeeding education interventions.

The limited geographic area of Massachusetts is noted as a limitation, although the participants were from Worcester County, Norfolk County, and the Greater Boston area. It is possible that women in rural communities may make their infant feeding decisions differently. A variation in age of the women who participated is warranted. The majority of the women who participated in the study were in their thirties. A younger population may have very different perspectives on breastfeeding. A study of young women that includes women under the age of 18 may provide different results. The women in our study were all highly educated, all had college degrees, and half of the participants had completed graduate studies. A majority of the women were married; the

literature suggests a supportive spouse or partner makes a difference in breastfeeding practices.

A future study should include more participants who identify themselves as undecided and more women who choose to bottle-feed their infants. The sample size of 20 participants and 12 Internet sites is also identified as a limitation to the findings of this study. A larger sample may have produced more diverse and divergent viewpoints on infant feeding decisions.

Conclusion

Analysis of 12 Internet sites, ten original and two additional sites suggested by the participants related to infant feeding, and 20 face-to-face participant interviews were conducted. The main theme *Media Matters Not* suggested that mass media did not influence infant feeding decisions for this group of mothers. What did have an important impact on infant feeding decisions was the information and emotional support provided by partners, family, and HCPs (subtheme of *Influences on Decisions).*

Participants reported personal experience with various types of media in relation to infant feeding. Their examples included television programs, movies, printed media such as magazines or brochures, and the Internet. The participants reported further that the examples of infant feeding identified in the media did not have a role in their individual infant feeding choice. Examples of portrayals of infant feeding and the messages included in these portrayals included messages both positive and negative. The participants offered suggestions of media messages they would like see in the future such as public service announcements of women breastfeeding their infants.

The findings from the participant interviews were compared to the Internet summaries. The comparison findings demonstrated that the emerging themes from the participant interviews reflected the information represented on the Internet sites. Tables of the Internet sites viewed by the participants, infant feeding choices, and demographics of the participants are included. A summary of media consumption by the participants was compiled and is also included.

In addition, the participants discussed media issues that had potential for influencing infant feeding decisions (*Media Messages—Good and Bad),* emphasized the need for public opinion to be altered so that breastfeeding in public would be viewed as more acceptable, *(Community/Public Opinions),* and described suggestions for enhancing media messages about breastfeeding (*Recommendations for Future Media Messages)*.

APPENDIX A

RECRUITMENT PAMPHLET

Research Overview

Mass Media is everywhere: television, magazines, advertisements, movies, web sites, newspapers, brochures and more. It influences people on a lot of important decisions.

My name is Paula; I am a nurse who is completing a research project to meet the requirements for graduation from a doctoral program at the University of Massachusetts, Worcester, MA.

I am interested in talking to women about why they chose to breastfeed or bottle feed, what they are planning, and if the mass media helped make that decision.

I am looking for mothers who are willing to share approximately one hour of time to tell me their experiences of bottle feeding or breastfeeding their infants. If you have not yet decided which method, I would like to ask you about ideas related to deciding. If you're interested in sharing your thoughts and ideas, I would love to speak with you!

The Role of Mass Media in Women's Infant Feeding Decisions

Sample Questions

What helped you to decide to bottle feed or breastfeed your baby?

What are your ideas about deciding which method to choose?

Describe any of your mass media exposure that relates to breastfeeding or bottle feeding.

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PARTICIPATION

Participation is completely voluntary:

- *Your care is not impacted*
- *Names not included in the research*
- *No one but the researcher will be present during the interview*
- *You can change your mind at any time*

I agree to be contacted by Paula. She can feel free to contact me to arrange a date and time with me:

NAME _____

PHONE NUMBER _____

*BEST TIME TO CALL*_____

ADDRESS *(if you wish to be contacted by mail or email)*

_____

APPROVED

MAY 26 2010

Human Subjects Committee

- *Opportunity to Share your Experiences with a Professional Nurse*
- *Convenient meeting place*
- *One hour of your time*
- *Bring your Baby with you*

Paula Bylaska-Davies
University of Massachusetts
Worcester, MA
Home Phone:
(508) 829-7433
paulabd619@aol.com

UMASS MEDICAL SCHOOL

H- 13728

APPROVED

MAY 26 2010

Human Subjects Committee

The Role of Mass Media in Women's Infant Feeding Decisions

APPENDIX B

PERMISSION LETTER

October 10, 2009

Danielle Pichette
Shayne Deal
Institutional Review Board Managers
Institutional Review Board
University of Massachusetts Worcester
55 Lake Avenue
Worcester, MA 01655

RE: Support for Research Recruitment

Dear Ms Danielle and Shayne Deal:

I understand that Paula Bylaska-Davies, RN, MS, is enrolled in a PhD program at the University of Massachusetts, Worcester, MA. For the completion of the degree, the university requires that Paula Bylaska-Davies complete a research study.

She has contacted me regarding her research and I agree to allow Paula Bylaska-Davies access to the listserv compiled by the Massachusetts Breastfeeding Coalition for purposes of contacting coalition members to solicit their cooperation in accessing a population of breastfeeding women for her study.

Sincerely,

Melissa Bartick, MD
Chair
Massachusetts Breastfeeding Coalition

APPENDIX C

INTERVIEW GUIDE

1. How did you come to decide to breastfeed/bottle feed?

2. How long have you been using this method?

    a. If you started to breastfeed and changed to bottle feeding, what made you decide?
    b. Tell me a little about what made you decide either one

3. If you have not yet decided, can you tell me about any factors that are influencing your decision. Is mass media playing a role?

4. What do you remember about ads, images, or portrayals in the mass media that have shown infants and babies being fed?

    a. What type of mass media and what caught your attention most?
    b. Did these positively or negatively help you to decide what method of infant feeding? If so, in what way?

5. Describe any other experiences with mass media that either helped or made your decide to breastfeed or bottle feed.
    a. Visual message
    b. Power
    c. Influence

6. What contributed to your feeding decisions that could be put into mass media images/messages?
    a. Your personal beliefs/opinions
    b. Family members
    c. Other sources of support

7. Is there anything that I should know about experiences related to this topic, that may help nurses or other healthcare providers who are working with breastfeeding mothers?

8. Do you have any questions for me?

APPENDIX D

DEMOGRAPHIC QUESTIONNAIRE

Patient Code _____

Age _____ Marital Status _____

Occupation _____

Race/Ethnicity _____

Level of Education _____

Number of Children _____

Breast/Bottle Feeding _____

How long _____

Number of Children Breastfed in the Past
_____

How long did you breastfeed each child?
_____

Did you receive any samples of formula/coupons for formula/brochures about formula?
_____

Who gave them to you or were they mailed?
_____

Mass Media Usage:

Television

Number of Televisions
in the Home_____

Hours of Television
Viewed Each Day _____

Days per Week
Television Viewed _____

Newspaper
Number of Newspaper Subscriptions
_____

Hrs per Wk Spent Reading Newspaper
_____

Magazines
Number of Magazine Subscriptions
_____

Hours per Week Reading Magazines
_____

Internet
Number of Computers in the Home
_____

Other sources of Internet access
_____

Hours/ Days per week on Internet
_____

Types of Sites Searched/Read
_____

Movies
How Often Do You Go to a Theater?
_____

Rent a Movie/View Movies
_____

Brochures or Pamphlets
Received in the Mail
_____

Given by Healthcare Provider
_____

Billboards/Posters
_____

Other _____

APPENDIX E

CODING FORM-CONTENT ANALYSIS OF VISUAL INFORMATION

Name of Website_____
Address of Website_____

Main Page- Related to Infant Feeding

Photograph	Yes	No	Comment
Graphics/ Illustration	Yes	No	Comment
Number of Subjects	Mother	Support System	Comment
Number of Subjects	Infant	Adult	Comment
Feeding Type	Bottle	Breast	Comment
Positive Tone	Yes	No	Comment
Pallet	Color	Black & White	Comment
Multicultural	Yes	No	Comment
Advertisement	Yes	No	Comment

One Click-Infant Feeding

Photograph	Yes	No	Comment
Graphics/ Illustration	Yes	No	Comment
Number of Subjects	Mother	Support System	Comment
Number of Subjects	Infant	More	Comment
Items Associated with Feeding	Bottle	Formula	Comment
Positive Tone	Yes	No	Comment

Pallet	Color	Black & White	Comment
Advertisement	Yes	No	Comment

Breastfeeding-One Click

Photograph	Yes	No	Comment
Graphics/ Illustration	Yes	No	Comment
Number of Subjects	Mother	Support System	Comment
Number of Subjects	Infant		Comment
Feeding Type	Bottle	Breast	Comment
Positive Tone	Yes	No	Comment
Pallet	Color	Black & White	Comment
Advertisement	Yes	No	Comment
Multicultural	Yes	No	Comment
Advertisement	Yes	No	Comment

REFERENCES

Ahluwalia, I., Morrow, B., & Hsia, J. (2005). Why do women stop breastfeeding? Findings from the pregnancy risk assessment and monitoring system. *Pediatrics,116*, 1408–1412.

Ajzen, I. & Fishbein, M. (1980). *Understanding attitudes and predicting social behavior.* Englewood Cliffs, NJ: Prentice Hall.

American Academy of Pediatrics (2005). Policy statement: Breastfeeding and the use of human milk. *Pediatrics*, *115*, 496–506.

American College of Obstetricians and Gynecologists (2007, January/February). Breastfeeding: Maternal and infant aspects. *ACOG Clinical Review*, *12,* 1S–16S.

Andrist, L. (2003, March/April). Media images, body dissatisfaction, and disordered eating in adolescent women. *Maternal Child Nursing,* 119–123.

Arora, S., McJunkin, C., Wehrer, J., & Kuhn, P. (2000). Major factors influencing breastfeeding rates: Mother's perception of father's attitude and milk supply. *Pediatrics*, *106*, 67–71.

Bartick, M., Stuebe, A., Shealy, K., Walker, M., & Grummer-Strawn, L. (2009). Closing the quality gap: Promoting evidence-based breastfeeding care in the hospital. *Pediatrics, 124*, e793–802.

Bates, D., & Gawande, A. (2003). Improving safety with information technology. *New England Journal of Medicine, 348*, 2526–2534.

Bazar, E., & Hemingway, S. (2006, November 17). Nursing mom files complaint against airlines. *USA Today.* Retrieved from http://www.usatoday.com/travel/news/2006-11-16-breastfeeding_x.htm

Bentley, M., Caulfield, L., Gross, S., Bronner, Y., Jensen, J., Kessler, L., & Paige, D. (1999). Sources of influence on intention to breastfeed among African-American women in Baltimore: Effects on breastfeeding initiation and continuation. *Journal of Human Lactation, 14*, 15–22.

Bentley, M., Dee, D., & Jensen, J. (2003). Breastfeeding among low income African-American women: Power, beliefs and decision making. *The Journal of Nutrition*, Supplement, 305–309.

Block, J. (2010, November 22). Move over, milk banks: Facebook and milk sharing. *Time.* Retrieved from http://www.time.com/time/health/article/0,85992032363,00.html

Brodribb, W., Fallon, A., Hengrey, D., & O'Brien, M. (2007). Identifying predictors of the reasons women give for choosing to breastfeed. *Journal of Human Lactation*, *23*, 338–344.

Brofenbrenner, U. (1979). *The ecology of human development, experiments by nature and design.* Cambridge, MA: Harvard University Press.

Brown, J., L'Engle, K., Pardun, C., Guo, G., Kenneavy, K., & Jackson, C. (2006). Sexy media matter: Exposure to sexual content in music, movies, television, and magazines predicts black and white adolescents' sexual behavior. *Pediatrics, 117*, 1018–1027.

Brown, J., & Walsh-Childers, K. (2002). Effects of media on personal and public health. In J. Bryant & D. Zillmann (Eds.), *Media effects: Advances in theory and research* (pp. 453–488). Mahwah, NJ: Erlbaum.

Centers for Disease Control (2010). *Breastfeeding report card*. Retrieved from http://www. cdc.gov/breastfeeding /data/reportcard.htm

Chang, K., & Spatz, D. (2006). The family and breastfeeding laws: What nurses need to know. *Maternal Child Health*, *31*, 224–230.

Chapman, D., Damio, G., Young, S., & Perez-Escamilla, R. (2004). Effectiveness of breastfeeding peer counseling in a low-income, predominantly Latina population. *Archives of Pediatric and Adolescent Medicine, 15*, 897–902.

Click, E. (2006). Developing a work site lactation program. *American Journal of Maternal Child Nursing, 31*, 313–317.

ComScore.com (2009, April 6) *Press Release U.S. Search Engine Rankings*. Retrieved from /Press_Events/Press_Releases/010/3comScore_Releases

Creedy, D., Cantrill, R., & Cooke, M. (2008). Assessing midwives' breastfeeding knowledge: Properties of the newborn feeding ability questionnaire and breastfeeding initiation practices scale. *International Breastfeeding Journal*, 3–7.

Creswell, J. (1998*). Qualitative inquiry and research design: Choosing among five traditions.* Thousand Oaks, CA: Sage.

Crist. J., & Tanner, C. (2003). Interpretive analysis methods in hermeneutic interpretive phenomenology. *Nursing Research*, *52*, 202–205.

Dalton, M., Sargent, J., Beach, M., Titus-Ernstoff, L., Gibson, J., Ahrens, M., . . . Heatherton, T. (2003). Effect of viewing smoking in movies on adolescent smoking initiation: A cohort study. *Lancet, 362*, 281–285. doi: 10.1016/SO 140-6736(03) 139-70-0

Dennis, C., Hodnett, E., Gallop, R., & Chalmers, B. (2002). The effect of peer support on breast-feeding duration among primiparous women: A randomized controlled trial. *Canadian Medical Association Journal*, *166*, 21–28.

Denzin, N., & Lincoln, T. (2000). *Handbook of qualitative research* (2nd ed.). Thousand Oaks, CA: Sage.

Dettwyler, K. (2004). When to wean: Biological versus cultural perspectives. *Clinical Obstetrics and Gynecology, 47*, 712–723.

Diaz, J., Griffith. R., Ng, J., Reinert, S., Friedman, R., & Moulton, A. (2002). Patients' use of the internet for medical information. *Journal of General Internal Medicine*, *17*, 180–185.

DiGirolamo, A., Grummer-Strawn, L., & Fein, S. (2003). Do perceived attitudes of physicians and hospital staff affect breastfeeding decisions? *Birth, 30*, 94–100.

DiGirolamo, A., Grummer-Strawn, L., & Fein, S. (2008). Effects of maternity-care practices on breastfeeding. *Pediatrics, 2*, S43–9.

Dillaway, H., & Douma, M. (2004, June). Are pediatric offices "supportive" of breastfeeding? Discrepancies between mothers' and healthcare professionals' reports. *Clinical Pediatrics,* 417–430.

Dowling, M. (2006). Approaches to reflexivity in qualitative research. *Nurse Researcher*, *13*, 7–21.

Downe-Wamboldt, B. (1992). Content analysis: Method, applications, and issues. *Health Care for Women International, 13*, 313–321.

Duran, B., & Walters, K. (2004). HIV/AIDS prevention in "Indian Country": Current practice, indigenist etiology models and postcolonial approaches to change. *AIDS Education and Prevention*, *16,* 187–201.

Dusdieker, L., Dungy, C., & Losch, M. (2006). Prenatal office practices regarding infant feeding choices. *Clinical Pediatrics*.

Earle, S. (2002). Factors affecting the initiation of breastfeeding: Implications for breastfeeding promotion. *Health Promotion International*. 17, 205–214.

Ebel, B., Koepsell, T., Bennett, E., & Rivara, F. (2003). Use of child booster seats in motor vehicles following a community campaign. *Journal of American Medical Association*, *289*, 879–884.

Elo, S., & Kyngäs, H. (2008). The qualitative content analysis process. *Journal of Advanced Nursing, 62*, 107–115.

Evans, W. D. (2006). How social marketing works in health care. *British Medical Journal, 332*, 1207–1210.

Everett, C. (2010, August 4). Gisele Bundchen responds to controversy over her breastfeeding comments: 'I am not here to judge'. *New York Daily News*. Retrieved from http://www.nydailynews.com/gossip/2010/08/04/gisele_bundchen_responds_to_controversy_over_her_breastfeeding_comments_i_am_not.html

Fishman, J., & Casarett, D. (2006). Mass media and medicine: When the most trusted media mislead. *Mayo Clinic Proceedings*, *81*, 291–293.

Fleury, J., & Lee, S. (2006). The social ecological model and physical activity in African American women. *American Journal of Community Psychology*, *37*, 129–140.

Forster, D., & McLachlan, H. (2008). Women's views and experiences of breastfeeding: Positive, negative or just good for the baby. *Midwifery, 26*, 116–235.

Foss, K., & Southwell, B. (2006). Infant feeding and the media: The relationship betweenParents' Magazine content and breastfeeding, 1972–2000. *International Breastfeeding Journal, 1*, 10.

Fotheringham, M., & Owen, N. (2000). Interactive health communication in preventive medicine. *American Journal of Preventive Medicine*, *19*, 111–112.

Freed, G., & Fraley, J. (1993). Effect of expectant mothers feeding plan on prediction of father's attitude regarding breastfeeding. *American Journal of Perinatology, 10*, 300–303.

Geraghty, S., Riddle, S., & Shaikh, U. (2008). The breastfeeding mother and the pediatrician. *Journal of Human Lactation*, *24*, 335–339.

Glaser, B., & Strauss, A. (1967). *The discovery of grounded theory: Strategies for qualitative research,* Chicago, IL: Aldine.

Gootman, E. (2011, March 1). Breast-feeding boutique in feud with condo board. *The New York Times*. Retrieved from http://www.nytimes.com

Gordon, A. (2010, November 29). Breast-milk banks latch on to social media. *The Star.com*. Retrieved from http://www.the star.com

Grassley, J., & Eschiti, V. (2008). Grandmother breastfeeding support: What do mothers need and want? *Birth*, *35*, 329–335.

Henderson, L., Kitzinger, J., & Green, J. (2000). Representing infant feeding: Content analysis of British media portrayals of bottle feeding and breast feeding. *British Medical Journal, 321*, 1196–1198.

Hersh, W. (2004). Health care information technology: Progress and barriers. *Journal of the American Medical Association, 292*, 2273–2274.

Hill, P. (2000). Update on breastfeeding healthy people 2010 objectives. *The American Journal of Maternal Child Nursing, 25*, 248–251.

Hillenbrand, K. & Larsen, P. (2002). Effect of an educational intervention about breastfeeding on the knowledge, confidence, and behaviors of pediatric resident physicians. *Pediatrics,* 110, 59–65.

Howard, C., Howard, F., Lawrence, R., Andresen, E., DeBlieck, E., & Weitzman, M. (2000). Office prenatal formula advertisements and its effect on breast-feeding patterns. *Obstetrics and Gynecology*, *95*, 296–303.

Hsieh, H., & Shannon, S. (2005). Three approaches to content analysis. *Qualitative Health Research, 15*, 1277–1288.

Hughes, R. (1999). Use of social marketing strategy to promote community acceptance of breastfeeding in public. *Australian Journal of Nutrition and Dietetics*, *56*, 108–110.

Information Age (2008, February 25). In *Wikipedia, the free encyclopedia*. Retrieved from http://en.wikipedia.org/wiki/Digital_Age#Digital_Age

Johnston, M., & Esposito, N. (2007). Barriers and facilitators for breastfeeding among working women in the United States. *Journal of Obstetric, Gynecological, and Neonatal Nursing, 36*, 9–20.

Kaufman, M., & Lee, C. (2007, August 30). HHS tone down breast-feeding ads, formula industry urged softer campaign. *The Washington Post*. Retrieved from http://www.washingtonpost.com/wp-dyn/content/article/2007/08/30/AR2007083002198.html?hpid=topnews

Kearney, M. (2001). Levels and applications of qualitative research evidence. *Research in Nursing and Health, 24*, 145–153.

Kitzinger, S., & Kitzinger, J. (2001). Sheila Kitzinger and Jenny Kitzinger's letter from Europe: Childbirth and breastfeeding in the British media. *Birth, 28*, 60–61. doi:10.1046/j.1523-536x2001.00060x

Koch, T. (2006). Establishing rigour in qualitative research: The decision trail. *Journal of Advanced Nursing, 53*, 91–103.

Kong, S., & Lee, D. (2004). Factors influencing decision to breastfeed. *Journal of Advanced Nursing*, *46*, 369–379.

Kuper, A., Lingard, L., & Levinson, W. (2008). Critically appraising qualitative research. *British Medical Journa,. 337*, 687–689.

Lagan, B., Sinclair, M., & Kernohan, G. (2010). Internet use in pregnancy informs women's decision making: A web-based survey. *Birth, 2*, 106–115.

Lawrence, R. (2002). Peer support: Making a difference in breast-feeding duration. *Journal of Canadian Medical Association, 166*, 42–43.

La Leche League International (*n.d.*) La Leche League Mission. Retrieved from http://www.llli.org/mission.html?m=1,0,2

Lehart, A. (2009). The democratization of online social networks: A look at the change in demographics of social network users over time. Pew Internet & American Life Project. Retrieved from http://www.pewinternet.org/Presentations/2009/41--The-Democratization-of-Online-Social-Networks.aspx

Li, R., Fridinger, F., & Grummer-Strawn, L. (2002). Public perceptions on breastfeeding constraints. *Journal of Human Lactation, 18*, 227–235.

Lincoln, Y., & Guba, E. (1985). *Naturalistic inquiry*. Beverly Hills, CA: Sage.

Livingstone, S. (2005) Critical debates in internet studies: Reflections on an emerging field. In J. Curran & M. Gurevitch (Eds.), *Mass media and society* (4th ed., pp. 9–28). London: Hodder Arnold.

Massachusetts Breastfeeding Coalition, About the Massachusetts Breastfeeding Coalition (*n.d.*). Retrieved from http://www.massbfc.org/about.html

Matros, E., Yueh, J., Bar-Meir, E., Slavin, S., Tobias, A., & Lee, B. (2010). Sociodemographics, referral patterns, and internet use for decision-making in microsurgical breast reconstruction. *Plastic Reconstruction Surgery*, *125*, 1087–1094.

Mayring, P. (2000, June). Qualitative content analysis. Forum: Qualitative social research. Retrieved from http://www.qualitative-research.net/index.php/fqs/

McDermott, R. J., & Albrecht, T. L. (2002). Mass media. In L. Breslow (Ed.), *Encyclopedia of public health*. Retrieved from http://www.enotes.com/public-health-encyclopedia/mass-media

McDowell, M. A., Wang, C.-Y., Kennedy-Stephenson, J. (2008). *Breastfeeding in the United States: Findings from the National Health and Nutrition Examination Surveys 1999–2006.* NCHS data briefs, No. 5. Hyattsville, MD: National Center for Health Statistics. 2008. Retrieved from http://www.cdc.gov/nchs/data/databriefs/db05.htm

McLeroy, K., Bibeau, D., Steckler, A., & Glanz, K. (1988). An ecological perspective on health promotion programs. *Health Education Quarterly*, *15*, 351–377.

Merewood, A., Mehta, S. D., Chamberlain, L. B., Philipp, B. L., & Bauchner, H. (2005). Breastfeeding rates in US baby-friendly hospitals: Results of a national survey. *Pediatrics, 116*, 28–34.

Meyers, D. (2001). Promoting and supporting breastfeeding. *American Family Physician*, *64*, 931–933.

Mills, S. (2009). Workplace lactation programs: A critical element for breastfeeding mother's success. *American Association of Occupational Health Nurses' Journal*, *57*, 227–31.

Milne, J., & Oberle, K. (2005). Enhancing rigor in qualitative description: A case study. *Journal of Wound, Ostomy and Continence Nursing, 32*, 413–420.

Morgan, S., Harrison, T., Long, S., Affifi, W., Stephenson, M., & Reichert, T. (2005). Family discussions about organ donations: How the media influences opinions about donation decisions. *Clinical Transplant*, *19*, 674–682.

Morse, J., & Richards, L. (2002). *Read me first for a user's guide to qualitative methods.* Thousand Oaks, CA: Sage.

Mundorf, N., & Laird, K. R. (2002). Social and psychological effects of information technologies and other interactive media. In J. Bryant & D. Zillmann (Eds.), *Media effects, advanced in theory and research*, (2nd ed., pp. 583–602). London: Erlbaum Associates.

Neilsen, J. (2004). Return to work: Practical management of breastfeeding. *Clinical Obstetrics and Gynecology, 47*, 724–733.

Nelson, A. (2009). Adolescent attitudes, beliefs, and concerns regarding breastfeeding. *The American Journal of Maternal Child Nursing*, *34*, 249–255.

Nichols-Johnson, V. (2004). Promoting breastfeeding as an obstetrician/gynecologist. *Clinical Obstetrics and Gynecology*, *47*, 624–631.

Ogbuanu, C., Glover, S., Probst, J., Liu, J., & Hussey, J. (2011). Balancing work and family: Effect of employment characteristics on breastfeeding. *Journal of Human Lactation,* March. doi: 10.1177/0890334410394860

OlaOlorun, F., & Lawoyin, T. (2006). Health workers' support for breastfeeding in Ibadan, Nigeria. *Journal of Human Lactation*, *22*, 188–194.

Page-Goertz, S., McComman, S., & Westdahl, C. (2001). Breastfeeding promotion: Top tips for motivating women to breastfeed. *AWHONN, Lifelines*, *5*, 41–43.

Patrick, K. (2000). Information technology and the future of preventative medicine: Potential, pitfalls, and policy. *American Journal of Preventive Medicine*, *19*, 132–135.

Petch, T. (2004). Content analysis of selected health information websites-final report. Retrieved from http://ir.lib.sfu.ca.handle/1892/4038

Pew Internet and American Life Project (2009). Retrieved from http://www.pewinternet.org/Static-Pages/Trend-Data.aspx

Philipp, B., Merewood, A., Miller, L. , Chawla, N., Murphy-Smith, M., Gomes, J., . . . Cook, J. (2001). Baby-Friendly hospital initiative improves breastfeeding rates in a US hospital setting. *Pediatrics, 108*, 677–681.

Philipp, B., & Radford, A. (2006). Baby-Friendly: Snappy slogan or standard of care? *Archives of disease in childhood: Fetal and neonatal edition*, *91*; F145–F149. doi: 10.1136/adc.2005.074443

Pisacane, A., Continisio, G., Aldinucci, M., D'Amora, S., & Continisio, P. (2005). A controlled trial of the father's role in breastfeeding promotion. *Pediatrics, 116*, e494–498.

Primack, B. (2004). Counseling patients on mass media and health. *American Family Physician, 69*(11), 2548–2554.

Ribisl, K., Lee, R., Haladjian, H. & Henriksen, H. (2003). A content analysis of web sites promoting smoking culture and lifestyle. *Health Education and Behavior, 30*, 64–78.

Rice, R., & Atkin, C. (2002). Communication campaigns: Theory, design, implementation, and evaluation. In J. Bryant & D. Zillmann (Eds.), *Media effects, advanced in theory and research* (2nd ed., pp. 155–198). London: Erlbaum.

Rosenberg, K., Eastham, C., Kasehagen, L., & Sandovai, A. (2008). Marketing infant formula through hospitals: The impact of commercial hospital discharge packs on breastfeeding. *American journal of public health, 98*, 290–295.

Ryan-Nichols, K., & Will, C. (2009). Rigour in qualitative research: Mechanisms for control. *Nurse Researcher, 16*, 70–85.

Sandelowski, M. (1995). Qualitative analysis: What is it and how to begin. *Research in Nursing and Health,* 18, 371–375

Sandelowski, M. (2000). Focus on research methods: Whatever happened to qualitative description? *Research in Nursing and Health*, *23*, 334–340.

Sandelowski, M. (2010). What's in a name? Qualitative description revisited. *Research in Nursing and Health, 33*, 77–84.

Schilling, J. (2006). On the pragmatics of qualitative assessment: Designing the process for content analysis. *European Journal of Psychological Assessment*, *22*, 28–37.

Shaker, I., Scott, J., & Reid, M. (2004). Infant feeding attitudes of expectant parents: Breastfeeding and formula feeding. *Journal of Advanced Nursing*, *45*, 260–268.

Shannon, T., O'Donnell, M., Skinner, K. (2007). Breastfeeding in the 21st century: Overcoming barriers to help women and infants. *Nursing for Women's Health, 11*, 570–575.

Sheeshka, J., Potter, B., Norrie, E., Valaitis, R., Adams, G., & Kuczynski, L. (2001). Women's experiences breastfeeding in public places. *Journal of Human Lactation, 17*, 31–38.

Shepherd, C., Power, K., & Carter, H. (2000). Examining the correspondence of breastfeeding and bottle-feeding couples' infant feeding attitudes. *Journal of Advanced Nursing*, *31*, 651–660.

Slack, W. (2004). A 67-year-old man who e-mails his physician. *The Journal of the American Medical Association, 292*, 2255–2261.

Smith, B., Ferguson, C., McKenzie, J., Bauman, A., & Vita, P. (2002). Impacts from repeated mass media campaigns to promote sun protection in Australia. *Health Promotion International, 17*, 51–60.

Speziale, H., & Carpenter, D. (2007). *Qualitative research in nursing: Advancing the humanistic imperative* (4th ed.). Philadelphia, PA: Lippincott Williams & Wilkins.

Stokols, D. (1996). Translating social ecology theory into guidelines for community health promotion. *American Journal of Health Promotion, 10*, 282–298.

Sullivan-Bolyai, S., Bova, C., Deatrick, J., Knafl, K., Grey, M., Leung, K., & Trudeau, A. (2007). Barriers and strategies for recruiting study participants in clinical settings. *Western Journal of Nursing Research,* 29, 486–500.

Sullivan-Bolyai, S., Bova, C., & Harper, D. (2005). Developing and refining interventions in persons with health disparities: The use of qualitative description. *Nursing Outlook, 53*, 127–133.

Susin, L., & Giugliani, E. (2008). Inclusion of fathers in an intervention to promote breastfeeding: Impact on breastfeeding rates. *Journal of Human Lactation, 24*, 386–392.

Sword, W., Busser, D., Ganann, R., McMillan, T., & Swinton, M. (2008). Women's care-seeking experience after referral for postpartum depression. *Qualitative Health Research*, *18*, 1161–1173.

Theroux, R. (2002). Bypassing the middleman: A grounded theory of women's self-care for vaginal symptoms. *Health Care for Women International*, *23*, 417–431.

Theroux, R., & Taylor, K. (2003). Women's decision making about the use of hormonal and nonhormonal remedies for the menopausal tradition. *Journal of Obstetric, Gynecological, and Neonatal Nursing, 32*, 273.

Tickle, J., Sargent, J., Dalton, M., Beach, M., & Heatherton, T. (2001). Favourite movie stars, their tobacco use in contemporary movies, and its association with adolescent smoking. *Tobacco Control*, *10*, 16–26.

Trocola, M. (2005). Breastfeeding in public. *New Beginnings*, *22*, 238–243.

Ukwuani, F., Suchindran, C., & Cornwell, G. (2001). Influences of mother's work, childhood place of residence, and exposure to media on breastfeeding patterns: Experience in Nigeria and Uganda. *Social Biology*, Spring.

United Nations Children's Fund/World Health Organization (1990). *Innocenti declaration on the protection, promotion, and support of breastfeeding*. Florence, Italy: Author.

U,S. Census Bureau (2009). Retrieved from www.census.gov/

U.S. Department of Health and Human Services (2000). *HHS Blueprint for action on breastfeeding.* Washington, DC: U.S. Department of Health and Human Services, Office on Women's Health.

U.S. Department of Health and Human Services (2005). *Theory at a glance: A guide for health promotion practice* (2nd ed.). Washington, DC: National Institute of Health.

U.S. Department of Health and Human Services (2010). *Healthy people 2020 objectives for the nation.* Washington, DC: U.S. Department of Health and Human Services.

U.S. Department of Health and Human Services (2011). *The surgeon general's call to action to support breastfeeding*. Washington, DC: U.S. Office of the Surgeon General.

U.S. Department of Labor (2011). *Wage and hour distribution—Family and medical leave act,* Washington, DC: USA.

U.S. Government Accountability Office (2006). *Breastfeeding: Some strategies used to market infant formula may discourage breastfeeding; State contracts should better protect against misuse of WIC name*. Report to Congressional Addressees, Washington, DC.

Vaughan, K., & Fouts, G. (2003). Changes in television and magazine exposure and eating disorder symptomatology. *Sex Roles*, *49*, 313–320.

Vidanapathirana, J., Abramson, M., Forbes, A., & Fairley, C. (2005). Mass media interventions for promoting HIV testing. Cochrane Database of Systemic Reviews 2005, Issue 3, Art No. CD004775, DOI: 10.1002/14651858. CD004775.pub2

Wambach, K., Campbell, S., Gill, S., Dodgson, J., Abiona, T., & Heinig, M. (2005). Clinical lactation practice: 20 years of evidence. *Journal of Human Lactation*, *21*, 245–258.

Ward, L., Merriwether, A., & Caruthers, A. (2006). Breasts are for men: Media use, masculinity ideology, and men's beliefs about women's bodies. *Sex Roles*, *9-10*, 703–714.

Weiss, J. (2011, March 20). The baby and breast brouhaha. *The Boston Globe*, p. A10.

Whittemore, R., Melkus, G., & Grey, M. (2004). Applying the social ecological theory to type 2 diabetes prevention and management. *Journal of Community Health Nursing*, *2*, 87–99.

World Health Organization (1981). *International code of marketing of breast-milk substitutes*. Retrieved from http://www.who.int/nutrition/publications/code_english.pdf

Wyatt, S. (2002). Challenges of the working breastfeeding mother: Workplace solutions. *American Association of Occupational Health Nursing, 50*, 61–66.

Zhang, Y., & Wildemuth, B. (2009). Qualitative analysis of content. In B. Wildemuth (Ed.), *Applications of social research methods to questions in information and library services* (pp. 308–319). Westport, CT: Libraries Unlimited.