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**Determining Racial and Ethnic Disparities in Breastfeeding in the United States**

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## **Abstract**

The benefits of breastfeeding have been thoroughly studied and researched, with the majority of healthcare providers, health organizations and policies, and professionals in health all recommending the practice. Breastfeeding has protective factors for the newborn against infection and mortality. Other benefits for breastfed children include reduced risk of obesity, asthma, and ear infections; enhanced chance of having a higher income; and a stronger immune system that can follow them throughout adulthood (World Health Organization [WHO] 2020). For mothers who breastfeed, there is a reduced risk of developing ovarian and breast cancer, high blood pressure, and type 2 diabetes (Centers for Disease Control and Prevention 2020). Breastfeeding is also proven to help with bonding with their baby. Despite the overwhelming evidence, the United States (US) still has the lowest rates of breastfeeding and large disparities for a developed country. The goal of this literature review with comparison study is to determine the disparities of breastfeeding between different maternal races, examine the benefits of breastfeeding for minority women, and provide recommended interventions to aid further implementation of breastfeeding across all races. This paper addresses the most concerning disparities and proposes several interventions to reconcile the disparities.

## **History**

Breastfeeding infants is a practice that has waned and gained in popularity throughout U.S. history. The first formula marketed to replace breastmilk was created in 1865, becoming popular in the 1930s, and resulting in a decrease in breastfeeding. Formula feeding continued to gain popularity, but in the 1970s, a movement began to promote breastfeeding as the best way to feed babies. Because of this, formula companies began to directly advertise to the public instead of healthcare providers, leading to an increase in popularity into the beginning of the 21<sup>st</sup>

century. The United States went from a breastfeeding rate of 90% at the beginning of the 20<sup>th</sup> century to a rate of 42% by the beginning of the 21<sup>st</sup> Century (Stevens et al., 2009).

During the 21<sup>st</sup> century, increased research has led to the awareness of the benefits of breastfeeding both in the public and private realm and to a steady increase in rates of breastfeeding. The World Health Organization now recommends that mothers breastfeed exclusively for six months and then breastfeed with supplemental foods for a year or longer (WHO 2020).

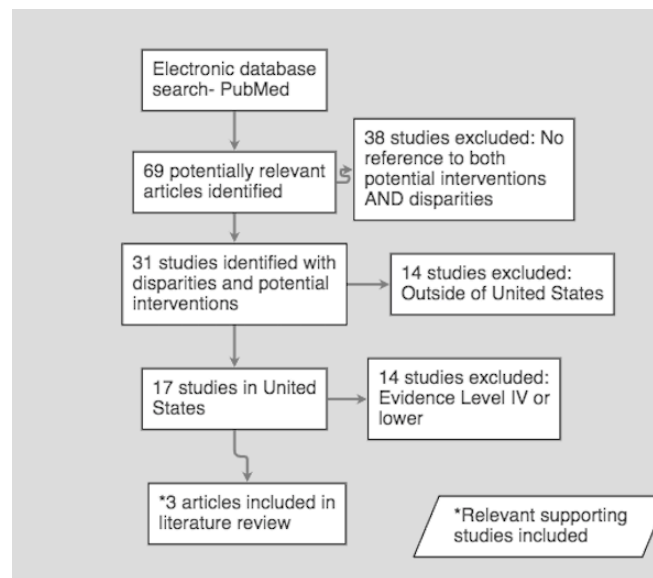
## **Methods**

This review utilized PubMed database using the keywords racial, ethnic, disparities, and breastfeeding. The criteria included that the central articles must be from the past eight years, published from 2012-2019, to keep the data relevant and updated. The search yielded 69 articles. The articles were analyzed and assessed for quality using guidelines from John's Hopkins' Evidence Level and Quality Guide (Dearholt & Dang 2012). Articles were excluded if they were below level III and included if they were III or higher. Other articles were excluded based on irrelevancy, lack of information, confusing data, and if they were outside the United States. A priority of this review was to address problems specific to the US, as this country consistently has low rates for developed countries. The three main articles consisted of two systematic reviews (Racial and Ethnic Disparities in Breastfeeding [2015] and Breastfeeding Among Minority Women: Moving from Risk Factors to Interventions [2012]) and one qualitative, data analysis study (Racial and Ethnic Differences in Breastfeeding [2016]). Inclusion and exclusion criteria are shown in Figure 1. Other resources used from previous years were only utilized for historical trends. The articles must have gone through the peer review process before being considered. For each racial or ethnic group, the latest available data from Healthy People data

resources on breastfeeding was used as a confirmation of currency. Within the Maternal, Infant, and Child Health objective, data was taken from the following sub-objectives: “Increase the proportion of infants who are ever breastfed”, “increase the proportion of infants who are breastfed at 6 months”, and “increase the proportion of infants who are breastfed exclusively through 3 months” (Healthy People 2015). The Healthy People data sets were utilized by grouping them by race or ethnicity of the child and comparing “Asian only”, “Black or African American only”, “White only”, and “Hispanic or Latino” from 2015 (latest available data). A table was created to help compare throughout the review process (Table 1).

## Figure 1

### *Research criteria*



**Table 1**

### *2015 Healthy People Data condensed by racial group*

Healthy People Data for Breastfeeding Percentage according to Race and Ethnicity					
	African American only	Hispanic	White only	Asian only	HP 2020 Goal
<b>Initiation</b>	70.6	84.6	85.5	90.6	76.1
<b>Breastfed at 6m</b>	45.6	54.1	59.7	72	46.6
<b>Exclusive Breastfeeding at 3m</b>	36	42.2	49.4	48.2	35.9

## **The Effects of Maternal Race Disparities on Breastfeeding in the United States**

### **Non-Hispanic African Americans:**

With more knowledge being acquired of the benefits of breastfeeding, the Healthy People 2020 objectives were created to help the United States strive for higher rates than ever before. While there have been improvements for this group, African American mothers are still 2.5 times less likely to breastfeed than white women (Jones et al. 2015). In one study, black women were the least likely to have an intent to breastfeed at 57% (McKinney et al. 2016). The higher goals have made the gaps between racial groups all the more evident, especially for the Black community. While this group has met the goal of 35.9% of infants being breastfed exclusively for 3 months, they just hit the mark at 36%. This is still the lowest percentage out of all other racial groups. African American women have the furthest group rate out of all, with only 69.4% of women ever attempting breastfeeding. The same low rates are were present for breastfeeding at 6 months. The 2020 Target is 60.6% and , and the African American group's rate was at 44.7% (Healthy People 2015). This common trend of falling short of the Healthy People 2020 goals stays consistent throughout all recorded years, creating a discrepancy that has put being African American as a risk factor for having a low rate of breastfeeding as a whole. Other risk factors include being overweight and having unintended pregnancies. These risk factors are important to note for African Americans, as they have one of the highest rates of obesity and unintended pregnancies (Jones et al. 2015). This compounds their risk for lower rates of breastfeeding even more so. Deubel, Miller, Hernandez, Boder, and Louis-Jacques (2019) found that African American women pointed to “lack of maternity leave from work, lack of access to electric pumps, social pressures to initiate formula supplementation, fears that breastfeeding renders infants overly dependent on their mother's care, and a lack of breastfeeding role models

and/or support networks” as the greatest challenges facing breastfeeding initiation and duration (p.1) . When taking out the mediators of poverty, college, education, and marital status, the gap closed between black and white mothers for initiation and intent to breastfeed (McKinney et al. 2016) . There are many factors at play here, but most of them point at socioeconomic status as being one of the largest hurdles for Black families. This population needs interventions and public health initiatives to aid in increasing their numbers more than ever, and some possible solutions are explored later in this paper.

### **Hispanics:**

It seems that while other minority groups suffer from a lower rate of initiating breastfeeding, Hispanic mothers seem to have a cultural advantage that mitigate their minority status. Hispanic women are meeting the goals of the Healthy People 2020 objectives for breastfeeding initiation at 84.6%, breastfeeding at 6 months at 54.1%, and exclusive breastfeeding at 3 months at 42.2% (Healthy People 2015). Hispanics lead in breastfeeding initiation and continuation according to Jones, Power, Queenan, and Schulkin (2015). Spanish-speaking Hispanic mothers initiated and maintained breastfeeding over any other group, with 92% intending to breastfeed and 91% actually initiating breastfeeding. In comparison, 88% of English-speaking Hispanic mothers intended to breastfeed and 90% initiated (McKinney et al. 2016). Although this is a small difference, the acculturation factor should be considered. Hispanic-American mothers who were more acculturated seemed to be slightly less likely to breastfeed. A possible reason for the lower rates of breastfeeding in this country could be related to American culture towards certain racial or ethnic groups. While other racial groups tend to assimilate more in America, many Hispanics respect and stay true to their ideals and practices of their countries after moving to the United States. However, researchers found that Hispanic

women are also the most likely to supplement with formula, with some women introducing formula after only two days (Jones et al. 2015) This is a popular practice for many ethnic groups, with 33% of Hispanic infants and 32% of black infants getting formula supplementation at only the second day of life (Chapman & Perez-Escamilla 2012). Formula supplementation can create problems for breastfeeding, often lowering the mother's breast milk supply and making breastfeeding difficult long term. While the Hispanic breastfeeding rates are impressive, there should be a focus with this group on the benefits of breastfeeding without formula supplementation.

### **Non-Hispanic Whites and Asian Americans**

White and Asian Americans seem to have the advantage, leading in breastfeeding statistics throughout the years. In the most recent data from 2015, 90.6% of Asian children were ever breastfed, and 85.9% of White children were ever breastfed. White children were the highest percentage that were exclusively breastfed through 3 months at 53%, with Asian children right behind at 48.2 % (Healthy People 2020). The disparities between black and white women's breastfeeding duration rates were not simply related to demographic factors, but more closely related to poverty. McKinney found that high rates of in-hospital formula feeding in black communities significantly affected breastfeeding rates (McKinney et al., 2016). In comparison, white women are less likely to introduce solids foods before 4 months and have higher rates of exclusive breastfeeding (Jones et al. 2015). Although Asians are a minority in the United States, they have high rates of breastfeeding. This could be because of America's view on Asian culture and having greater opportunities than African Americans and Hispanics.

### **Interventions:**

#### ***Peer Counseling***



Peer counseling interventions seem to be one of the most effective interventions for minority women to increase breastfeeding. Since the positive breastfeeding cultural norms of Spanish-speaking Hispanics have helped to mediate their minority status and demographic variables, it is reasonable to conclude that having support and peer counseling to encourage a healthier view of breastfeeding as a cultural norm in the US could greatly impact breastfeeding practices in the country (McKinney et al. 2016). When peer counseling was incorporated as “peer counseling prenatal home visits, daily in-hospital support, post-partum home visits, telephone support, and free breast pumps as needed”, the rate of breastfeeding at 12 weeks post-partum was greater (OR: 2.81, 95% CI: 1.11–7.14;  $P = 0.03$ ) than those without peer counseling (Chapman & Perez 2012). Vulnerable populations, such as African American and Hispanic women, seem to respond more to peer education and support than healthcare workers. Peer counseling with Spanish-speaking peers and lactations consultants increased Hispanic exclusive breastfeeding (Jones et al. 2015). Peer counseling consistently gained greater rates of initiation, duration, and exclusivity compared to other interventions, such as professional support, specific breastfeeding appointments, and group prenatal counseling (Chapman & Perez 2012). Advocating and supporting for peer counseling programs could greatly benefit breastfeeding outcomes for at-risk groups.

### ***In-Hospital Formula Feeding***

When taking out the variable of hospitals who pushed in-hospital formula feeding, the duration of breastfeeding between races becomes more similar (McKinney et al. 2016). They found that Black mother’s formula fed their infants in the hospital significantly more than white mothers. The authors of this study recommended that hospitals limit this practice and form demographically-aware policies regarding breastfeeding practices. They estimated that the black

to white gap in breastfeeding duration could decrease by 20% if hospitals did not introduce formula (McKinney et al. 2016). It is important to note that the most disparaged community, black mothers, can benefit the most from encouraging them from supplementing or starting formula. They are the most likely to supplement with formula (32%), according to Jones (2015). Baby-Friendly Hospitals provide a solution to this problem. Baby-Friendly hospitals have been accredited by the Baby-Friendly Hospital Initiative program by passing certain requirements that reflect evidence-based practice regarding infant-feeding. These hospitals encourage patients to breastfeed and provide extensive education on breastfeeding to their staff. These hospitals would only offer formula after extensive education and encouragement was given.

### ***Education In-Hospital***

While it is imperative that in-hospital introduction to formula should be decreased, breastfeeding education must also be improved. Jones (2015) found that education about breastfeeding sessions in clinics were infrequent and short, with the topic being discussed at only 29% of visits and lasting an average of 39 seconds. This cannot be significant enough to allow this education to be received in the proper manner. Jones (2015) states that black mothers also reported “differential treatment from healthcare providers with regard to breastfeeding encouragement and information (Barriers to Breastfeeding)”. This must be addressed in the healthcare system by individual hospitals. Chapman and Perez-Escamilla (2012) found that professional support and education was statistically inconsistent at improving breastfeeding rates unless bilingual staff with strong rapport were utilized. Providing more breastfeeding education with specific cultures and implementing strict interventions required of healthcare workers might help to increase encouragement.

### ***Improving WIC***

Part of the problem with the disparities seen in breastfeeding is the lack of understanding of socioeconomic causes. Many people think providing more education, encouragement, and opportunities to breastfeed is the key to improving outcomes but without addressing the socioeconomic barriers doesn't mediate the problem. WIC (The Special Supplemental Nutrition Program for Women, Infants, and Children) counselors reported to give more breastfeeding advice to white women than African American women (Jones et al. 2015). To remedy this problem, policies should be proposed within the WIC program to encourage breastfeeding for all women and not exclude any groups. When WIC clinics offered only peer counseling services as breastfeeding education, breastfeeding initiation rates were significantly higher as opposed to other interventions (Jones et al. 2015). As the majority of WIC participants are minorities, it is vital that we use this resource to improve disparities.

### ***Improving the Family and Medical Leave Act***

While the Family and Medical Leave Act was important for providing many with maternity and family leave, the act doesn't cover many low-income jobs that many minority groups rely on. African American women usually return to work post-partum 2 weeks before the majority of women and are less likely to work in an environment that promotes breastfeeding (Jones et al. 2015). The recommendation is that this act is expanded to target jobs with a majority of minority women to increase the statistics for breastfeeding across initiation, intent, and duration.

## **Discussion**

Ultimately this review demonstrates that there is compelling data to determine that there is a racial and ethnic disparity in breastfeeding intent, initiation, and duration. In every study and from the current statistics, it is obvious that African Americans are at the lowest rates of

breastfeeding and require interventions that are specific to their needs and barriers. Hispanics seem to have high rates of breastfeeding despite demographic risk factors such as low socioeconomic status, obesity, diabetes, and cardiovascular disease, largely attributed to the lack of acculturation and positive family histories. More interventions that directly target populations who suffer from low breastfeeding rates are needed. The most recommended intervention that yields statistical results is peer counseling. This utilizes trained women in the same community that have gone through the process of breastfeeding, and they work with their peers to aid in breastfeeding education, support, and ultimately improve outcomes. Other interventions with potential include Baby-Friendly Hospitals and lowering formula use in hospitals, improving WIC policy, and improving the Family and Medical Leave Act to include low-income jobs. Advocacy is a vital role of nursing and advocating for these vulnerable populations is central to providing people with the best health outcomes. Nurses acting simply as professional support seems to be insignificant in comparison to other interventions. Supporting and enacting policy change within hospitals, cities, and nationally will promote populations at risk to a higher level of health.

This literature review addresses that there are implications for further research. These articles covered data analysis and experimental studies well, however it might be beneficial to do more qualitative research directed at the lived experiences of people. Although objective, quantitative experiments are a more proven source for concrete information, the reasons that people do not breastfeed can be complex. A survey or questionnaire that gets individual's opinions, views, and perspectives on a wide variety of breastfeeding issues could be beneficial. This could help us address more personal or cultural concerns within the vulnerable populations that we serve.

## **Why Breastfeeding Outcomes are Important for Minority Groups**

The evidence is clear that breastfeeding practices are beneficial for all women, but the outcomes are even more crucial for minority women. Maternal breastfeeding benefits include reducing the risk of cardiovascular disease, hypertension, type 2 diabetes mellitus, breast and ovarian cancer, and metabolic syndrome (Louis-Jacques et al. 2017). African American and Hispanic women have an increased risk of cardiovascular disease, diabetes, and obesity than the rest of the population. Breastfeeding could help mediate some of these health problems.

According to Jones (2015), mothers who exclusively breastfeed lose more weight than those who supplement with formula, decrease childhood obesity for infants, reduce the risk of maternal type 2 diabetes, and reduce cardiovascular disease. (The Importance of Breastfeeding). While Hispanic mothers have high rates of breastfeeding, the majority supplements with formula. The benefits of breastfeeding directly correlate to minorities' biggest health risks.

## **Quality and Limitations**

Strict quality assessment was ensured for the three main journal article resources that were reviewed. All three articles (Racial and Ethnic Differences in Breastfeeding [2016], Breastfeeding Among Minority Women: Moving from Risk Factors to Interventions [2012], and Racial and Ethnic Disparities in Breastfeeding [2015]) were relevant to my research topic. Articles were only included once it was ensured that they addressed the disparities between race and ethnicity when it comes to breastfeeding and discussed possible interventions that could help reduce this disparity. These articles have highly accurate content, as they were fairly similar in their data and discussions. They provided credible resources from previous research, their own data extraction, and credible organizations such as the CDC and WHO. All authors from the three sources had a doctoral degree. The article Racial and Ethnic Differences in Breastfeeding

(2016) was associated with NorthShore University Health System. Breastfeeding Among Minority Women: Moving from Risk Factors to Interventions (2012) is associated with the Yale School of Public Health. Racial and Ethnic Disparities in Breastfeeding (2015) is associated with the American College of Obstetricians and Gynecologists. All journal articles, including supporting articles, have been peer reviewed. The articles are relatively current, all within the last eight years. While it would have been ideal to have excluded this search to the past five years, it seems that the progression of breastfeeding is relatively slow compared to many medical advances. Much of the data is very similar and proportionate across the years. The most recent available data from Healthy People was included to compare that the information is still the same as far as the disparity gap is concerned. The study done by McKinney et al. (2016) was limited because they used data to see what mediating factors might cause certain disparities, but there was a lack of data for actual interventions. While Chapman and Perez-Escamilla (2012) established important interventions such as peer counseling, more research could be done to determine how best to manage that specific intervention. The biggest limitation in Jones (2015) was a currency problem, as some of the data for the interventions went as far back as 1990s. Although most of their data was from the most recent decade, the inconsistency could cause inaccurate suggestions. As far as bias is concerned, it is obvious that these articles believe that breastfeeding exclusively for a minimum of six months is the most beneficial thing and argue for this side of the issue exclusively. However, all of them have the resources and statistics to back this up.

This paper has its own set of limitations. One limitation is the range of dates for data concerning disparities, with some statistics dating back to 2007. One reason for this is the release of breastfeeding data from reliable sources. The most recent data available from Healthy People

is from 2015. The research articles that were reviewed had gathered data at an earlier time, creating even older results. In addition, because of how strict the topic of the chosen articles was, the subject matter was limited to the author's chosen focuses. Articles that contained information regarding statistical disparities and interventions were selected as both topics were discussed. Including more articles that were focusing on statistics for breastfeeding interventions for minorities would have expanded the information further.

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