Factors Underlying Racial and Ethnic Disparities in Breastfeeding

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National Breastfeeding Rates by Race and Ethnicity in the United States


National Gaps in Breastfeeding between Black and White Mothers over the Last Decade

Lind et al. (2011) MMWR
**Ever Breastfed:** Percentage-point difference in non-Hispanic white and non-Hispanic Black infants by State (2011-2015)

![Map showing percentage-point difference in ever breastfed infants by state](image1)


**Exclusive Breastfeeding at 6 months:** Percentage-point difference in non-Hispanic white and non-Hispanic Black infants by State (2011-2015)

![Map showing percentage-point difference in exclusive breastfeeding at 6 months by state](image2)

Latina Health Paradox

In the US, Hispanic and Latina mothers are more likely to face challenges (e.g., poverty, low education) associated with poor birth and breastfeeding outcomes than white mothers, yet often have excellent birth and breastfeeding outcomes (for a review, see Buekens et al., 2000).

These health advantages seem to degrade with acculturation and time spent in the US (Lara et al., 2005).
We Do Not See These Same Patterns in Other Western Countries

- In the UK, Black and Asian mothers have higher breastfeeding rates than White mothers (Kelly, Watt, & Nazroo, 2006, *Pediatrics*).

- Indian, Pakistani, Bangladeshi and Black Caribbean mothers were more likely to breastfeed at 3 months than white mothers in the UK.

- Cultural factors partly explained these differences

Causes of Breastfeeding Disparities in the United States?
Many of the Results Discussed Today are Available in a Recent Study Published in *Pediatrics*

**Community and Child Health Network Study (CCHN)**

- Funded by the National Institute of Child and Human Development (NICHD)
- Examine how community, family, and individual-level stressors influence and interact with biological factors to affect maternal and child health.
- 3,079 women in their postpartum period and 1,758 spouses.
- Most participants were from predominantly lower socioeconomic levels in five regions of the United States.
Study Design

**Participants:** 1,636 mothers from the Community and Child Health Network (CCHN) study

**Breastfeeding Outcomes:** Postnatal breastfeeding intent was evaluated in-hospital after birth; Breastfeeding initiation was assessed at 1 month postpartum; Breastfeeding duration (in weeks) at 1 and 6 months postpartum.

**Statistical Analysis:** Hierarchical Linear Modeling was used to estimate relative odds of breastfeeding initiation, postnatal intent and duration among racial/ethnic groups, and to test the candidate mediators.


Mediation Analysis

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Mediators Tested:

- Demographic Factors (Age, Poverty, Education, Marital Status, Number of Children, Employment)
- Maternal-Child Health Factors (Preterm Delivery, Postpartum Depression, Maternal Smoking)
- Social Factors (Family History of Breastfeeding, Co-resident Father or Grandparent)
- Belief that “Breast is Best”
- Health Care Factors (In-Hospital Introduction of Formula, WIC participation)

Results: Breastfeeding Gaps in Initiation

Hispanic mothers (regardless of primary language) were 30% more likely to initiate breastfeeding than Black mothers and 13% more likely to initiate breastfeeding than white mothers.
Initiation Results:
Hispanic Mothers compared to White Mothers

INITIAL GAP
Spanish & English speaking Hispanic mothers were 12% more likely to initiate breastfeeding than white mothers

EXPLANATORY FACTOR(S)
Both Spanish- and English-speaking Hispanic mothers were more likely to have mothers who breastfed than white mothers

AFTER
Once maternal grandmother’s breastfeeding was taken into account, gap was non-significant


Initiation Results:
Hispanic Mothers compared to Black Mothers

INITIAL GAP
Spanish- & English-speaking Hispanic mothers were 30% more likely to initiate breastfeeding than Black mothers

EXPLANATORY FACTOR(S)
Both Spanish- and English-speaking Hispanic mothers were more likely to have mothers who breastfed than white mothers

AFTER
Once maternal grandmother’s breastfeeding was taken into account, the gap was significantly reduced

Initiation Results: Black Mothers compared to White Mothers

INITIAL GAP
White mothers were 17% more likely to initiate breastfeeding than Black mothers

EXPLANATORY FACTOR(S)
- Poverty
- Single Motherhood
- Education

AFTER
Black mothers were more likely to live in poverty, be single and less educated than white mothers
Once poverty, education and single motherhood were taken into account, the gap was non-significant

Postpartum Intention Results by Race and Ethnicity

Hispanic mothers (regardless of primary language) were more likely to intend to continue breastfeeding after the hospital than Black or white mothers

Intention Results:
English-Speaking Hispanic Mothers compared to White Mothers

**INITIAL GAP**
- English-speaking Hispanic mothers were 12% more likely to initiate breastfeeding than White mothers

**EXPLANATORY FACTOR(S)**
- Hispanic mothers were more likely to have a family history of breastfeeding than white mothers

**AFTER**
- Once maternal grandmother’s breastfeeding was taken into account, gap was non-significant

None of the factors tested explained the Spanish-speaking Hispanic mothers’ greater likelihood to intend to breastfeed after hospital discharge.


Intention Results:
Hispanic Mothers compared to Black Mothers

**INITIAL GAP**
- Hispanic mothers were >30% more likely to initiate breastfeeding than Black mothers

**EXPLANATORY FACTOR(S)**
- Hispanic mothers were more likely to have a family history of breastfeeding than Black mothers

**AFTER**
- Once maternal grandmother’s breastfeeding was taken into account, gap was reduced

Intention Results:
Black Mothers compared to White Mothers

INITIAL GAP
White mothers were 20% more likely to intend to breastfeed than Black mothers

EXPLANATORY FACTOR(S)
- Poverty
- Single Motherhood
- Education

AFTER
Once poverty, education and single motherhood were taken into account, the gap was non-significant

Black mothers were more likely to live in poverty, be single and less educated than white mothers

Results: Breastfeeding Gaps in Duration

White mothers and Spanish-speaking Hispanic mothers breastfeed approximately 6 weeks longer than English-speaking Hispanic mothers and 10 weeks longer than Black mothers

Breastfeeding Duration by Race/Ethnicity

- White
- Black
- Hispanic: Spanish Speaking
- Hispanic: English Speaking

Duration Results: English Speaking Hispanic Mothers compared to White Mothers

INITIAL GAP

White mothers breastfeed 6 weeks longer than English-speaking Hispanic mothers

EXPLANATORY FACTOR(S)

Youth

Education

After

English-speaking Hispanic mothers were younger and less educated than white mothers

Once age and education were taken into account, the gap was non-significant


Duration Results: Hispanic Mothers compared to Black Mothers

INITIAL GAP

Black mothers breastfed 3 to 10 fewer weeks than English- and Spanish-speaking Hispanic mothers, respectively

EXPLANATORY FACTOR(S)

Hispanic mothers were more likely to have a family history of breastfeeding than Black mothers

AFTER

Once maternal grandmother’s breastfeeding was taken into account, gap was reduced between Black and Spanish-speaking Hispanic mothers and eliminated for English-speaking Hispanic mothers

Duration Results: 
Black mothers compared to White Mothers

INITIAL GAP

White mothers breastfed 10 weeks longer than Black mothers

EXPLANATORY FACTOR(S)

- In Hospital Formula Introduction
- Education
- Single Motherhood

AFTER

Once in-hospital formula, education, and single motherhood were taken into account, the gap was non-significant

Black mothers were more likely to be given formula in the hospital, less educated, and single than white mothers

The Major Culprit: 
In-Hospital Formula Introduction

- After controlling for poverty and education, Black mothers are 9x more likely to experience in-hospital formula feeding than White mothers; Hispanic mothers are 2-5x more likely to be given formula than White mothers.

- If racial/ethnic disparities in hospital formula use could be eliminated, we could reduce racial/ethnic breastfeeding disparities by approximately 20%

In-Hospital Formula Introduction by Race/Ethnicity

Why do Black and Hispanic mothers receive formula more often than White mothers in the hospital?

Possible Explanations: Can we Rule out the Possibility that these Racial and Ethnicity Differences in Hospital Supplementation were due to Medical Necessity?

- Disparities existed even after adjusting for medical issues such as preterm birth and postpartum depression (McKinney et al., 2016)

- Early formula introduction was not likely to be an early sign of medical breastfeeding problems because Spanish-speaking Hispanic mothers had longer breastfeeding durations than white mothers, yet were still more likely to be given formula in the hospital (McKinney et al., 2016)

- No evidence to suggest that Black or Hispanic women are more likely to be medically unable to breastfeed (e.g., recent immigrants have some of the best breastfeeding rates)
If not for medical reasons, then why?

Possible Explanations

Hospitals that disproportionately serve Black and Hispanic mothers provide less breastfeeding support than hospitals that disproportionately serve white mothers.

- CDC study found that Black and Latino mothers were more likely to live in zip codes with hospitals that did not follow baby friendly guidelines (Lind et al. 2014, MMWR)).
Possible Explanations

• Health care providers’ stereotypes or unintentional biases
• Study of mothers who used WIC showed that Black mothers were less likely to receive breastfeeding advice and more likely to receive bottle-feeding advice than white mothers (Beal, Kuhlthau & Perrin, 2003).
• Studies in other domains of health care show patients may be treated differently based on race (see Burgess, van Ryn, Dovidio & Sara, 2007, for a review)
• Negative stereotypes about certain groups can lead caregivers to avoid communication (Plant & Devine, 2003)
• Caregivers engage in fewer positive, rapport-building nonverbal cues with minority patients (Elliott, Alexander, Mescher, Mohan & Barnato, 2015).

Summary

➢ Black and Hispanic mothers are more likely to be given formula in the hospital than white mothers.
➢ The breastfeeding disparities between Black and white mothers could be reduced by ~20% if we eliminated disparities in in-hospital formula use.
➢ English-speaking Hispanic mothers were more likely to be given formula in the hospital than Spanish-speaking Hispanic mothers and white mothers.
➢ Intergenerational factors proved to be the most powerful driving force behind Hispanic mothers’ better breastfeeding outcomes.
➢ Strong family history of breastfeeding, especially on the mother’s side, seemed to help Hispanic mothers overcome some of the breastfeeding barriers that they faced including higher rates of in-hospital formula introduction.

Surprises

- Although racial/ethnic differences were found in the belief that “breast is best” this factor did not explain breastfeeding gaps
- Employment patterns did not drive breastfeeding disparities
- Magnitude of racial/ethnic disparity in hospital formula use

Implications

- We need to eliminate racial/ethnic disparities in breastfeeding to help reduce racial/ethnic disparities in infant mortality, obesity, diabetes and cancer.

- Racial and ethnic disparities in breastfeeding may diminish as more hospitals serving low-income populations become ‘baby-friendly’, encouraging breastfeeding through close maternal-infant contact after birth and discouraging in-hospital formula use.

- By increasing breastfeeding in this generation, we are likely to increase breastfeeding in the generations that follow.
What we do now could impact breastfeeding for years to come

What can we do?

◆ Encourage hospitals and WIC to look at racial and ethnic breastfeeding disparities within their own organizations.

◆ Press for baby-friendly hospital initiatives in hospitals that are more likely to serve Black and Hispanic mothers.

◆ Train medical staff about the fact that we all hold stereotypes, and that they can be overcome with training and reframing patient encounters.

◆ Reduce the involvement of formula companies in health care settings.
Promote Positive Images of Breastfeeding Mothers of all Racial and Ethnic Backgrounds

Black Breastfeeding Week
http://blackmothersbreastfeeding.org/
https://blackwomendobreastfeed.org/
Image from Instagram of the group: “Chocolatemilkmommies”

Unanswered Questions

- Why are Black and Hispanic babies more likely to receive formula in the hospital than white babies?

- Why are Hispanic mothers who become more enculturated less likely to breastfeed?

- What interventions will be effective to reduce racial and ethnic disparities in breastfeeding?
References