INITIATION AND MAINTENANCE OF BREASTFEEDING—ISSUES AMONG HIGH-RISK POPULATIONS OF MOTHERS OF AFRICAN AMERICAN DESCENT AND UNDERAGE MOTHERS: A CRITICAL LITERATURE REVIEW

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MASTER OF SCIENCE

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ABSTRACT

This paper is a critical literature review on issues and concerns of initiation and maintenance of breastfeeding amongst high-risk populations including mothers of African American descent and underage mothers. To guide the critical literature review, the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework was used. A PRISMA flow diagram outlining the process of the critical literature review is included. The review identified 28 articles which matched the inclusion criteria. Eight common themes emerged, specifically: healthcare or hospital services, knowledge/education, support, social norms and cultural beliefs, return to work or school, policy and legislation, programs and initiatives, and self-efficacy. A detailed discussion of the eight themes along with nursing implications and thoughts on future research is presented.

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LIST OF ABBREVIATIONS

AAP.....American Academy of Pediatrics

ACA or PPACA.....Patient Protection and Affordable Care Act

ACOG .....American College of Obstetricians and Gynecologists

BST .....Breastfeeding support team

AWHONN .....Association of Women's Health, Obstetric and Neonatal Nurses

CINAHL .....Cumulative Index of Nursing and Allied Health Literature

CDC .....Centers for Disease Control and Prevention

IBCLC.....International Board Certified Lactation Consultant

IWPR.....Institute for Women's Policy Research

MICH .....Maternal, Infant, and Child Health

NICHQ.....National Institute for Children's Health Quality

NIS .....National Immunization Survey

NRDC .....Natural Resources Defense Council

PRB.....Population Reference Bureau

RSV.....Respiratory Syncytial Virus

UNICEF .....United Nations International Children's Educational Fund

US .....United States

USDA.....United States Department of Agriculture

WHO.....World Health Organization

WIC.....Women, Infants, and Children

CHAPTER 1. INTRODUCTION

Nursing Issue

Literature and research identifies the benefits of breastfeeding to both mother and infant, however, the statistics of initiation and maintenance of breastfeeding amongst the general population show a different picture. As a health care practitioner, understanding current recommendations and statistical evidence related to breastfeeding trends across the nation is important. The American Academy of Pediatrics [AAP] policy statement (2012) recommends "exclusive breastfeeding for about six months, followed by continued breastfeeding as complementary foods are introduced, with continuation of breastfeeding for one year or longer as mutually desired by mother and infant" (p. e827). In addition to the AAP recommendation, a science-based objective plan is given every ten years to promote improvement of the nation's health status. The latest statement titled *Healthy People 2020* was released by the Department of Health and Human Services on December 2, 2010. Included in the report were numerous general health-related objectives as well as several objectives pertinent to the importance of breastfeeding (Centers for Disease Control and Prevention [CDC], 2011).

Found under the Maternal, Infant, and Child Health (MICH) section of the above-mentioned report are four objectives and five sub-objectives specifically focused on the promotion of breastfeeding. One objective in particular relates to the number of breastfed infants. Objective MICH-21 reads: "Increase the proportion of infants who are breastfed" (CDC, 2011). Five sub-objectives follow, in which each includes baseline data and a target percentage for the year 2020. Table 1 describes the main objective and the five sub-objectives with related information.

Table 1

Healthy People 2020 Breastfeeding Objectives (CDC, 2011)

	Objectives	Baseline	Target
MICH-21: Increase the proportion of infants who are breastfed			
MICH-21.1	Ever	74.0% of infants born in 2006 were ever breastfed as reported in 2007–09	81.9%
MICH-21.2	At 6 months	43.5% of infants born in 2006 were breastfed at 6 months as reported in 2007-09	60.6%
MICH-21.3	At 1 year	22.7% of infants born in 2006 were breastfed at 1 year as reported in 2007–09	34.1%
MICH-21.4	Exclusively through 3 months	33.6% of infants born in 2006 were breastfed exclusively through 3 months as reported in 2007–09	46.2%
MICH-21.5	Exclusively through 6 months	14.1% of infants born in 2006 were breastfed exclusively through 6 months as reported in 2007–09	25.5%

In addition to the objective plan presented every ten years, each year the CDC compiles a "Breastfeeding Report Card." The report card examines births and breastfeeding rates occurring three years prior to the actual report itself. For example, breastfeeding rates for births occurring in 2011 were compiled through surveys given in 2012 and 2013, thus creating the 2014 report card. Figures are compiled via the US National Immunization Survey (NIS), which examines national, state, and selected urban areas to gather information regarding immunization and breastfeeding practices. Five indicators of breastfeeding practice are surveyed and mimic the sub-objectives labeled in Table 1. The assembled 'report card' presents data linked to breastfeeding practices and resources in all states. Current data is reassuring in that breastfeeding rates throughout the United States (US) have shown consistent positive progress each year (CDC, 2014).

Despite the consistent increase in the initiation and maintenance of breastfeeding nationwide, breastfeeding trends across the United States continue to fall short of the AAP recommendations. In 2011 approximately 79% of infants were introduced to breastfeeding, however, most did not continue the process for as long as recommended. Of the 79% of infants that initiated the breastfeeding process, 49% were still breastfeeding at six months and only 27% at 12 months (CDC, 2014). The above numbers fall well below the *Healthy People 2020* target of 60.6% at six months and 34.1% at 12 months. The above numbers are representative of a national average of breastfeeding practices. A closer examination of the report card reveals a state-by-state detailed account of breastfeeding rates.

According to the 2014 'report card' many breastfeeding statistics are respectable with regards to the *Healthy People 2020* objectives. The 'report card' examines the following five indicators of breastfeeding practice: (a) ever breastfed; (b) breastfeeding at six months; (c) breastfeeding at 12 months; (d) exclusive breastfeeding at three months; (e) exclusive breastfeeding at six months. According to the above mentioned indicators, Minnesota rates read as follows: (a) 89.2%; (b) 59.2%; (c) 34.6%; (d) 48.5%; (e) 23.5%. Another state with suitable numbers is California: (a) 92.8%; (b) 63.1%; (c) 38.4%, (d) 56.1%; (e) 25.4%. Additional states with high scores throughout are Alaska, Colorado, Hawaii, Oregon, Utah, Vermont and Washington. Several states fall centrally with somewhat average scores. North Dakota scores as follows: (a) 82.4%; (b) 55.4%; (c) 26.5%; (d) 53.9%; (e) 22.5%. Wisconsin's scores appear as: (a) 83.5%; (b) 54.9%; (c) 26.2%; (d) 48%; (e) 21.4%. Other states with average scores are Arizona, Connecticut, Idaho, Iowa, Maine, Maryland, Massachusetts, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New York, North Carolina, Rhode Island, Virginia, and Wyoming. The remainder of the states faired lower on the 2014 'report card.' Louisiana, West

Virginia, and Mississippi scored quite low in comparison to most states. Louisiana reports the following breastfeeding statistics, respectively: (a) 56.9%; (b) 30.3%; (c) 12.6%; (d) 25.3%; (e) 13.4%. West Virginia reports (a) 59.3%; (b) 29.3%; (c) 15.9%; (d) 28.3%; (e) 12.2%. Mississippi's scores are very low with the following report card: (a) 61.5%; (b) 28.9%; (c) 10%; (d) 28.8%; (e) 10.1% (CDC, 2014). With review of the 'report card,' it is apparent that each state has some degree of variation from the others as it relates to each sub-objective. Despite a range of encouraging numbers from several states and an overall increase in breastfeeding rates over the past years, ***ALL*** still fall short of the recommended AAP guidelines.

To encourage and promote the concept of breastfeeding, it is imperative to understand which populations are at highest risk for falling short of the given recommendations. The rates of initiation and maintenance of breastfeeding found within the 2014 report card are an average of the entire US/state-by-state population. Clinically significant sociodemographic information such as maternal age, race/cultural affiliation, and financial status are obscured within the figures. Although inconsistencies among breastfeeding intent and attainment pose a dire public health problem for all, of particular concern are African American mothers, adolescent/underage mothers and those of low-economic status. The noted subcultures are amid mothers with both the lowest breastfeeding rates and the highest prevalence of diseases linked to the lack of optimal breastfeeding (UNC Gillings School of Global Public Health, n.d.).

When compared to other racial groups, statistically African American mothers are less likely to initiate and/or maintain breastfeeding according to the given guidelines. Based on the most recent CDC National Immunization Survey, the breastfeeding initiation rate for mothers of non-Hispanic black or African American descent was 58.1%. This is in contrast to an initiation rate of 80.6% in the Hispanic or Latino population. The rate of breastfeeding at six months was

only 27.5% for women of the African American subgroup compared to 46% of Hispanic or Latino descent ("Policy statement," 2012).

Women of adolescent age and women lacking financial stability are *also* at high risk for not meeting the recommended guidelines regarding breastfeeding initiation and maintenance. According to the most recent NIS figures, mothers less than 20 years of age initiated breastfeeding at a frequency of 59.7%, compared to 79.3% of those mothers over 30 years of age. With a rate of 30%, the lowest initiation was demonstrated amongst non-Hispanic black mothers less than 20 years of age. Low-income mothers (based on eligibility for Women, Infants, and Children [WIC]) initiated breastfeeding at a rate of 67.5%, compared to 84.6% in women of higher income status. Like the rates of African American adolescent women, the initiation rate of low-income non-Hispanic black mothers is also the lowest at 37% ("Policy statement," 2012).

It is likely that any given health care practitioner will someday be involved in the care of a woman who meets one of the descriptions listed above. Based on figures from the July 1, 2014 census there are approximately 63,356,565 women of childbearing age living in the US. Women of 'childbearing age' can range from 15-44 years. Of the nearly 64 million women, roughly 9,472,000 are black or African American. Slightly over 10 million range in age from 15-19 and close to 1.6 million women within this age group are African American (US Census Bureau, 2015). Additionally, data released by the Institute for Women's Policy Research from a 2013 Community Survey shows that 45.3 million individuals living in the US fall at or below the poverty line with 55.6% of them being female. Of the women in poverty, 15.8% are between the ages of 18 and 34 (Institute for Women's Policy Research [IWPR], n.d.).

Aim and Focus

The origins of the disparities in women's and children's health are numerous and complex. Efforts to better understand and address the imbalances of breastfeeding are necessary to lessen the said disparities and promote health and wellness in maternal and child health. The original intent of the critical literature review aimed at gaining insight into breastfeeding practices amongst African American women, underage/adolescent mothers, and those of low-economic status. Following the research process, it was noted that a majority of the African American mothers as well as adolescent mothers considered high-risk were also of low-income status. Due to the above factors, this author has chosen to primarily focus on African American and adolescent mothers and include data about low-income status as necessary. The author focused on answering the following questions:

- What barriers exist to the initiation and/or maintenance of breastfeeding within the following high-risk populations: African Americans and underage/adolescent mothers?
- What clinical/support services, recommendations, and/or interventions and strategies are available to promote the initiation and maintenance of breastfeeding in high risk populations such as those listed?

The critical literature review may assist health care providers in various areas. First, the information obtained may assist nurses, physicians, and other providers to better understand potential barriers and give demographically appropriate care as it relates to maternal and child health. Second, information from the critical literature review may help promote further research into the promotion of breastfeeding initiation and maintenance within high-risk populations.

Third, the critical literature review may assist nurse educators with the development of curricula related to the promotion of breastfeeding.

The American College of Obstetricians and Gynecologists (ACOG) strongly advocates for breastmilk as the exclusive nutritional source for infants through six months of age. Maintenance of breastfeeding with introduction of foods rich in iron after six months is beneficial. ACOG supports a multidisciplinary approach to the promotion of breastfeeding amongst all groups, but especially to those within high-risk populations. ACOG requests support from fellow hospitals, health care professionals, and employers to support the breastfeeding practice of women. It is important to note that although most women have the capability to breastfeed, some physically cannot or will not choose to do so. It is essential to be empathetic to the needs of women regardless of the choice they make ("Breastfeeding in underserved," 2013).

In general, the medical community supports and endorses breastfeeding amongst all populations. Medical contraindications to breastfeeding are very rare and almost all medical professions recognize the benefits of breastfeeding to both mother and infant. Locally and nationally there are numerous programs to support the practice of breastfeeding, some of which are government funded. Within the community and clinical setting, health care practitioners such as pediatricians, nurses, and clinical educators, play a vital role in the advocacy of breastfeeding. Their knowledge about the maternal and infant health benefits, economic benefits, and techniques to support breastfeeding practice are imperative to the breastfeeding dyad ("Policy statement," 2012).

Background

Since the beginning of mammals and mankind, the concept of breastfeeding has been in existence. Even so, the 'bottle vs. breast' controversy has ensued for hundreds of years. The

advent of sophisticated formula has encouraged some mothers and even health care practitioners to choose or promote formula-feeding over breastfeeding (Doolan, 2008). Among African American families, approximately 32% of breastfed infants are given formula within the first two days of life compared to the nationwide rate of 24.5% (CDC, 2011). According to the United Nations International Children's Educational Fund (UNICEF), in 2007 alone nearly 1.5 million babies died. The statistic may have been more favorable had the babies been breastfed (Doolan, 2008).

Benefits of Breastfeeding

The literature is filled with content discussing the benefits of breastfeeding to both maternal and infant health. Documentation of the benefits is especially important to underserved and high-risk populations. High-risk populations are more likely to experience adverse outcomes that may be eliminated or improved with breastfeeding. Underserved mothers, such as women who are unable to acquire quality health care due to economic status, race or culture differences, age, and other sociodemographic factors may face innumerable barriers to the initiation and maintenance of breastfeeding ("Breastfeeding in underserved," 2013).

Maternal benefits. Although the value of breastfeeding applies to all women and infants, those within high- risk populations particularly benefit. Maternal benefits include, but are not limited to (1) increased protection from infections; (2) biologic signals to promote cellular growth and differentiation; (3) decrease in postpartum maternal blood loss related to the release of the hormone oxytocin which promotes uterine contraction and involution; (4) a decreased risk of ovarian and breast cancer; (5) decreased rates of hypertension, hypercholesterolemia, and cardiovascular disease; (6) increased maternal/infant bonding time; (7) reduced risk of postpartum depression partially due to the release of prolactin— a hormone

that promotes breastmilk production as well as induces instinctive maternal behaviors; (8) quicker postpartum weight loss; and (9) fewer unintentional pregnancies (Afshariani, 2014; "Breastfeeding in underserved," 2013; "Breastfeeding overview," 2013; Natural Resources Defense Council [NRDC], 2005; "Policy statement," 2012).

In addition to the benefits mentioned above, several other maternal benefits have been acknowledged. Studies indicate breastfeeding may slow or even prevent the onset of osteoporosis. During lactation, the female body removes calcium from the bones, however after weaning, calcium will be replaced in the bone at a higher concentration (Afshariani, 2014; "Breastfeeding overview," 2013; NRDC, 2005). Mothers with recent gestational diabetes have shown improved glucose tolerance with breastfeeding and a decreased risk of developing Type II diabetes. Additionally, women with Type I diabetes tend to be less insulin dependent while nursing (Afshariani, 2014; Bomer-Norton, 2014; "Policy statement," 2012). Recent studies have verified that aortic calcification, the threat of stroke, heart attack, and other complications are significantly less in mothers who have breastfed for at least three months than women who have not nursed at all. Furthermore, breastfeeding allots women certain cancer-fighting properties, due to lower levels of estrogen and the inhibition of ovulation while lactating (Afshariani, 2014; "Policy statement," 2012). The maternal benefits vary amongst individuals and are dose-dependent referring to the cumulative total of all breastfed children over the woman's lifetime (Bomer-Norton, 2014).

Infant and childhood benefits. Just as the benefits are numerous to the mother, the infant benefits immensely from the process of breastfeeding. Breastmilk is unique in that it is able to adapt to the nutritional and protective needs of the infant. Benefits of breastmilk to infants vary and may include: (1) all-natural nutrition— the perfect combination of vitamins,

fats, and protein; (2) protection against disease; (3) decreased risk of asthma or allergies; (4) fewer ear infections, respiratory illness, and diarrhea related to gastrointestinal tract infections for infants breastfed exclusively for six months; (5) decreased incidence of sudden infant death syndrome (SIDS); (6) higher IQ scores in later childhood; and (7) decreased risk of childhood obesity and the comorbidities that follow ("Breastfeeding in underserved," 2013; "Breastfeeding overview," 2013; NRDC, 2005; "Policy statement," 2012; World Health Organization [WHO], 2014). Study after study has confirmed the beneficial effects of infant breastfeeding. Like the maternal benefits, several of the outcomes seen in infants are dependent on the extent and duration of breastfeeding.

Research has confirmed the value of breastfeeding in support of a child's immunity to disease and infection. Through nursing, antibodies are passed from mother to infant, helping improve the immune response— preventing, postponing or weakening diseases caused by pathogens within the environment of mom and baby (Bomer-Norton, 2014;"Breastfeeding in underserved," 2013; NRDC, 2005). Interestingly, the composition of breastmilk has shown changes (i.e. an increase in white blood cells) in response to an active infectious state in the infant. Breastfeeding provides enhanced immunity to the infant via *passive protection* in which antibodies and other immune factors are transferred to the infant. Additionally, immune response is enhanced through *active stimulation* and *modulation of infant response.* Breastfeeding facilitates tolerance to vaccines, regulation of the inflammatory response, and promotion of the humoral and cellular responses to vaccines (Cerini & Aldrovandi, 2013; NRDC, 2005). Maternal immunization has surfaced as a safe and cost-effective way to enhance neonatal immunity. This strategy is being used to reduce neonatal tetanus and is encouraged as an approach to control infant pertussis, influenza, and other diseases. Antenatal (before birth)

maternal vaccination produces specific antibodies that are transmitted to the infant via breastmilk for up to six months postpartum (Cerini & Aldrovandi, 2013; NRDC, 2005). During a newborn's vulnerable period, maternal breastmilk plays a critical role in the maintenance of an infant's health.

Respiratory tract infections, otitis media, and gastrointestinal infections are greatly reduced in infants who are breastfed (Bomer-Norton, 2014; "Breastfeeding in underserved," 2013; "Breastfeeding overview," 2013; NRDC, 2005; "Policy statement," 2012). According to the AAP policy statement (2012), hospitalizations for lower respiratory tract infections during the first year of life are reduced by 72% in infants who were exclusively breastfed for greater than four months. The risk of severe respiratory syncytial virus (RSV) is decreased by 74% in infants who breastfeed for at least four months ("Policy statement," 2012). Similarly, the risk of otitis media is decreased by half in infants who breastfeed exclusively for more than three months ("Policy statement,"2012). A 64% reduction in gastrointestinal tract infections was seen in infants exposed to any breastfeeding, with the effects lasting approximately two months after breastfeeding cessation ("Policy statement," 2012). One recent study indicated that preterm infants fed exclusively with breastmilk experienced a 77% reduction in necrotizing enterocolitis ("Policy statement," 2012).

Allergic diseases ranging from asthma to atopic dermatitis to eczema are positively affected by breastfeeding. The incidence of allergic conditions was lessened by 27% in infants considered low-risk and up to 42% in high-risk populations. Likewise, infants who were breastfed and exposed to gluten, experienced a 52% decrease in the risk of the development of celiac disease ("Policy statement,"2012).

In many cases, national campaigns to prevent childhood obesity begin with supporting the concept of breastfeeding. Although the exact link between breastfeeding and childhood obesity is not well established, several credible explanations have been given. Exclusive breastfeeding delays supplementation with other nutritional sources which may lead to weight gain. Formula-fed infants demonstrate higher levels of plasma insulin leading to fat deposition and premature development of adipocytes. Hormones and other biological factors within breastmilk that help to regulate food intake and energy balance may have long-term effects on the body's ability to maintain energy homeostasis. It is possible that breastfeeding may help 'program' an individual to have less risk factors for obesity later in life (WHO, 2014).

Possessing knowledge about the positive effects and outcomes of breastfeeding is pivotal in combatting the health disparities that may result from the lack of breastfeeding. Statistically, as a nation, all populations fall short of the recommended AAP guidelines for initiation and maintenance of breastfeeding. It is, however, high-risk populations such as African American mothers and underage mothers that are most affected. With sufficient knowledge to provide mothers with encouragement and evidence-based information, health care practitioners can have a profound effect on maternal and child health.

Definitions

The critical literature review will examine issues and concerns regarding the initiation and maintenance of breastfeeding as it relates to high-risk populations— African Americans and underage/adolescent mothers. The author perused relevant professional sources to determine what barriers to breastfeeding exist amongst the two targeted populations, as well as what clinical/social support services, recommendations, and interventions/strategies are available to breastfeeding mothers. The following definitions will be used for the terms: breastfeeding,

initiation, maintenance, duration, exclusive breastfeeding, high-risk, African-American, underage/adolescent, low-income, barrier, and resource.

According to *Mosby's Medical Dictionary*, the term ***breastfeeding/breastfeed/breastfed*** refers to "suckling or nursing, giving a baby milk from the breast; taking milk from the breast" (2002, p. 238). Other substitutions for the term breastfeed are lactation or nursing. As breastfeeding patterns vary over the first few months of life, defining breastfeeding is a challenge, yet researchers need precise definitions. Variations of the term exist according to the exclusivity and duration of the practice. The WHO (n.d.) describes ***exclusive breastfeeding*** as the infant only receiving breastmilk from his/her mother or a wet nurse, or expressed breastmilk, with no other liquids or solids, with the exception of drops or syrups consisting of vitamins, mineral supplements or medicines. ***Duration*** refers to the "length of time for any breastfeeding, including breastfeeding through the initial stage of exclusive breastfeeding and any period of complementary feeding until weaning" (Noel-Weiss, Boersma, & Kujawa-Myles, 2012, p.1). The AAP guidelines request exclusive breastfeeding through six months of age, followed by complementary breastfeeding with the introduction of foods through the duration of a year, with continuation of breastfeeding as welcomed by infant and mother ("Policy statement," 2012).

The scope of the literature review will focus on the initiation and maintenance of breastfeeding. The *Random House Webster's College Dictionary* defines ***initiate*** as "to begin, set going, or originate" (2001, p.680). To ***maintain***, according to the *Random House Webster's College Dictionary*, is "to keep in existence, to persevere" (2001, p. 801). The goal of healthcare practitioners should be to focus on encouraging the initiation of the breastfeeding process and then promoting and advocating for the maintenance of it.

Three groups run the highest risk for the development of health disparities related to the absence of or maintenance of breastfeeding. African American mothers, adolescent mothers, and mothers of low-income status make up the three populations. Despite African American and adolescent/underage populations being the main focus of the critical literature review, the term low-income will also be described in the following paragraphs. *McGraw-Hill Concise Dictionary of Modern Medicine* (2002) describes ***high-risk groups*** as individuals in a community with a greater than expected chance of developing a given disease, which may be defined by measurable parameters such as— a genetic defect, physical quality, lifestyle, habits, socioeconomic and/or educational status, and environmental factors. The CDC (2015) describes ***African Americans*** as individuals claiming their origins amongst any of the black racial groups in Africa. The US Census Bureau projects by the year 2060, approximately 74.5 million African Americans will be living in the United States (CDC, 2015). Adolescent mothers are also considered a high-risk population. ***Adolescent*** mothers, according to *Stedman's Medical Dictionary*, are in the "period of life beginning with puberty and ending with completed growth and development" (2000, p.29). The critical literature review will focus on adolescent women from the beginning of puberty through age 20.

Women of ***low-income*** status are also considered high-risk when discussing the breastfeeding dyad. Low-income working families are described as earning less than twice the federal poverty line. In 2011, the marker for "low-income" was an annual income of $45,622 for a family of four with two children. The total number of low-income families increased from 10.2 million in 2010 to 10.4 million in 2011. The figures represent roughly one-third of all the working class in the US (Population Reference Bureau [PRB], 2013).

A ***barrier***, according to *Random House Webster's College Dictionary*, is "anything that obstructs progress, access, etc.; a limit or boundary of any kind" (2001, p.111). Within the aforementioned high-risk populations, potential barriers to breastfeeding initiation and maintenance may include: cultural belief systems, socioeconomic factors, age, social support influences, and more. The critical literature review examined various barriers encountered by high-risk populations which may inhibit the initiation and/or maintenance of breastfeeding.

Random House Webster's College Dictionary defines ***resource*** as "a source of supply, support, or aid especially one that can be readily drawn upon when needed" (2001, p. 1125). Numerous resources are available to pregnant and lactating women. Many of these resources may be locally, state, or nationally funded. The critical literature review explored resources available to the high-risk pregnant and lactating population.

CHAPTER 2. METHODOLOGY

PRISMA Framework

Without question, the health care industry is an ever-changing entity. Health care providers must maintain current knowledge regarding clinical standards and guidelines. Quality health research provides valuable information about disease trends and risk factors, outcomes of treatment, public health interventions, patterns of care, costs of health care, and much more. Research is accomplished using various methods and access to the gathered data is important to health care providers. Information-based research using online health databases is a rapid, inexpensive means of obtaining meaningful information. Large sets of data, examining varying criteria, can be reviewed and analyzed through access to several evidence-based, professional sources (Nass, Levit, & Gostin, 2009).

A systematic review of literature categorizes, evaluates, and combines criteria-based evidence from individual research studies and ultimately produces a valuable source of information. Health care providers may use systematic critical literature reviews to guide their practice, thus, quality research is of great value when conducting a critical literature review. To obtain superior data pertinent to one's chosen topic, it is imperative to conduct a literature review in a systematic, non-biased manner. Various inclusion and exclusion criteria must be incorporated into one's search. Systematic analyses help clinicians remain up-to-date on current practice guidelines, provide evidence for or against treatment options, and summarize data for patients (Liberati et al., 2009).

The PRISMA framework was incorporated to guide the critical literature review. PRISMA stands for Preferred Reporting Items for Systematic reviews and Meta-Analyses. The goal of the PRISMA framework is to assist authors to give a report on a large collection of

systematic reviews relating to health care (Liberati et al., 2009). The PRISMA flow diagram in Figure 1 demonstrates the systematic process followed in the critical literature review. Of importance to note, the PRISMA framework used in the critical literature review is permitted for use by Liberati et al. (2009) when cited and adapted properly.

Review Protocol

As discussed by Nass, Levit, and Gostin (2009) and Liberati et al. (2009), systematic analyses of relevant literature may provide clinicians with quality, up-to-date content to guide their practice. The literature review was performed to critically analyze the topic of initiation and maintenance of breastfeeding among the previously described high risk populations. The framework guiding the review followed the guidelines of the PRISMA statement and diagram as presented by Liberati et al. (2009). The following account gives a brief description of the various components in the critical literature review.

Databases

The approach to the critical literature review included the examination of various online databases for relevant professional sources. Additional professional sources were also accessed via online sources outside of the said databases. The scanned databases via EBSCOhost included CINAHL (Cumulative Index of Nursing and Allied Health Literature) complete, HealthSource: Nursing/Academic edition, and MEDLINE. Professional sources covered the years of 2005-2015, unless a hallmark source was found relevant to the critical literature review. The previously stated professional sources were searched through February 2016 for data relevant to at least one of the search terms used in the critical literature review.

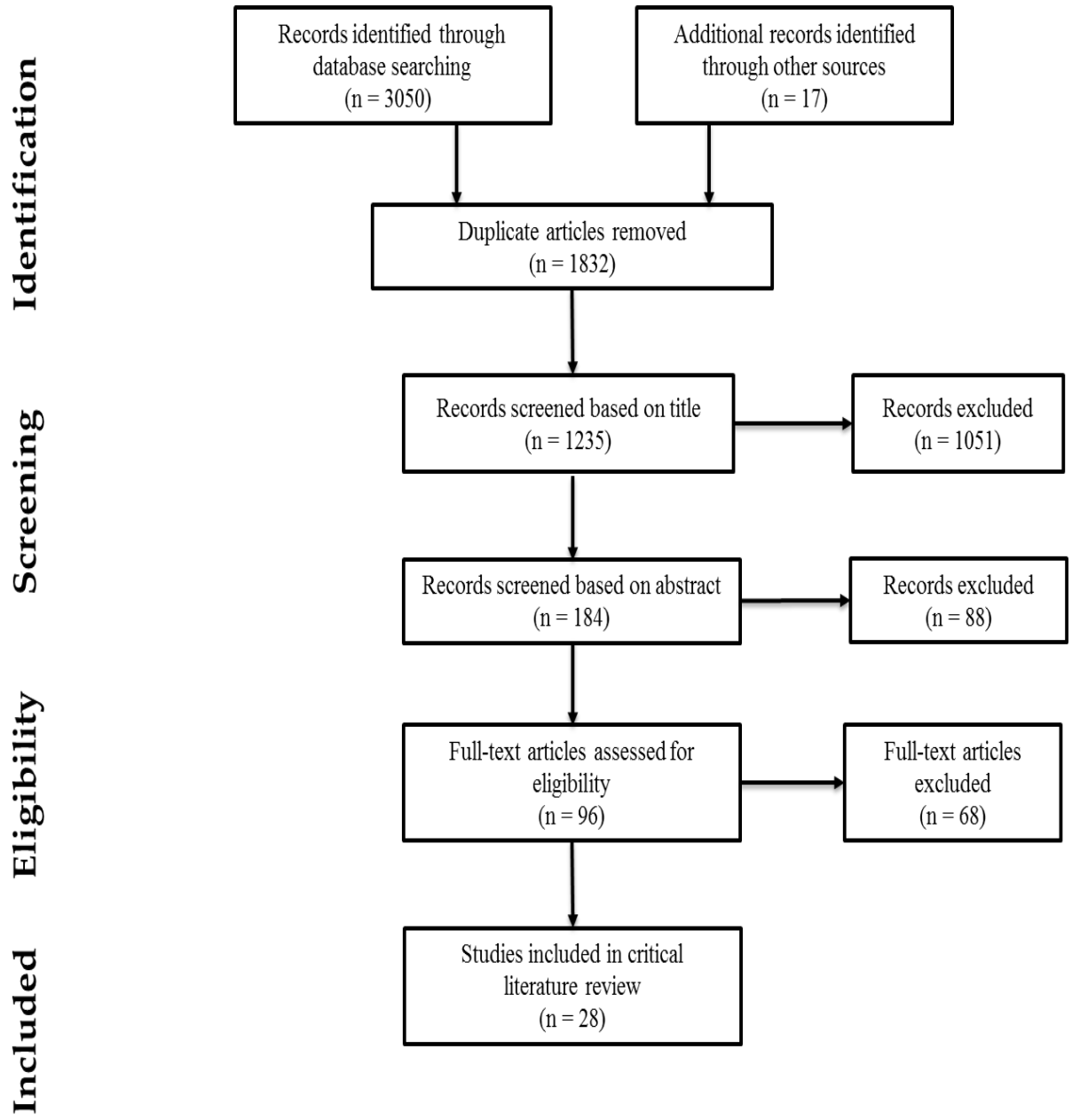

Figure 1. A PRISMA flow-diagram to guide the critical literature review; adapted from Liberati et al. (2009).

Search Terms

The critical literature review focused on initiation and maintenance of breastfeeding amongst high-risk populations, specifically women of African-American descent and underage/adolescent mothers. The goal of the critical literature review was to determine what

barriers exist to initiation and maintenance of breastfeeding and what resources, recommendations and strategies are available and/or applicable to the said high-risk populations. Accordingly, the search terms used to conduct the critical literature review were chosen relative to the focus and goal of the review and the identified populations. In consideration of the focus and goal of the review, the search terms used were "breastfeeding" (or a derivative of this word), "initiation," "maintenance," "barriers," and "resources." The identified populations were searched as follows: "adolescent" and "African-American." Two searches were conducted using the search terms interconnected with Boolean phrases. The first search was as follows: breastfeeding AND (initiation OR maintenance) AND (adolescent OR African-American) AND barriers. The second search was as follows: breastfeeding AND (initiation OR maintenance) AND (adolescent OR African-American) AND resources. The search terms are included in the Appendix for quick reference. The search process identified potential articles to be incorporated in the study, however, specific inclusion and exclusion criteria were implemented to regulate which articles were ultimately included in the literature review.

Inclusion Criteria

Specific inclusion criteria was used to initiate the research process. All study types (descriptive study designs, qualitative/quantitative studies, case studies, explanatory documents, etc.) were inclusive in the literature review. Additionally, sample sizes within the studies were not restricted. Logically, the populations to be included in the research were predominantly African American and adolescent/underage women. Within the said populations, through the research process, the listed groups were often found to also be considered populations of low-income status. Therefore, some chosen articles also include information about women of low-income standing. Literature pertinent to women of childbearing age (puberty to approximately

44 years of age) was included. A more liberal research approach was ensued regarding the support systems, recommendations, and strategies available to the focused populations. General data associated with the content was included if applicable to the populations listed. Demographically, all studies and literature were applicable to population groups within the United States. Of importance to recognize, only journal articles were included in the literature review.

Exclusion Criteria

A less specific approach to the exclusion criteria vs. inclusion criteria was followed in completion of the critical literature review. Articles addressing *only* the breastfeeding process or benefits of breastfeeding to women and infants without discussion of barriers and/or resources applicable to the populations listed were excluded. Articles were disregarded if the title or abstract did not address at least one of the search terms mentioned in the Appendix. Additionally, articles published within the search timeframe (2005 to February 2016) but representative of research data previous to the timeframe were excluded.

PRISMA Flow Diagram

Figure 1 gives a PRISMA flow diagram (adapted from Liberati et al., 2009) for the existing critical literature review. Figure 1 represents the steps followed through the research process of the critical literature review. Burns and Grove (2013), describe the importance of creating a data flow chart with an account of the articles found in addition to the number of articles included relevant to the focus of the literature review.

Figure 1 gives a visual depiction of the process followed for selection of the articles to be included in the critical literature review. As depicted, a total of 3,050 records were identified through database searching, with an additional 17 records identified through other internet

sources. Three databases each were accessed via two differing searches. The three databases accessed via EBSCOhost were CINAHL, Health Source: Nursing/Academic Edition, and MEDLINE. The first search produced 1,861 articles based on specific terms interconnected with Boolean phrases. The terms searched were input as follows: breastfeeding AND (initiation OR maintenance) AND (adolescent OR African-American) AND barriers. The number of articles provided by each database were CINAHL 1,411, Health Source 428, and MEDLINE 22. The second search found 1,189 articles and like the first was based on specific terms interconnected with Boolean phrases. The terms searched were input as follows: breastfeeding AND (initiation OR maintenance) AND (adolescent OR African-American) AND resources. The number of articles found through each database were CINAHL 856, Health Source 333, and MEDLINE revealed zero. Due to the replication of some search terms, naturally there was some duplication of articles within the two searches. In fact, there were 1,832 articles removed by reason of duplication. After this removal 1,235 articles remained to be screened according to specific inclusion and exclusion criteria. A total of 1,051 articles were excluded based on title and another 88 articles were excluded because of the abstract. Consequently, 96 articles remained to be assessed for inclusion eligibility in the critical literature review. After careful assessment of the remaining articles, 68 were excluded leaving 28 articles that met the inclusion criteria. Following, in the subsequent chapters, an overview and synthesis of the 28 articles is presented. A general discussion including various nursing implications and ideas for future research are offered at the conclusion of the paper.

CHAPTER 3. RESULTS

Overview of Selected Studies

Table 2 outlines and gives a brief synopsis of the selected articles. The articles are presented in alphabetical order and include a description of the authors, year of publication, location, type of paper or study design, participants, and findings.

Table 2

Summarization of studies included in critical literature review

Authors	Year	Geographic Location	Type of Paper/Study Design	Participants	Findings
Abdulloeva & Eyler	2013	Various states	Quantitative, descriptive study	National Conference of State Legislators	After the ACA became effective in 2010, much legislation has been enacted regarding workplace lactation support. There was a significant correlation between state law and six month exclusive breastfeeding rates.
Ahluwalia et al.	2011	11 states and New York City	Quantitative	49,135 women with known breastfeeding status and infant living with mother	Several variables were exposed that promoted breastfeeding to 10 weeks postpartum and beyond. Examination of existing practices should be racially and ethnically explored to include culturally appropriate care.
American Academy of Pediatrics	2005	United Stated, no specific geographic location	Descriptive article	Inclusive to breastfeeding mothers and healthcare providers	Policy statement on breastfeeding which reflects newer breastfeeding knowledge.

Table 2. *Summarization of studies included in critical literature review* (continued)

Authors	Year	Geographic Location	Type of Paper/Study Design	Participants	Findings
Association of Women's Health, Obstetric and Neonatal Nurses	2015	United Stated, no specific geographic location	Descriptive article	Inclusive to breastfeeding mothers and healthcare providers	Poses several strategies and implementation ideas as well various recommendations including legislative policies.
Bai et al.	2011	Hospitals and WIC clinics in Central Indiana and Southern New Jersey	Quantitative, cross-sectional survey design	236 mothers- 93 non-Hispanic African Americans, 72 non-Hispanic whites, and 71 Hispanic/Latina	Intentions to continue exclusive breastfeeding for six months was similar across racial/ethnic groups. Influential predictors included attitude, social norm, and perceived behavioral control. Beliefs of family members and the general public contributed to the subjective norm of African American mothers.
Brand et al.	2011	Kalamazoo County, southwest Michigan	Quantitative, descriptive study	239 women at two weeks postpartum	At the 2-week postpartum interview, 209 women continued to breastfeed and 30 women had discontinued breastfeeding.
Cottrell & Detman	2013	Three Florida counties- a large urban county, a medium-sized county, and a rural county	Qualitative	253 recently pregnant African American women ages 18-35 years	Numerous barriers to breastfeeding initiation and maintenance were identified based on personal experiences. Implications for practice are included in this article.

Table 2. *Summarization of studies included in critical literature review* (continued)

Authors	Year	Geographic Location	Type of Paper/Study Design	Participants	Findings
Di Frisco et al.	2011	Large, urban, academic medical center; no specific geographic location given	Quantitative, descriptive survey design study	113 mothers aged 21-44 years	Mothers who breastfed within the first hour after birth were more likely to be exclusively breastfed at 2-4 weeks post-delivery.
Goldbas	2015	United Stated, no specific geographic location	Descriptive article	Inclusive to breastfeeding mothers and healthcare providers	The Patient Protection and Affordable Care Act was enacted to protect women's rights to breastfeeding in the workplace. Additional legislation has been enacted to reduce the barriers of embarrassment or ridicule when breastfeeding in public.
Grassley & Sauls	2012	North central Texas- tertiary hospital intrapartum unit	Quantitative, quasi-experiential design	106 parturient adolescents ages 13-20 years	Age-specific labor/birth support positively influences the childbirth satisfaction of adolescent mothers and subsequently breastfeeding initiation and duration.
Kaufman et al.	2010	Bedford-Stuyvesant and Bushwick neighborhoods in Brooklyn, NY	Qualitative	14 African American and 14 Puerto Rican mothers ages 17-35 years plus 8 family members	Women's ambivalence to breastfeeding resulted in a complementary feeding pattern among the participants. Intention does not always determine breastfeeding outcomes.

Table 2. *Summarization of studies included in critical literature review* (continued)

Authors	Year	Geographic Location	Type of Paper/Study Design	Participants	Findings
Kozhimannil et al.	2013	Minnesota	Qualitative	1,069 women receiving doula care	Breast feeding initiation was almost 100% amongst doula supported births. Among African American women with Medicaid coverage 92.7% with doula support initiated breastfeeding compared to 70.3% of the general population.
Lewallen et al.	2006	Southeastern United States	Qualitative	379 women planning to breastfeed for at least 8 weeks after an uncomplicated delivery; 292 white, 80 African American, and 22 were some other minority	Sixty-eight percent of women were still breastfeeding at 8 weeks, however, 37% reported using formula supplementation.
Lewallen & Street	2010	Varying locations of a southeastern state in the United States	Qualitative	15 African American women aged 18-38 years who are currently breastfeeding or have breastfed within the past year	Three themes were identified as reasons to start and stop breastfeeding: perceived lack of information about benefits and management of breastfeeding, difficulties breastfeeding in public, and lack of a support system for continued breastfeeding.

Table 2. *Summarization of studies included in critical literature review* (continued)

Authors	Year	Geographic Location	Type of Paper/Study Design	Participants	Findings
Ma & Magnus	2012	Louisiana	Quantitative, cross-sectional study	2,036 WIC-enrolled first time mothers	Black and white first time mothers enrolled in WIC are significantly more likely to try to breastfeed with hospital staff support and opportunity to feed in the hospital setting.
McCarter-Spaulding & Gore	2009	Urban teaching hospital in New England	Quantitative, descriptive, longitudinal, cohort study	125 women of African descent with full-term infants planning to breastfeed; initial sample was 155 women with 125 women participating at 6 months	Higher levels of self-efficacy predicted longer breastfeeding duration and an increased exclusivity at one and six months postpartum. Planned patterns of feeding helped to predict duration. Returning to work after 12 weeks postpartum was protective of breastfeeding to 6 months postpartum.
McCarter-Spaulding	2010	3 maternity units of a large urban hospital in northeastern United States	Quantitative, methodological investigation	153 African American new mothers	Breastfeeding self-efficacy tools are significant predictors of breastfeeding duration and exclusivity in the participant sample.
McNeal	2014	United States, no specific geographic location	Descriptive article	Inclusive to breastfeeding mothers and healthcare providers	With several challenges to overcome to promote breastfeeding, much is being done by health care marketers to promote a healthy and positive perspective on breastfeeding.

Table 2. *Summarization of studies included in critical literature review* (continued)

Authors	Year	Geographic Location	Type of Paper/Study Design	Participants	Findings
Murtagh & Moulton	2011	United States	Descriptive article	Inclusive to working mothers	The workplace presents a potential obstacle to continued breastfeeding. Federal laws and policies are in place to protect a mother's rights.
Office of the Surgeon General	2011	United States	Descriptive Article	Inclusive to breastfeeding mothers and healthcare providers	Description of barriers to breastfeeding in the United States and recommendations from a public health perspective
Pugh et al.	2010	2 large urban hospitals; no specific geographic location given	Quantitative, randomized controlled trial	328 mothers with majority of African American descent	Breastfeeding rates in low-income mothers can be increased by a nurse peer counselor intervention.
Purdy	2010	United States, no specific geographic location	Commentary	Inclusive to breastfeeding mothers	Several barriers exist to breastfeeding and many positive effects of breastfeeding are available.
Ruiz et al.	2011	Puerto Rico	Qualitative	Nutritionists	Nutritionists identified many barriers to breastfeeding. They agree that face-to-face counseling is the best strategy, but recognize that the time to do this is limited. Suggestions for WIC to intervene while women are still in the hospital were given.

Table 2. *Summarization of studies included in critical literature review* (continued)

Authors	Year	Geographic Location	Type of Paper/Study Design	Participants	Findings
Sauls & Grassley	2011	United States, no specific geographic location	Descriptive article	Adolescent mothers	Interventions that create a positive childbirth experience will impact breastfeeding amongst this population.
Stadtlander	2015	United States, no specific geographic location	Descriptive article	Adolescent mothers	Primary adolescent concerns about breastfeeding relate to body exposure and privacy, potential of pain, and dependency of the infant. Teens lack adequate knowledge and therefore need active education about breastfeeding.
Stanton	2011	United States, no specific geographic location	Commentary	Inclusive to breastfeeding mothers and healthcare providers	Barriers exist to breastfeeding and important steps can be taken to help promote and initiate breastfeeding
Thrower & Peoples	2015	United States, no specific geographic location	Descriptive article	Inclusive to breastfeeding mothers	Childbirth educators have the ability to make a vast impact on the breastfeeding dyad.

Table 2. *Summarization of studies included in critical literature review* (continued)

Authors	Year	Geographic Location	Type of Paper/Study Design	Participants	Findings
Wambach & Cohen	2009	Teen obstetric clinics at two urban university-affiliated medical centers; no specific geographic location given	Qualitative	23 single, primiparous teens 14-18 years of age (14 African Americans, three Hispanics, five Caucasians, and one African) who were currently breastfeeding or had previously breastfed	The breastfeeding experience of the teens in this study began with the decision-making process, which spread across the gestational period. Those that made decisions earlier typically breastfed longer. Breastfeeding barriers were identified, including low motivation, mechanical issues with physical breastfeeding, lack of support, pain, and lack of education. It was found that the developmental characteristics of teens should also be considered when promoting breastfeeding.

Per the table above, the articles represented in the critical literature review span the years 2005 through 2015. A variety of article/study designs were incorporated into the critical literature review. As can be seen in the above table, a mixture of qualitative, quantitative, commentary and descriptive articles were included. Study types included descriptive, randomized controlled trials, cross-sectional studies, and quasi experiential. The participants and outcomes within the selected studies represented the populations identified in the focus of the critical literature review. Note that much of the outcomes and data can be directly applied to any woman in which breastfeeding practices would apply. The following section summarizes and synthesizes the selected articles.

Synthesis of Selected Studies

The articles acquired for the critical literature review varied in their composition, thus there were similarities and differences amongst them. Despite the variations within the articles, all addressed breastfeeding and/or barriers and resources/recommendations/strategies to breastfeeding. The majority of articles focused on the African American or underage populations, however some articles were applicable to both populations. Inclusion of diverse articles gives a more comprehensive assessment of issues related to the initiation and maintenance of breastfeeding in high-risk populations.

The settings among the articles were also diverse and crossed several locations throughout the United States and Puerto Rico, however not every article explained its exact geographic location. All community types were included in the search and spanned urban and rural as well as high and low-income areas. Because of the nature of the populations, the primary location of six of the studies occurred within clinic/hospital settings. Examples of hospital/clinic locations involved were teen obstetric clinics at two urban university-affiliated medical centers; two large urban hospitals; an urban teaching hospital in New England; a North central Texas- tertiary hospital intrapartum unit; another large, urban, academic medical center with no specific locale; and hospitals and WIC clinics in Central Indiana and Southern New Jersey. Additional locations identified within the review were the following: Louisiana, Minnesota, New York, Michigan, Florida, and several southeastern states with no specific mention of the particular state.

The participants within the articles were also fairly assorted. Participants and study groups consisted of women of childbearing age (mainly those of African American descent and/or adolescent age) who had breastfed, were breastfeeding or intended to breastfeed.

Additional participants included family members of the mother/breastfeeding woman, nutritionists and healthcare providers, and legislators. The number of participants ranged from a small group of 15 African American women (Lewallen & Street, 2010) who had breastfed within the past year up to 49,135 women with a known breastfeeding status and an infant living with the mother (Ahluwalia, Morrow, D'Angelo, & Li, 2012).

The twenty-eight articles suitable for the critical literature review comprised several different layouts and approaches. Not all articles reported research studies; some articles offered information about the initiation and maintenance of breastfeeding within particular populations. Of the 28 articles, nine articles were simply descriptive articles and two articles were commentary/editorial articles produced by professionals in the field of medicine. The remaining 17 articles incorporated a "true" research study. Ten articles incorporated a quantitative study design, such as a cross-sectional study, cohort study, descriptive study, or randomized controlled trial. Seven articles included a qualitative study, such as a case study, phenomological, or biographical study reviewing the experiences of an individual or group. Specifically, all articles addressed barriers to breastfeeding *AND/OR* resources, recommendations, and strategies/interventions to promote breastfeeding in and amongst women, particularly those considered high risk. Consequently, the chosen articles were very heterogeneous in nature. Fifteen articles focused largely on the barriers and related experiences of breastfeeding amongst African American and underage mothers. Seven articles were specific to the African American culture and two were specific to the adolescent/underage population, whereas six of the articles were representative of *ALL* women, including African Americans and underage mothers, with breastfeeding experience or intended experience. Thirteen articles focused primarily on resources, recommendations, and/or strategies to promote breastfeeding initiation and

maintenance. Two articles addressed the aforementioned topics in specific relation to adolescents. Three articles specifically focused on the aforementioned topics with African Americans. Nine articles included data applicable to both populations. It is of importance to note that some of the above mentioned articles addressed a combination of the main topics, including information about barriers and/or experiences AND resources, recommendations, and/or strategies. The characteristic differences of the selected articles made analysis challenging, however, with careful scrutiny and synthesis, eight themes developed as follows: healthcare or hospital services, knowledge/education, support, social norms and cultural beliefs, return to work or school, policy and legislation, programs and initiatives, and self-efficacy.

Determination of the aforementioned themes followed a precise process of analysis. The process involved thorough reading of each article with highlighting and note-taking to recognize important aspects of each article. Following the detailed review, a topic was determined for each article. Dependent on the identified topic, articles were grouped into two differing categories—either *barriers and experiences* or *resources, recommendations, and strategies.* Additionally within each category, the articles were separated into subcategories consisting of *African American, adolescent, or both.* Similarities and/or differences were deduced from within the articles. Eight themes emerged as a result of the meticulous analysis and are discussed in the following paragraphs.

Healthcare or Hospital Services

After thorough review, the concept of healthcare or hospital services appeared in over half of the articles. A total of 17 of the 28 articles to some degree, discussed healthcare and/hospital services in relation to breastfeeding initiation and maintenance. Numerous articles explained the impact of hospital staff and the incorporation of differing healthcare services and

practices on a mother's decision to initiate breastfeeding and therefore continue the practice. The impact of such roles were shown to be beneficial in most instances, however, it was reported that some had a negative experience and/or the interaction negatively impacted the breastfeeding course.

Successful initiation and maintenance of breastfeeding may be attributed to a positive hospital experience. Hospital experiences, as described within the articles, included the labor and birth experience, support from nurses as well as physicians, access to lactation consultants and/or other professionals who may assist with the breastfeeding process, and various other practices following the birth of the infant.

The promotion of breastfeeding must start prior to the birth of the infant. A positive childbirth experience plays an important role in the initiation and maintenance of breastfeeding. Four articles specifically addressed the importance of a positive labor and birth experience on breastfeeding. Due to an adolescent's developmental level and therefore overall feelings, emotions, and situational anxiety in regards to giving birth, a positive birth experience is vital to breastfeeding succession. Three articles specifically discussed the important role of childbirth practitioners in providing labor support to adolescent mothers (Grassley & Sauls, 2012; Sauls & Grassley, 2011; Stadtlander, 2015). In turn, a positive correlation to breastfeeding initiation and maintenance often results. One study suggested that for adolescents reporting high childbirth satisfaction, 47% continued to breastfeed at three months postpartum, compared to only 23% of adolescents reporting a negative birth experience (Grassley & Sauls, 2012).

Positive support from and access to hospital staff— nurses, obstetrician-gynecologists, pediatricians, midwives, and lactation consultants— plays a pivotal role in breastfeeding initiation and maintenance. Hospital staff can impact the mother's breastfeeding decision

through their interactions with the patient via words, actions, or even written material they provide to the patient. Fifteen of the 17 articles addressed the impact of healthcare professionals on breastfeeding initiation and maintenance.

Clinicians and healthcare staff have a unique opportunity to promote and support breastfeeding. Most women initiating breastfeeding were informed by hospital personnel of the benefits of breastfeeding to both the infant and mother. Furthermore most mothers were able to indicate several advantages to breastfeeding, such as improved infant immune system, improved infant development, promotion of bonding, and quicker weight loss postpartum (Cottrell & Detman, 2013; Kaufman, Deenadayalan, & Karpati, 2010; Lewallen & Street, 2010; Wambach & Cohen, 2009). Despite several mothers receiving useful information, others reported a lack of professional input or inadequate information. In one instance, a healthcare practitioner mentioned he or she typically only dedicated approximately 10-15 minutes per patient to discuss breastfeeding (Ruiz, Arroyo, Torres, Vera, & Ortiz, 2010). The research found that although mothers were asked about breastfeeding plans, opportunities to promote breastfeeding were missed when mothers were unsure of their plans. In these instances, mothers may have received written material such as brochures versus professional input (Cottrell & Detman, 2013; Lewallen & Street, 2010; Lewallen et al., 2006; Office of the Surgeon General, 2011; Thrower & Peoples, 2015). One study of 215 women found that 82% of providers did discuss breastfeeding with their patients, while 18% reported that no discussions had taken place (Cottrell & Detman, 2013).

Hospital practices appeared to play an important role in facilitating a woman's effort to breastfeed. Different hospital policies and procedures can either facilitate breastfeeding or work against it. The ability to feed in the birth or recovery room, especially within the first hour of life

was a significant factor. Giving an infant breastmilk only was explained as an important determinant in the maintenance of breastfeeding. Many women recognized the helpfulness of the nurses and/or lactation consultants with infant latch and it was recognized as significant. Proper latch and assistance with positioning helped to reduce the pain that many first time breastfeeders anticipated (Ahluwalia, Morrow, D'Angelo, & Li, 2012; American Academy of Pediatrics [AAP], 2005; Cottrell & Detman, 2013; Grassley & Sauls, 2012; Kaufman et al., 2010;Lewallen et al., 2006; Ma & Magnus, 2012; Office of the Surgeon General, 2011;Wambach & Cohen, 2009). Practitioners must understand how they can help women in their effort to breastfeed, potentially impacting one's decision to continue breastfeeding upon discharge.

Knowledge and Education

All women have the right to receive adequate information about breastfeeding to make informed decisions. Various elements are reflected when considering knowledge/education as it relates to breastfeeding initiation and maintenance. In addition to the need for understanding the benefits of and physiology of breastfeeding, there remains a void in fully recognizing the physical mechanics of breastfeeding and its potential effects. The void is especially true in African American and adolescent women (Lewallen & Street, 2010; Wambach & Cohen, 2009). Cultural competence has an effect on knowledge retrieval and understanding. Of the 28 articles addressing breastfeeding, 14 discussed knowledge and education related to breastfeeding.

Participants received their education or knowledge about breastfeeding from various sources. Much of the education related to breastfeeding was received through classes, nursing staff, and lactation consultants. Group classes and written brochures were identified as effective sources of breastfeeding information (Cottrell & Detman, 2013; Lewallen & Street, 2010;

Lewallen et al., 2006; Office of the Surgeon General, 2011; Ruiz et al., 2010). Despite the above sources being reported as effective by most participants, relying solely on written materials may be ineffective. African American women reported rarely hearing about benefits of breastfeeding first from their health care providers— unfortunately the information they receive elsewhere may negatively sway their decision about breastfeeding. In one study by Lewallen et al. (2006) involving a diverse group of mothers including 20.3% African Americans, the most commonly reported source of information was books and other written materials. Family and friends also provided much of the information to the mothers. The above study also indicated other sources such as nurses, lactation consultants, physicians, classes, the La Leche League, and online sources. In the context of receiving information from non-reputable sources, some women reported believing their breastmilk could be dangerous to the infant— directly absorbing their sicknesses and personal practices. Additionally, women reported the belief of infant food consumption within the early months of life as a sign of advanced development (Kaufman et al., 2010).

Education received prior to discharge from the hospital is most beneficial and addressed many of the concerns and difficulties women encounter when breastfeeding. Early breastfeeding cessation was often influenced by a belief of inadequate milk supply, latching difficulties, and sore nipples. The common complaints were generally diffused through proper patient education. (Brand, Kothari, & Stark, 2011; Lewallen et al., 2006; Sauls & Grassley, 2011). The previously listed complaints were especially true for adolescents concerned about pain associated with breastfeeding. Additionally, adolescents wanted nurses to help guide them through proper latch and support them during the process (Sauls & Grassley, 2011)

Education received regarding breastfeeding should also include any members of the mother's support system. Women reported the importance of significant others as well as family members receiving suitable information and education about the breastfeeding process, so they too could offer support and assistance to the mother and infant. Education of both individuals should occur before and after delivery to maximize the support needed for initiation and maintenance of breastfeeding. Fathers and others left out of the discussion may not receive valuable information that could assist them to embrace their supportive position (AAP, 2011; Purdy, 2010; Ruiz et al., 2011).

Support

The birthing process is a complex, holistic paradigm involving the physical, mental, social, and spiritual well-being of the mother. To achieve success, it requires an all-inclusive, interdisciplinary approach. Similarly, the breastfeeding dyad affects the same aspects of the mother. To maintain well-being throughout the sometimes anxiety-provoking, pain-provoking process, adequate support is needed from various surrounding networks. The critical literature review revealed 10 of 28 articles which addressed the concept of maternal support in some fashion.

Throughout the review, several support persons or networks were identified as significant factors in a mother's decision to initiate breastfeeding and also to continue the process postpartum. Hospital personnel (especially nurses and lactation consultants), friends, significant others (specifically the father of the baby), and family including grandmothers, mothers, sisters, aunts, cousins, etc. highly influence a new mother's thoughts and therefore decision to breastfeed and/or continue to breastfeed beyond her hospital stay. In general, women with friends who have successfully breastfed will often also choose to breastfeed. Negative attitudes and

breastfeeding experiences had by friends or family often swayed new mothers away from breastfeeding (Association of Women's Health, Obstetric and Neonatal Nurses [AWHONN], 2015; Grassley & Sauls, 2012; Kaufman et al., 2010; Lewallen et al., 2006; Lewallen & Street, 2010; Ruiz et al., 2011; Sauls & Grassley, 2011; Stadtlander, 2015; Wambach & Cohen, 2009).

Breastfeeding support was received in various manners, both during the immediate postpartum hospital stay and also after discharge. Women often described emotional support as having high significance whether from friends, family, healthcare personnel, or other breastfeeding mothers (especially African American mothers). Additionally, hands-on assistance in the hospital setting, particularly with latch issues was viewed as a substantial form of support (AWHONN, 2015; Cottrell & Detman, 2013; Kaufman et al., 2010; Lewallen& Street, 2010; Office of the Surgeon General, 2011; Purdy, 2010; Ruiz et al., 2011). Support in the hospital proved to be as important as support in the home setting. One study revealed 54.8% of women received accommodating help at home from visiting nurses, calls from lactation consultants, and friends and family (Lewallen et al., 2006). Teens typically viewed encouragement and positive support from nurses, partners, family and friends through hands-on assistance and via pertinent information related to breastfeeding issues. Additionally, teens suggested that age-specific labor support positively influenced childbirth satisfaction which ultimately affected the breastfeeding initiation process (Grassley & Sauls, 2012; Sauls & Grassley, 2011; Stadtlander, 2015; Wambach & Cohen, 2009). Additional breastfeeding support for both teens and African American mothers came in the mode of privacy, advice from school personnel, daycare teachers, and pediatric office nurses (Kaufman et al., 2010; Wambach & Cohen, 2009). Long-term (greater than three months duration) breastfeeding teen mothers all reported noteworthy

emotional, informational, and instrumental support from their own families (Wambach & Cohen, 2009).

Despite accounts of much positive support, there were also instances in which breastfeeding support was negative. A few teens reported feelings of "negative" support related to feeling dismissed, receiving contradictory information, and the administration of formula supplementation without permission. Three teens described negative support directly from their own mothers. One teen stated, "My mother she don't like it…ugh why don't you give her a bottle" (Wambach & Cohen, 2009, p. 249). Furthermore, many African American mothers reported having to defend their decision to breastfeed and received various negative comments related to the breastfeeding phenomena. The negativity was in specific relation to many of the cultural views African Americans have about breastfeeding. Several women in the African American culture viewed breastmilk as dangerous and potentially harmful to the infant, thus the lack of support (AWHONN, 2015; Kaufman et al., 2010; Lewallen & Street, 2010).

Social Norms and Cultural Beliefs

Certain cultural beliefs and observations contribute to normal feeding practices involving newborns. The same concept holds true when you assess societal influence in regards to breastfeeding initiation and maintenance. Several societal and cultural perceptions and stigmas have shaped the breastfeeding paradigm into what it is today. Whether through media, suggestive comments, disapproving glances or glares, or negative opinions, a woman's choice to breastfeed may be affected positively or negatively. Ten of the chosen 28 articles speak to the idea of social norms and/or cultural beliefs and practices and the impact they have on a woman's breastfeeding decision.

Unfortunately, the American culture has done a considerable disservice to the many women who want to pursue breastfeeding. Some data suggests the idea of breastfeeding as archaic and associated with third-world countries, whereas formula feeding is more common to modern-day America. America has portrayed breasts as sexual objects, while their nurturing purpose has been overlooked. As shown in many of the qualitative and quantitative studies involving the identified high-risk populations, the perception of breasts as sexual objects did impede upon the mother's comfort with breastfeeding in public, or anywhere for that matter (Bai, Wunderlich, & Fly, 2011; Cottrell & Detman, 2013; Kaufman et al., 2010; Office of the Surgeon General, 2011; Purdy, 2010; Wambach & Cohen, 2009).

Teens were especially prone to embarrassment and awkwardness associated with breastfeeding in public. Several felt reluctant to breastfeeding outside of the home and chose instead to bottle-feed while in public. Some teens felt as though breastfeeding in public was disrespectful and threatening, as if in attempt to allure men in a sexual nature (Kaufman et al., 2010; Wambach & Cohen, 2009). One teen described her experience as wanting everyone to see her newborn, but apprehensive to breastfeed in public, she chose to bottle-feed while away from home. This practice soon turned into full-time formula feeding as it was easier (Wambach & Cohen, 2009). Unfortunately, formula feeding is a common scenario amongst adolescent breastfeeding mothers.

As with the scenario described above, women of African American descent were also subject to societal scrutiny related to public breastfeeding. Much of the emotional consequences, however, correlated with shame. Several African American women in one New York neighborhood were reprimanded for breastfeeding in public, mostly by young men.

While it was okay to bare the top half of the breast as a symbol of her womanly identity, it was felt breastfeeding was a morally inappropriate display of the female body. One African American woman commented, "I get red, blue, and green for women who breastfeed in public, because I get embarrassed" (Kaufman et al., 2010, p. 701). Breastfeeding comments and opinions from those in public places were highly suggestive to non-Hispanic African American mothers and therefore impacted their breastfeeding practices. In addition to stranger's words, comments and opinions of friends, family, and the father of the baby highly impacted the African mother. One woman shared, "My father, he wasn't like don't do it, but he was kind of like most men, like 'I don't want you having to breastfeed her out in public,' and he wasn't like don't do it he was just kind of suspicious about the whole having to breastfeed in public" (Lewallen & Street, 2010, p.671). The overall lack of cultural acceptance was familiar to many African American women who often found themselves having to defend their decision to breastfeed their newborns.

Return to Work or School

The need to return to work or school is likely to influence a woman's breastfeeding initiation and/or duration, as well as the pattern of breastfeeding. This reality holds true for many women, but especially adolescents who must return to school and African American women who must return to work for socioeconomic reasons. Research shows women in lower income levels and those of racial and ethnic minorities (African Americans) have a higher probability of returning to work sooner postpartum and also have a tendency to be employed at worksites with insufficient breastfeeding support (Abdulloeva & Eyler, 2013). Ten of 28 articles, to some extent, explored the issue of breastfeeding and returning to work or school.

A variety of factors associated with a mother's return to work or school surfaced throughout the research process. In one particular study by Lewallen et al. (2006) involving 399 women with 20.3% of the participants claiming African American descent, 16 women reported their decision to wean based on their return to work or school. They explained that they had no place to pump, therefore, contributing to difficulty maintaining an adequate milk supply. In addition, support and encouragement for breastfeeding itself was lacking.

Without proper space and workplace support, breastfeeding mothers often skipped or delayed milk expression. A work environment based on old values and norms deterred many mothers from continued breastfeeding. The breastfeeding decision and initiation process was, in most cases, less affected by the need to return to work or school than was the duration of feeding (Lewallen & Street, 2010; McCarter-Spaulding & Gore, 2009; Purdy, 2010; Ruiz et al., 2011). A study with an initial sample of 155 African American women intending to breastfeed, revealed at six months postpartum that all but 19 mothers had returned to work. Returning to work prior to 12 weeks postpartum significantly increased the risk of weaning, but returning to work between 12 and 24 weeks postpartum did not increase the risk of weaning beyond mothers who continued to be at home (McCarter-Spaulding & Gore, 2009). Several women also commented on a deficiency of adequate break time to express milk (Murtagh & Moulton, 2011; Office of the Surgeon General, 2011; Ruiz et al., 2011). One study of African American women revealed that very few mothers used breast pumps to provide breastmilk for the infant while at day care and not one mother said they breastfed at the worksite. One mother said, "Yes, I did breastfeed for three weeks, then I went back to work and it was just too hard." Another mother stated, "I had to go back to work so she gets the bottle at the daycare center" (Cottrell & Detman, 2013, p. 303). Other factors concerning the return to work or school included employer flexibility, milk storage,

maternity leave, child care services, dedicated privacy, and job insecurity (Cottrell & Detman, 2013; Office of the Surgeon General, 2011). Dependent upon the maternal situation, all of the above- mentioned factors had an effect on a mother's breastfeeding practices.

Programs, Initiatives, and Guidelines

A woman's ability to decide, initiate, and maintain breastfeeding relies highly on the community in which she lives. Various breastfeeding services and programs may be offered within the community. Eight of the 28 articles within the critical literature review discussed programs, initiatives, and guidelines related to breastfeeding.

As discussed previously in the background portion of this paper, the AAP recommends exclusive breastfeeding to six months, followed by continued breastfeeding with introduction of complementary foods, with maintenance of breastfeeding for one year or longer as desired by mother and infant ("Policy statement", 2012). Various national and local programs are available to assist mothers as well as clinicians to promote breastfeeding amongst high-risk populations. Women, Infants, and Children (WIC) is one of the most prominent agencies providing breastfeeding support, programming, and encouragement to high-risk mothers. The United States Department of Agriculture (USDA), through social marketing approaches, also supports and encourages breastfeeding which began with WIC's 1997 campaign "Loving Support Makes Breastfeeding Work." UNICEF and the WHO established the Baby-Friendly Hospital Initiative to encourage and identify healthcare facilities providing prime levels of care to breastfeeding mothers and their newborns. The Baby-Friendly Hospital Initiative incorporates a ten step guideline format to successful breastfeeding. In 1981, the WHO produced the "International Code of Marketing of Breastmilk Substitutes" to improve practices that may interfere with protection and promotion of breastfeeding. Moreover, the AWHONN developed key nursing

care measures to support breastfeeding (DiFrisco et al., 2011; McNeal, 2014; Office of the Surgeon General, 2011; Purdy, 2010; Stanton, 2011).

The National Institute for Children's Health Quality (NICHQ) introduced the "Best Fed Beginnings" campaign. Funded by the CDC, it currently supports 89 hospitals to improve maternity care practices and assists them in their endeavor to become "baby friendly." NICHQ found that hospitals deemed "baby friendly" through the Baby Friendly Hospital Initiative received higher patient satisfaction scores, a better reputation, and cost savings (McNeal, 2014).

Studies show that implementation of the above programs, strategies, and/or guidelines positively affect breastfeeding initiation and maintenance. One study from a large, urban, academic hospital striving for Baby Friendly status, showed that at two to four weeks discharge, 87.5% of participants reported sustained breastfeeding (DiFrisco et al., 2011). Another study found that first time black mothers enrolled in WIC were more likely to initiate breastfeeding with assistance of hospital support (Ma & Magnus, 2012).

Policy and Legislation

Given the various cultural and societal biases affecting initiation and duration of breastfeeding, implementation of workplace and public policies and legislation has occurred in recent years. This is an important step in the advocation of breastfeeding, especially amongst high-risk populations like adolescent and African American mothers. Seven articles were found to give descriptive information about a number of policies and legislative action affecting breastfeeding.

Various local and national legislative changes in the past have been implemented, but none have truly provided significant rights to breastfeeding mothers. The Patient Protection and Affordable Care Act (PPACA or ACA or sometimes referred to as 'Obamacare') introduced in

2010 has been a significant piece of advocacy for breastfeeding mothers. Prior to 2010, only 24 states had enacted any form of worksite breastfeeding law supporting a mother's right to continue breastfeeding after returning to work. The ACA includes a provision providing substantially more support to the working mother who wishes to breastfeed. Section 4207 of the ACA changed the legal landscape of breastfeeding. The act requires all employers to provide, per employee request, 'adequate' break time to express milk (but not to actually breastfeed) for a child up to one year of age. A private area other than a bathroom is necessary for the purpose of breastmilk expression. The break times do not need to be paid, under the discretion of the employer. Employers with 50 or less employees are exempt from the ACA provision (Abdulloeva & Eyler, 2013; Goldbas, 2015; Murtagh & Moulton, 2011; Stanton, 2011).

According to the 2015 National Conference of Legislatures (NCSL) state laws regarding breastfeeding differ. Forty-nine states, the District of Columbia and the Virgin Islands have laws allowing breastfeeding in any public or private location. Exemptions from public indecency laws exist in 29 states, the District of Columbia and the Virgin Islands. Exemptions from jury duty related to the need to breastfeed are in place in 17 states and Puerto Rico and public awareness campaigns are present or encouraged in five states and Puerto Rico (Goldbas, 2015).

On the heels of the presentation of the 2010 ACA provisions for breastfeeding, 2011 also introduced legislation promoting breastfeeding. The *Surgeon General's Call to Action to Support Breastfeeding* was launched. The call identified breastfeeding as a primary strategy for health promotion and prevention. It identified roles and responsibilities of individuals to support and encourage breastfeeding. Additionally, the call explained 20 key steps and strategies for six major divisions of society: (1) Mothers and their families, (2) Communities, (3) Health care, (4) Employment, (5) Research and surveillance, and (6) Public health infrastructure. Furthermore,

February 2011 saw the Internal Revenue Service (IRS) allow breast pumps and supplies be a deductible medical expense. Moreover, Michelle Obama included the concept of breastfeeding in her "Let's Move" campaign (Stanton, 2011).

Self-efficacy

Breastfeeding self-efficacy is a concept based on the social cognitive theory. The concept is essentially described as the mother's confidence and ability to follow-through with her decision to breastfeed her infant. Although not addressed in a large number of articles, five articles carefully examined the concept of self-efficacy and breastfeeding.

In general self-efficacy in high risk populations is a significant factor in predicting breastfeeding initiation and maintenance. The critical literature review revealed some data supporting self-efficacy as well as contradictions to it. Studies involving teens found various factors affecting self-efficacy. Some teens described their decision to breastfeed as a process that occurred over a period of time involving factors such as education, social networks, and benefits of breastfeeding versus confidence in their ability to do so (Sauls & Grassley, 2011; Wambach & Cohen, 2009). Another study indicated that attitude and subjective norm were strong predictors of intention for non-Hispanic African American mothers (Bai et al., 2011). In one study which implemented the use of a breastfeeding self-efficacy survey, African American women scored very low, indicating that although they had intended to breastfeed, they did not always follow through with the initiation or maintenance or both (McCarter-Spaulding & Dennis, 2010). Overall according to the data, a women's breastfeeding intention does not necessarily dictate her breastfeeding outcome.

CHAPTER 4. DISCUSSION AND CONCLUSION

Discussion

The intent or purpose of the critical literature review was to investigate the phenomena of breastfeeding initiation and maintenance among high-risk populations, specifically African American and adolescent mothers. Moreover, the exact goal was to determine what barriers exist to initiation and maintenance of breastfeeding and what resources and recommendations or interventions are available and/or applicable to the said high-risk populations.

Barriers

As indicated through various statistics in Chapter 1 of the critical literature review, nationwide rates of breastfeeding initiation and maintenance fall short of the recommended American Academy of Pediatrics guidelines. African American women and adolescent mothers are amongst those with both the lowest breastfeeding rates and the highest prevalence of diseases linked to the lack of optimal breastfeeding. When compared to other racial groups, African American mothers are less likely to initiate and/or maintain breastfeeding according to the given guidelines. The NIS indicates that adolescent mothers (those less than 20 years of age) are approximately 20% less likely to initiate and maintain breastfeeding than women over age 30 years. At 30%, the lowest initiation rate was amongst African American adolescent mothers ("Policy statement," 2012). Given the above mentioned data, it is apparent that barriers to breastfeeding exist within the aforementioned populations.

Through careful analysis and synthesis of the 28 articles in the critical literature review, although not always specifically stated, barriers were revealed. Twelve articles addressed barriers and experiences of mothers who had breastfed previously, are currently breastfeeding, or intend to breastfeed. Two articles specifically addressed adolescent concerns and five focused

on the African American culture. General barriers and experiences within various populations were the focus of the remaining five articles. With 79% of infants initiating the breastfeeding process, 49% still breastfeeding at six months and only 27% at 12 months, all of which statistically fall well below the *Healthy People 2020* target of 60.6% at six months and 34.1% at 12 months (CDC, 2014), it can be assumed that barriers exist among all mother populations regardless of race or age. Theoretically, the literature found could be applied to all mothers, including high-risk populations.

Many of the perceived and noted barriers were in unison with the themes that emerged throughout the analysis process. Therefore, much of the information discussed in the subsequent paragraphs will mimic information posed in the synthesis of articles section of this paper. Accordingly, one can conceptualize that concepts such as support, hospital and healthcare/services and practices, education or knowledge, mother's return to work or school, social norms and cultural beliefs, and self-efficacy can play a significant role in the process of breastfeeding initiation and maintenance. As with all patient care, clinicians and practitioners must identify the desires and needs of each mother and implement care accordingly. Each mother's beliefs, traditions, attitudes, physical capabilities, and developmental level should be appreciated and respected, so as to approach the concept of breastfeeding with compassion, consideration and patience.

Although the critical literature review exposed a variety of information about barriers to breastfeeding, more research is needed to focus on barriers specific to adolescent and African American mothers. Much of the data explored breastfeeding mothers in general, with no specific population focus. A more specific review of each population would provide even more clinically significant information.

Hospital or health care services. The CDC indicates that barriers to breastfeeding are prevalent during the peripartum, intrapartum, and postpartum stages as well as upon discharge from the hospital (Office of the Surgeon General, 2011). Hospital and healthcare services were a main theme that emerged throughout several of the articles. As mentioned previously, 17 of the 28 articles displayed information regarding this topic. Throughout the literature, the majority of mothers were in agreement with most practitioners encouraging the breastfeeding process and providing mothers with adequate information regarding the benefits of breastfeeding. Additionally, most mothers were exposed to practices within the hospital setting to promote breastfeeding, such as "rooming in," breastfeeding within the first hour after birth, and assistance with latch. Practitioners including nurses, lactation consultants, and physicians have a great opportunity to promote breastfeeding and are apt to provide much encouragement and support to new mothers, through hands-on education or supplemental information to assist with the breastfeeding process. Unfortunately, mothers were also exposed to some practices that may act as barriers to breastfeeding. Obviously if the above mentioned practices did not occur, they were considered barriers. Many adolescent mothers described a negative birth experience as a barrier to the initiation of breastfeeding, whether it involved surgery, medications, or a lack of compassion from the nurses. The use of formula supplementation in the hospital setting was a barrier discussed by several mothers. Five articles found mention this practice as a significant barrier to either the initiation or maintenance of breastfeeding. A study of 106 adolescent mothers by Grassley and Sauls (2012) found an almost 50% level of formula supplementation amongst adolescent mothers prior to hospital discharge. This statistic is a significant risk factor for shorter duration of breastfeeding and is a common hospital practice.

Other breastfeeding barriers linked to healthcare practices were exposed during the review and are important to identify. The extent to which they were mentioned in each of the 17 articles was very sporadic. Despite the limited discussion of some health care barriers, it is of significance to mention them here. Other significant barriers to breastfeeding initiation and maintenance as found in the literature included: invasive medical interventions during labor and delivery, absence or lack of hospital policy related to breastfeeding, lack of clinician knowledge and confidence regarding the process of breastfeeding, untreated pain and fever, poor discharge or follow-up instructions, lack of support for lactation, and short hospital stay (Brand et al., 2011; Cottrell & Detman, 2013; Kaufman et al., 2010; Ma & Magnus, 2012; Office of the Surgeon General, 2011; Purdy, 2010; Wambach & Cohen, 2009).

Knowledge and education. All women, regardless of age or race, have the right to unbiased, accurate information regarding the benefits and potential barriers associated with breastfeeding. The source of a mother's breastfeeding information plays a major role in the accuracy of the data and may have an effect on a woman's breastfeeding decisions. Although the majority of women were able to describe at least some of the main benefits of breastfeeding, many mothers, especially first time breastfeeders, were unfamiliar with the mechanics of breastfeeding as well as the risks associated with not breastfeeding. In light of the lack of knowledge, health care providers must be sure to grasp the opportunity to educate and discuss breastfeeding with pregnant and new mothers. Several participants in the review expanded on this very issue. Some mothers mentioned they were given written materials versus discussion time with their provider. Others described very limited conversation regarding the topic. One African American mother reported, "Yes, they asked me if I was going to breastfeed, and I

wasn't sure I was going to, so they didn't proceed to ask me any questions or talk to me about it" (Cottrell & Detman, 2013, p. 300).

In this author's opinion, the previously stated circumstances are potential barriers for several reasons. Dependent on the source, the information provided may not be scientifically based and therefore is non-reliable. Written information via pamphlets, handouts, etc., although generally evidenced-based and reputable, may not be written at a comprehensible level for the patient. The above may be especially true of adolescents and/or African American mothers who have not completed an education or who have a low IQ. Additionally, providing mothers with only written information or other breastfeeding material versus engaging in conversation does not afford the provider verification of patient understanding and/or the opportunity to answer questions the mother may have.

As discussed previously, it is vital for breastfeeding mothers to have positive support persons available for assistance and encouragement. The concept of knowledge and education of breastfeeding benefits, mechanics, and potential problems should also be extended to the support persons. Studies of African American families in which education on breastfeeding was directed at the father of the infant found a 20% increase in breastfeeding initiation and maintenance (Office of the Surgeon General, 2011). Through proper education and adequate knowledge, mothers with the help of their support networks can properly weigh the advantages and disadvantages of breastfeeding versus formula feeding. Without accurate and sufficient information, they cannot make an evidence-based, informed decision about feeding their infants.

Support. The significance of the degree of support for breastfeeding mothers from several differing networks— including hospital staff, family, father of the baby, employers, and the general public— was highly notable throughout the literature. The participants in the studies

demonstrated an understanding, need, and receptiveness of a supportive network. Negative comments, distracting opinions, disapproving glares and stares, and overall absence of affirmative support from others were revealed as momentous barriers to the initiation and preservation of breastfeeding amongst the noted populations. When a women decides to breastfeed, she should be encouraged to discuss her desires with others, so they too can prepare themselves and offer support. As with all personal and potentially sensitive topics, the method or manner in which a support person approaches the topic can have an effect on the overall initiation and maintenance of breastfeeding. With acknowledgement of cultural and societal norms, as well as individual beliefs and attitudes, support persons have the capability of providing high-risk mothers with the sustenance and encouragement needed to push through the obstacles and hurdles faced during breastfeeding. Health care providers must provide support in a culturally sensitive and developmentally appropriate manner.

Social norms and cultural beliefs. Certain cultural beliefs and societal norms will impact a women's decisions about infant feeding practices. Women associated with both high-risk groups, African Americans and adolescents, are faced with multiple, competing ideas and opinions of breastfeeding and therefore women's breasts in general. Ten of the 28 articles discussed this concept and exposed the potential hurdles that may be imposed upon women who choose to breastfeed.

Unfortunately, American society has objectified women's breasts to that of a sexual nature, versus the God-given intention. Several women explained the embarrassment and punitive sensation of breastfeeding in public places. They feared being stigmatized by people around them, including family and strangers. The experience was noted by both adolescents and African American women. One African American mother said, "It was just something that I just

didn't want to do because I didn't want to be one of those people in public having to pull out my breast" (Cottrell & Detman, 2013, p.302). Fortunately, in recent years, various forms of legislation have been enacted to protect women who choose to breastfeed in public. For further information, refer to the section discussed under policy and legislation in the pages previous to this section

In addition to the social stigma of breastfeeding, many cultural beliefs and practices have posed barriers to women pondering the idea of initiation. To many within the African American culture, breastfeeding in public is considered unthinkable. Women in one study described it as 'morally dubious behavior' (Kaufman et al., 2009). Within the same study, African American women viewed breastfeeding in front of other children as a 'corruptive influence.' Conversations about breastfeeding within family groups may also not take place as they are deemed very intimate. Other members of the African American culture tend to believe their breastmilk is tainted and could impose illness on their infant (Kaufman et al., 2010).

Given the extent of the social and cultural impacts on breastfeeding initiation and maintenance, culturally competent care is key. It is imperative that health care providers develop racially and ethnically sensitive interventions to promote breastfeeding, especially in high-risk populations. Data in the 28 articles did not suggest specific culturally sensitive interventions.

Return to work or school. For socioeconomic and personal development reasons, most participants within the critical literature review made the decision to return to work or school within 12 weeks of delivery. The return to work or school was a significant barrier to continuation of breastfeeding. The lack of flexibility in work or school hours, lack of dedicated breastfeeding areas, inadequate fridge space for proper storage, job insecurity, limited maternity leave and difficulty finding childcare were all factors contributing to this barrier. Studies

indicate women intending to return to work within one year post-delivery are less likely to initiate breastfeeding and mothers working full-time breastfeed for shorter durations than women who work part-time or are unemployed (Office of the Surgeon General, 2011). A study of women at high-risk for not breastfeeding (African Americans) found that mothers planning to return to work full-time during the month prior to doing so had a 1.34 times increased risk of ending breastfeeding compared to mothers not planning to return to work. In the actual month of returning to work, mothers had 2.18 times the odds of terminating breastfeeding compared to nonworking mothers. In the first month after returning to work her odds of ending breastfeeding were 1.32 times that of nonworking mothers (Murtagh & Moulton, 2011). The above are significant figures and indicators to be considered when assisting and supporting mothers to make decisions regarding breastfeeding. It is key to educate mothers intending to breastfeed about various obstacles they may encounter with their return to work or school.

Considering the already low breastfeeding initiation rate of 37% amongst low-income African Americans and a 30% initiation rate amongst African American adolescents ("Policy statement," 2012), the need to return to work or school poses an even greater risk to the promotion of breastfeeding in these populations. Until 2010 there were no federal laws providing protection to working mothers, although 23 states had previously adopted legislation to boost breastfeeding in the workplace. The Patient Protection and Affordable Care Act of 2010 provides enhanced rights to breastfeeding mothers in the workplace. As discussed in a previous section of the literature review, the ACA requires employers to provide private breastfeeding areas as well as adequate break times for women to express milk. Section 4207 of the ACA is integral to breastfeeding initiation and maintenance for two paramount reasons. First, it is likely to rally a new mother's ability to express breastmilk with the expectation of positively affecting

the health of her infant and herself. Second, it is the first federal law requiring accommodation for working mothers (Abdulloeva & Eyler, 2013; Goldbas, 2015; Murtagh & Moulton, 2011; Stanton, 2011).

The concept of breastfeeding mothers is also of economic benefit to employers. In discussion with employers about public health and economic infrastructure, the benefits should be explained so as to encourage employers to fully support their breastfeeding mothers. The following are proven economic benefits of breastfeeding: (1) Higher employee productivity and lower absenteeism. (2) Increased employment retention of breastfeeding mothers. (3) Family cost savings with the avoidance of purchasing formula for supplementation. (4) Decreased health care costs of $3.6 billion, which results in savings to public and private insurers (Murtagh & Moulton, 2011).

Self-efficacy. Understanding why individuals behave the way they do is essential to the development of successful breastfeeding promotion strategies. Consideration of a new mother's breastfeeding self-efficacy is significant to provide her with the support she needs to successfully breastfeed. Despite only a few articles recognizing the significance of self-efficacy and the initiation and maintenance of breastfeeding, it can be deduced from the literature that a lack of self-efficacy creates a barrier to the breastfeeding process. Attitude and subjective norms are powerful indicators of an African American mother's intention to breastfeed. It is recommended that the determination of predictors of intention will assist with the design of breastfeeding promotional strategies (Bai et al., 2011). Teens in one study done by Wambach and Cohen (2009) indicated their decisions to breastfeed. Seven teens were influenced knowing they had also been breastfed as children. Sixteen of 23 teens reported their main reason was due to the benefits given to infant via breastfeeding. The same study found that teens making a decision to

breastfeed early in pregnancy were more likely to breastfeed for a longer duration than teens making that decision later. Data shows self-efficacy in African Americans holds the same influence as in adolescents. Women have a wide-range of thoughts about breastfeeding which ultimately determine lactation initiation and duration.

Services, Recommendations, and Interventions/Strategies

Although not always explicitly described, several services, recommendations, and interventions do exist to promote breastfeeding initiation and maintenance in all women. Less commonly discussed are interventions and services specifically available for women at high risk for not initiating or maintaining breastfeeding. Fortunately, many of the proposed recommendations, services and strategies can be implemented and utilized with all breastfeeding populations. The main factor regarding the options and recommendations available to women is first recognizing and understanding the existing barriers to breastfeeding initiation and maintenance. Action is needed to overcome the many barriers that exist despite the known benefits of breastfeeding. The critical literature review revealed several articles that commented on and gave suggestions, such as programming, strategies/interventions, and general recommendations, to promote the initiation and maintenance of breastfeeding.

Various healthcare and hospital practices were mentioned as potential maternal barriers to breastfeeding. Hospital practices shown to positively impact breastfeeding include 'rooming in' or keeping mother and baby together, skin-to-skin contact between mother and infant immediately post-delivery, breastfeeding attempts within the first hour of life, staff assistance with latch and early infant feeding, limiting the use of artificial nipples and pacifiers, eliminating the distribution of formula gift bags upon discharge, and providing staff with breastfeeding education (AAP, 2005; Brand et al., 2011;Cottrell & Detman, 2013; Di Frisco et al., 2011;

Grassley & Sauls, 2012; Kaufman et al., 2010; Lewallen & Street, 2012; McNeal, 2014; Office of the Surgeon General, 2011; Purdy, 2010; Wambach & Cohen, 2009). Additionally, providers and clinicians need to determine a mother's attitude regarding breastfeeding. A mother's thoughts, perceptions, and attitude regarding breastfeeding often plays a significant role in her ability to initiate and maintain breastfeeding (Bai et al., 2011; Kaufman et al., 2010; McCarter-Spaulding & Gore, 2009; Wambach & Cohen, 2009)

Discussed throughout the literature, the Baby Friendly Hospital Initiative is one program currently in place to promote breastfeeding. Established in 1991 by UNICEF and the WHO, it is a program with an intent to globally encourage and recognize hospitals giving optimal care to breastfeeding women and infants. The program encourages, protects, and supports hospitals through the "Ten Steps to Successful Breastfeeding." The 'steps' are the core components of the initiative and include the following (Office of the Surgeon General, 2011):

1. Incorporate a breastfeeding policy that is communicated to all staff.
2. Train all health care staff to properly implement the policy.
3. Educate all women about the benefits and management of breastfeeding.
4. Assist mothers to initiate breastfeeding within one hour of birth.
5. Demonstrate to mothers the mechanics of breastfeeding and how to maintain lactation, even when apart from their infant.
6. Unless medically necessary, do not give the newborn infant food or drink other than breastmilk.
7. Practice 'rooming in'— allowing mothers and infants to remain together 24 hours a day.
8. Encourage breastfeeding on demand.

9. Do not give pacifiers or artificial nipples to breastfeeding infants.
10. Foster the development of breastfeeding support groups and refer mothers to them upon discharge.

As discussed previously, women receiving care at designated "Baby Friendly" hospitals generally report higher satisfaction with their care. The satisfaction contributes to a strong reputation for the hospital. Additionally, long-term hospital savings result with higher patient contentment.

Various studies indicated the lack of continued assistance at home. The recommendation of using community nurses or lactation consultants to make home visits following discharge has been suggested (Pugh et al., 2010). Nurse and lactation consultants have the ability to effectively promote and encourage breastfeeding through educational expertise, experience addressing breastfeeding and psychosocial issues, and skills to assess and assist with the mother-infant interaction (AAP, 2005; AWHONN, 2015; Cottrell & Detman, 2013; DiFrisco et al., Lewallen & Street, 2010; Lewallen et al., 2006; Office of the Surgeon General, 2011; Pugh et al., 2010; Stanton, 2011; Wambach & Cohen, 2009). One article discussed the concept of a breastfeeding support team (BST), which included a peer counselor as well as a community nurse. The BST role began in the hospital postpartum and provided support via home visits through 24 weeks postpartum. The concept of the BST was supported by several different strategies to: (1) strengthen maternal competence and commitment to breastfeeding; (2) provide parental education; (3) provide/identify social support systems needed to maintain breastfeeding; (4) highlight behaviors to decrease fatigue and breast pain commonly reported by high-risk populations; and (5) develop connections with community services that provide breastfeeding support. The BST was introduced to 328 mainly young African American mothers. The results

demonstrated an increased rate of breastfeeding through 16 weeks postpartum (Pugh et al., 2010).

Lack of education and knowledge was cited as a potential breastfeeding barrier. Most women are aware of the value of breastfeeding and can typically list several benefits both to the infant and to the mother herself. There is, however, a disconnect in knowledge of the risks of not breastfeeding as well as the mechanics of breastfeeding amongst other lapses in awareness of the breastfeeding dyad. The disconnect is especially common in adolescent and first-time breastfeeding African American mothers. Unfortunately, as indicated by the qualitative and quantitative studies in this critical literature review, education and reputable information is not always accessible or easily understood by the populations listed (AWHONN, 2015; Lewallen & Street, 2010). A practitioner must prioritize the education of mothers with evidence based information and verify a mother's understanding. In addition to providing a mother with accurate, evidence based information regarding breastfeeding, education should be extended to the mother's support network, especially the infant's father. Attendance to a breastfeeding class is recommended to compliment the information received from practitioners.

Varied hospital and healthcare services, lack of education and knowledge, as well as social stigmas and cultural beliefs pose barriers to breastfeeding mothers. As discussed in previous sections, America has objectified women's breasts as sexual objects and therefore many mothers, especially adolescents are hesitant to breastfeed in public or even their own home. Peer counselors may be of benefit to breastfeeding mothers facing shame or embarrassment. Peer counselors are mothers who have had personal experiences with breastfeeding and are trained to provide counseling and assistance to other mothers with whom they may share characteristics such as language, race/ethnicity or age (Office of the Surgeon General, 2011). Various states

have passed laws to prevent the scrutiny and shame that may exist due to breastfeeding in public places. Laws to protect mothers now exist in many states throughout the US. The AWHONN supports legislation for breastfeeding in public and private locations as well as the exclusion of breastfeeding from state and federal indecency legislation. As with social stigmas, cultural beliefs may also present barriers to breastfeeding. The AWHONN recommends culturally specific public health campaigns to encourage breastfeeding especially within populations at risk for not breastfeeding – African Americans, Native Americans, and Asian-Pacific Islanders. In addition to public health campaigns, practitioners should incorporate culturally sensitive considerations into maternity practices (APA, 2005; AWHONN, 2015; Bai et al., 2011; Cottrell& Detman, 2013; Lewallen & Street, 2010; Office of the Surgeon General, 2011). The promotion of breastfeeding as a cultural norm is essential.

WIC has long been a supporter and proponent for breastfeeding initiation and maintenance. A leading goal of the WIC program is to improve the nutritional status of infants, therefore WIC participants are encouraged to breastfeed their infants. WIC has started a nationwide training program for all local agencies called 'Using Loving Support to Grow and Glow in WIC,' with the intent of ensuring that all WIC staff can effectively promote and support breastfeeding. WIC offers peer counselors as support persons for their breastfeeding participants. Additionally, exclusive breastfeeding is rewarded in the WIC program via offering a food package with higher monetary value to breastfeeding participants (Office of the Surgeon General, 2011). WIC focuses its services on several high-risk populations like African American and adolescent mothers. In addition to the services provided to women, WIC's "Fathers Supporting Breastfeeding" campaign focuses on educating African American fathers about

breastfeeding, so they too can continue offering support to the mother of their child (McNeal, 2014).

In recent years, the passage of the PPACA has given more freedom and protection to breastfeeding mother's returning to work. The PPACA as described in previous sections of this paper has lifted some of the barriers to mothers returning to work, such as lack of adequate break time to express milk, lack of designated areas to express milk, job insecurity, and lack of employer support. Even with the law in place, barriers still exist such as finding adequate childcare so the mother can return to work or school. As a practitioner, it is essential to discuss potential barriers with the mother and her support system and provide them with information about services available to them. In addition to the PPACA, other guidelines and decisions have been made and proposed to assist with the obstacles mothers may face when choosing to breastfeed. The Surgeon General's Call to Action to Support Breastfeeding identified breastfeeding as a primary prevention strategy and offered guidelines for several public sectors to follow to support breastfeeding. Additionally, the IRS recalled a past decision and now considers breast pumps and supplies a deductible medical expense. Michelle Obama is also an endorser of breastfeeding (Murtagh & Moulton, 2011; Stanton, 2011).

In addition to the above mentioned programming, recommendations and interventions, the American Academy of Pediatrics gives an extensive list of guidelines and recommendations to promote and encourage the initiation and maintenance of breastfeeding. Further recommendations and guidelines include but are not limited to the following: minimization or modification of maternal medications that may potentially alter the infant's level of alertness and therefore feeding behavior; encourage the mother to keep a record of each breastfeeding encounter including time and duration as well noting infant urine and stool patterns during the

early days of breastfeeding; professional collaboration with the dental community to encourage oral health assessments of infants between six months and one year of age; and arrangement of guidance to adoptive mothers choosing to breastfeed through induced lactation. A comprehensive description of guidelines and recommendations can be found under the AAP Policy Statement on Breastfeeding and the Use of Human Milk (2005).

Implications

Upon completion of the literature review, several implications for practice were revealed. Breastfeeding initiation and maintenance issues which affect nursing care are based on the identified barriers and interventions, recommendations and services available. Implications to nursing practice include the following elements: nursing actions and cultural competence.

Nursing Actions

Efforts on the part of healthcare providers need to be implemented before, during, and after delivery of the baby. A thorough multidisciplinary approach to the care of a breastfeeding mother must be executed. Prenatal engagement of mothers and support systems in question/answer to dialogue allows for the healthcare provider to assess maternal beliefs and attitude as well as dispel any mistruth and misconceptions about breastfeeding. Discussions should focus on varying factors, such as pain control, potential problems, and returning to work amongst others. To ensure consistent, reliable communication of the breastfeeding process between mothers and hospital staff, implementation of hospital policies regarding proper distribution of breastfeeding information to all expectant mothers may be necessary. The policy could include signed documentation of the delivery and receipt of breastfeeding material from both the provider and mother. With each prenatal visit, documentation of discussion of breastfeeding plans should be noted. Additionally, early prenatal incorporation of group

question and answer sessions lead by IBCLCs may help to clear anxieties and uncertainties of breastfeeding as well as promote the initiation and maintenance of the process. Members of the mother's support system should be encouraged to attend the classes also. Additionally, to help mentor and support the expectant mothers, inviting to the meetings women of the same high-risk populations who have successfully breastfed in the past, may be of benefit. Implementation of such interventions may be especially helpful for adolescent mothers who frequently reported enhanced anxiety about the breastfeeding process, especially in relation to anticipated pain. Additionally, mothers of African American descent who may be subject to non-approval from family and friends would benefit from interaction with other African American women who have successfully breastfed.

Nursing care throughout the labor and delivery process will consequently have a great impact on a mother's initial breastfeeding experience. As noted in the literature, a mother's intrapartum experience can have a positive or negative effect on her breastfeeding experience. Therefore, it is essential that a well-trained nurse be available to assist and support during the intrapartum period, especially with a mother who is considered high-risk for not carrying out the breastfeeding process. Consequently, all nurses assisting with the birth process should receive supplemental training related to culturally competent care. Birth centers caring for large populations of African American and/or adolescent mothers should provide specialized training to their staff free of charge.

It is vital that clinicians incorporate maternity practices to encourage and support breastfeeding in the immediate postpartum timeframe. Proper education of hospital staff is critical to assure appropriate care practices are being followed. Twice-yearly training seminars can assist staff to provide up-to-date, evidence-based education on maternity practices important

to the promotion of breastfeeding amongst all populations, especially high-risk populations. A visual tool of maternity practices supporting breastfeeding, such as a poster, can be placed in nursing stations and patient rooms as a reminder to staff as well as breastfeeding mothers and support persons. The Baby Friendly Hospital Initiative, as referenced previously, offers significant support to breastfeeding mothers and promotes numerous guidelines to uphold maternal and infant health. Therefore, encouragement of administration by nursing staff to strive for 'Baby Friendly 'achievement is significant. Prompt and thorough follow-up attention in the postpartum period is also vital. Follow-up phone calls and home visits to assess the breastfeeding process and any concerns the mother or support system may have is ideal. The Affordable Care Act of 2010 included a provision to expand home visitations for pregnant women and children ages birth through kindergarten (Office of the Surgeon General, 2011). This piece of legislation accentuates the promotion of breastfeeding beyond the hospital period. Although legislation is in place and home visits are encouraged, not all healthcare facilities provide the service to new mothers. Employment of additional IBCLCs or specially trained nurses may be necessary to offer home visits to *ALL* breastfeeding mothers. Scholarship money may be an incentive to assist current nurses to obtain their certification as a lactation consultant.

As indicated in several studies, one of the most prominent barriers to maintenance of breastfeeding is the return to work or school. The ACA (2010) introduced legislation to support working, breastfeeding mothers through designated breastfeeding areas, job security, adequate break times, etc. Unfortunately, the ACA omitted legislation to encourage breastfeeding amongst adolescent mothers returning to school. In advocation of mothers returning to school, nurses should contact their local and state legislators to request student-specific accommodations. Nurses can assist the mother in a practical plan for breastmilk pumping and

storage upon her return to work or school. In the role of advocate, a nurse or other provider can contact the mother's school or place of work and inquire about the accommodations available for breastfeeding mothers. A nurse may be needed to assist the new mother in obtaining a breast pump and educating her on the proper use of it, including trouble-shooting. Clinicians should be familiar with community-based services that support and promote breastfeeding, such as WIC, so referrals can be made. The above health care interventions certainly fit well when caring for a breastfeeding mother who is at risk for falling short of the AAP guidelines.

Cultural Competence

When working with mothers belonging to a high-risk population such as African Americans and adolescents, culturally competent care is essential. Health care professionals need to develop racially and ethnically sensitive breastfeeding interventions and also overcome their own cultural and professional biases. Cultural competence is one of the main factors in narrowing the gap in health disparities among diverse cultures. The *Andrews/Boyle Transcultural Nursing Assessment Guide for Individuals and Families* (2012) evokes cultural awareness via a series of comprehensive questions. When implemented as part of the assessment process, the guide provides a holistic platform for health care personnel to develop a culturally-sensitive plan of care. Upon admission of an expectant mother, clinicians should implement the assessment guide to initiate development of culturally appropriate interventions.

The *Andrews/Boyle Transcultural Nursing Assessment Guide for Individuals and Families* assesses 12 different aspects of human nature. Each category is summarized below by taking quoted key statements directly from the *Andrews/Boyle Transcultural Nursing Assessment Guide for Individuals and Families* (Andrews & Boyle, 2012).

- Biocultural variations and cultural aspects of the incidence of disease— Does the client have distinctive features of a particular ethnic or cultural group (i.e. skin color, hair texture)? How do anatomic, racial, and ethnic variations affect the physical and mental examination?
- Communication— What language does the client speak at home with family members? What is the fluency level of the client in English- both written and spoken? How does this client prefer to be addressed? What are the styles of individual and family members' nonverbal communication? How do the client and family members feel about health care providers who are not of the same cultural or religious background (e.g. Black, middle-class nurse; Hispanic of a different social class; Muslim or Jewish care provider)?
- Cultural affiliations— With which cultural group(s) does the client report affiliation (e.g., American, Hispanic, Irish, Black, Navajo, American Indian, or combination)? How do the views of other family members coincide or differ from the client regarding cultural affiliations? Where was the client born? Where has the client lived (country, city, or area within a country) and when (during what years of his or her life)?
- Cultural sanctions and restrictions— How does the client's cultural group regard expression of emotion and feelings, spirituality and religious beliefs? How do men and women express modesty? Does the client or family express any restrictions related to sexuality, exposure of various body parts, or certain types of surgery (e.g., vasectomy, hysterectomy, abortion)?
- Developmental considerations— What are the beliefs and practices associated with developmental life events such as pregnancy, birth, marriage, and death? What is the cultural perception of aging (e.g., is youthfulness or the wisdom of old age more valued)?

- Economics— What insurance coverage (health, dental, vision, pregnancy, cancer, or special conditions) does the client and his or her family have? What impact does the economic status have on the client and his or her family's lifestyle and living conditions?
- Educational background— What is the client's highest educational level obtained? Does the client's educational level affect his or her knowledge level concerning his or her health literacy —how to obtain the needed care, teaching related to or learning about health care, and any written material that he or she is given in the health care setting (e.g., insurance forms, educational literature, information about diagnostic procedures and laboratory tests, admissions forms, etc.)? What learning style is most comfortable and familiar? Does the client access health information via the Internet?
- Health-related beliefs and practices— To what cause does the client attribute illness and disease or what factors influence the acquisition of illness and disease (e.g., divine wrath, imbalance in hot/cold, yin/yang, punishment for moral transgressions, a hex, soul loss, pathogenic organism, past behavior, growing older)? Is there congruence within the family on these beliefs? What is the client's self-image in relation to the ideal? How does the client express pain, discomfort, or anxiety? What is the client's religious affiliation?
- Kinship and social networks— What is the composition of the client's family? Who makes up the client's social network (family, friends, peers, neighbors)? How do members of the client's social support network define caring or caregiving? How does the client's family participate in the promotion of health (e.g., lifestyle changes in diet, activity level, etc.) and nursing care (e.g., bathing, feeding, touching, being present) of the client? Does the cultural family structure influence the client's response to health and illness (e.g., beliefs, strengths, weaknesses, and social class)?

- Nutrition— What nutritional factors are influenced by the client's cultural background? How are the foods prepared at home (type of food preparation, cooking oil[s] used, length of time foods are cooked [especially vegetables], amount and type of seasoning added to various foods during preparation)? Does the client or client's family use home and folk remedies to treat illness (e.g., herbal remedies, acupuncture, cupping, or other healing rituals often involving eggs, lemons, candles)? What is the role of religious beliefs and practices during health and illness?
- Values orientation— What are the client's attitudes, values, and beliefs about his or her health and illness status? How does the client perceive and react to change? How does the client value privacy, courtesy, touch, and relationships with others?

Several of the above mentioned aspects are similar to the themes that emerged throughout the critical literature review. Similar topics included social norms and cultural beliefs, knowledge and education, support systems, health care practices and beliefs, and developmental levels and considerations. Recommendations, services, and interventions promoted in the critical literature review can be considered and developed through incorporation of the Andrews/Boyle assessment guide.

In addition to implementation of the *Andrews/Boyle Transcultural Nursing Assessment Guide for Individuals and Families* in the clinic or hospital setting, it is essential to publicize breastfeeding as a social norm. Public events to promote and support the concept of breastfeeding may help to dispel negative opinions and myths surrounding breastfeeding. Guest speakers including professional clinicians, past and current breastfeeding mothers, and members of support systems, may provide vital, reassuring information to mothers and the general public. Positive publicity through posters, local TV and radio ads, and support of public breastfeeding

may be pivotal in the initiation and maintenance of breastfeeding in the identified high-risk populations

Future Research

Research surrounding the issues and concerns of initiation and maintenance of breastfeeding is not a new phenomenon. However, research related to high-risk populations and the initiation and maintenance of breastfeeding is relatively new. Throughout the review process, gaps in the literature were apparent. Although the critical literature review highlighted several barriers to breastfeeding initiation and maintenance as well as recommendations, services, and interventions applicable to breastfeeding promotion, increased knowledge and research is still necessary. Few studies specific to the issues of breastfeeding within the adolescent and African American culture have been produced. Future research should examine the effects of culturally sensitive maternity practices, education, and support on breastfeeding practices of high-risk populations.

Many studies within the literature review were conducted using mixed participants, such as mothers with varied racial backgrounds and ages. Similar studies would be of benefit if replicated in uniform participant groups, such as only African American adolescents. Only two articles were specific to adolescents' barriers to breastfeeding. Similarly, only two articles were specific to interventions involving adolescent mothers as were two articles specific to African American interventions and recommendations. As research revealed, African American and adolescents are two groups of mothers at highest risk for experiencing issues related to breastfeeding initiation and maintenance. A research study linking the two populations and focusing on culturally explicit barriers may reveal data pertinent to the breastfeeding dyad. Additional studies focused on current integration of hospital practices and/or policies related to

breastfeeding promotion *AND* high-risk populations and their overall influence on breastfeeding initiation and maintenance are necessary.

The concept of home visits was introduced in the literature review and discussion. Studies indicating the effectiveness of home visits and the maintenance of breastfeeding amongst high-risk mothers would be of value to the clinical community. The effectiveness of home visits in relation to breastfeeding duration amongst all adolescent and African American breastfeeding mothers would be of clinical significance. Additionally, it would be of benefit to observe the effect of home visits with first-time adolescent and/or African American mothers versus experienced breastfeeding mothers. Clinically, the information would provide insight into the necessity of the ACA recommended nursing service.

Furthermore, Murtagh and Moulton (2011) identified a lack of studies regarding the effectiveness of workplace breastfeeding interventions. According to Murtagh and Moulton, a 2007 review failed to find any randomized or quasi-randomized clinical trials evaluating workplace interventions, including legal interventions. Likewise, the above were not aware of any studies of women's perceptions of workplace breastfeeding support. In succession of the passage of the ACA (2010), it would be efficacious to conduct studies amongst breastfeeding women regarding specific accommodations made by their employers to promote breastfeeding. Equally valuable would be the determination of the effect of workplace adjustments on a woman's decision to breastfeed as well as its effect on duration of breastfeeding amongst both new and experienced breastfeeding mothers. Similarly, the above concepts would be clinically significant if replicated amongst African American and adolescent mothers. Research is needed to determine the effectiveness of workplace legislation to promote breastfeeding with dissemination of the results to federal, state, and local as well as tribal policymakers.

Lastly, as noted in the literature, one significant barrier amongst adolescents is the need to return to school. The need to return to school is a major factor in the mother's initiation and maintenance of the breastfeeding process. Unfortunately, there is a lack of research linked to this concept. Research studies examining accommodations for mothers returning to school would give insight into the manner in which nurses and clinicians could potentially assist with the maintenance of breastfeeding amongst this population. An important factor is whether or not breastfeeding policies exist within school settings. First-hand accounts from breastfeeding adolescents returning to school may be beneficial to other adolescent mothers as well as clinicians promoting breastfeeding amongst teens. Similarly, identification of the differences amongst accommodations deemed necessary for mothers (adolescents and/or adults) returning to school versus returning to work would be advantageous. Furthermore, the same study could be replicated within high-risk populations such as African American mothers. The results would assist employers as well as school administrators with the implementation of culturally sensitive modifications to promote breastfeeding.

Closing Remarks

Women encounter barriers to breastfeeding initiation and maintenance across all socioeconomic, racial, marital, and demographic boundaries. The factors identified in the critical literature review are not innovative or new as many studies through the years have revealed the barriers and proposed interventions. However, the barriers to breastfeeding initiation and maintenance continue to be real issues in the lives of African American and adolescent mothers every day. Statistically, the two populations initiate breastfeeding at lower rates and maintain breastfeeding for a shorter duration than their counterparts. Their unique experiences, insights, and concerns must be explored and given intervention. Healthcare providers have the

opportunity to intervene and make a positive difference in the lives of breastfeeding mothers and their infants. In addition to health care providers, nursing programs can incorporate basic breastfeeding information into their curricula as it relates to high-risk populations. In summary, the barriers and obstacles facing breastfeeding mothers today need to become a primary focus in order to meet the recommended AAP guidelines as well as meet the Healthy People 2020 recommendations.

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APPENDIX. SEARCH TERMS

- breastfeeding (or a derivative of this word)
- initiation
- maintenance
- barriers
- resources

Search 1 the terms were combined in the following manner: breastfeeding AND (initiation OR maintenance) AND (adolescent OR African-American) AND barriers.

Search 2 the terms were combined in the following manner: breastfeeding AND (initiation OR maintenance) AND (adolescent OR African-American) AND resources.