Health Disparities: Breastfeeding’s Role in Closing the Gap

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Did you hear about the rose that grew from a crack in the concrete?
Proving nature's law is wrong it learned to walk without having feet.
Funny it seems, but by keeping it's dreams, it learned to breathe fresh air.
Long live the rose that grew from concrete when no one else ever cared.

Tupac Shakur
Disparity City

With each mile you travel, life expectancy increases about a year and a half.
Disparity City

The average suburbanite near the Shady Grove station will live 20 years longer than the typical city dweller around Capitol Heights.
Social Determinants of Health

Dahlgren and Whitehead (1991)
Race and Health Disparities

• African Americans (AA) bear disproportionate share of disease morbidity, mortality, disability, and injury (MMWR, 2005, Williams 2006)

• AA men live 6.2 years less than white men and 8.3 years less than the national average, 77.8 years (MMWR, 2005).
Race and Health Disparities

- Otten et al (1990), reported death rates per 100,000 for people 35-54 years of age 2.3 times higher for AA than whites.
- Adjusted for 6 risk factors (smoking, SBP, Chol, BMI, Etoh, DM) decrease from 2.3 to 1.9 times add income decreased to 1.4 times.
- This leaves about 1/3 of the difference unexplained.

National Health and Nutrition Examination Survey I Epidemiologic Follow-up Study
Poverty controlled for leaves an excess of 38,000 deaths per year.

Or 1.1 million years of life lost among AA in the US (Franks et al, 2005).
Infant Mortality Rates

![Infant Mortality Rates Chart]

- Rate per 1,000 live births
- Race and Hispanic ethnicity
- Black, non-Hispanic
- American Indian/Alaska Native
- Total
- White, non-Hispanic
- Hispanic
- Asian or Pacific Islander

* Per 1,000 live births.
Graphic courtesy of the Colorado Children’s Campaign
Diabetes Age-Adjusted Death Rate by Sex and Race/Ethnicity
California, 2000 - 2008

Year

Race/Ethnicity
- American Indian
- Asian
- Black
- Hispanic
- White

Data for American Indian males, Pacific Islanders and Two or More Races were unreliable and are not included on this graph.
Refer to Table 3 for rate values.
Racial/ethnic disparities in breastfeeding rates (percent and 95% CI; 2002 NIS).

Li R et al. Pediatrics 2005;115:e31-e37
Percentage of Infants Who Were Ever Breastfed by Race-Ethnicity and Birth Cohort

- **Mexican American**
- **Non-Hispanic white**
- **Non-Hispanic black**

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**Birth cohort**

- Significant increase in trends over time for non-Hispanic black infants.
- Non-Hispanic black infants are significantly different from non-Hispanic white and Mexican-American infants in each birth cohort.

**SOURCE:** CDC/NCHS, National Health and Nutrition Examination Survey.
Percentage of Infants Who Were Ever Breastfed by Poverty Income Ratio and Race-Ethnicity

- **Total**
  - PIR less than or equal to 1.85: 157%
  - PIR greater than 1.85: 74%
- **Non-Hispanic white**
  - PIR less than or equal to 1.85: 155%
  - PIR greater than 1.85: 76%
- **Non-Hispanic black**
  - PIR less than or equal to 1.85: 1237%
  - PIR greater than 1.85: 258%
- **Mexican American**
  - PIR less than or equal to 1.85: 74%
  - PIR greater than 1.85: 74%

1. Significant differences between the two income groups.
2. Significantly different from non-Hispanic white and Mexican-American infants within income groups.

NOTES: Income status was defined using the poverty income ratio (PIR), an index calculated by dividing family income by a poverty threshold specific for family size. Low income was defined as PIR less than or equal to 1.85, and high income was defined as PIR greater than 1.85.

SOURCE: CDC/NCHS, National Health and Nutrition Examination Survey.
Percentage of Infants Who Were Ever Breastfed by Maternal Age and Race-Ethnicity

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Total</th>
<th>Non-Hispanic white</th>
<th>Non-Hispanic black</th>
<th>Mexican American</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 20 years</td>
<td>43</td>
<td>40</td>
<td>30</td>
<td>66</td>
</tr>
<tr>
<td>20–29 years</td>
<td>65</td>
<td>65</td>
<td>44</td>
<td>126</td>
</tr>
<tr>
<td>30 years and older</td>
<td>75</td>
<td>77</td>
<td>56</td>
<td>175/176</td>
</tr>
</tbody>
</table>

1 Mexican-American infants were significantly different from non-Hispanic black infants within maternal age groups.
2 Significantly different from non-Hispanic white infants and non-Hispanic black infants.

NOTE: Trend test for breastfeeding rate by maternal age was statistically significant in the total population and each race-ethnicity group.

SOURCE: CDC/NCHS, National Health and Nutrition Examination Survey.
What negatively impacts Breastfeeding?

• Being African American
• Poverty
• Younger mothers
• Being single (less support)
Bigger than Breastfeeding

• Breastfeeding acts as a canary in the coal mine
• It it’s practice or lack of practice can be a statement of not feeling empowered or be a statement of self worth
• Also a statement of connectedness to the health care world
The role of Racism

• Internalized (lack of self worth and confidence)
• Pathophysiologic effects (allostatic load)
• Institutionalized (poor hospitals/poor hospital practices)
Defining Stress

stress is a condition or feeling experienced when a person perceives that demands exceed the personal and social resources the individual is able to mobilize.
Allostatic Load

Allostatic load is used to explain how the “burden” external stressors hijack normal allostatic processes and become pathophysiologic processes (overload).
An Example: Fight or Flight

In acute stressful situations, adrenaline increases concentration and heightens awareness.
The Stress Factor

• Chronic exposure to stress, poor social supports and limited social networks have been shown to increase disease risk (Institute of Medicine, 2001).

• Phillips et al. (2005) reaffirmed the connection between acute stress and acute upper respiratory infections due to decreased secretion of secretory immunoglobulin A.
The Stress Factor

Stress has also been shown to potentiate the negative affects of a high fat diet and initiate atherosclerotic plaque formation (Adams, 1994).
The Stress Factor

• Hostility and low perceived control are also related to poor health outcomes (Miller et al., 1996).

• Low perceived control is a determinant of heightened stress responses and poor adaptation (Steptoe et al., 1989).
The Stress Factor

Adversity and vulnerability along with psychological markers such as low self-esteem and loneliness are also associated with poor health outcomes (Cacioppo, et al. 2002).
Racism as Stress

In the past decade more than 100 studies have been published documenting the harmful effects of racial discrimination on a variety of health measures in African-American men and women.
Racism as Stress

A recent study that followed nearly 60,000 African-American women for six years found that women who reported on-the-job racial discrimination had a 32 percent higher risk of breast cancer than others who did not.
Racism as Stress

Women who said they faced racial discrimination on the job, in housing and from the police were 48 percent more likely to develop breast cancer than those who reported no incidents of major discrimination.
Racism as Stress

Another study of African-American women found that those who reported chronic emotional stress due to their experience of racism had more severely blocked carotid arteries.
Racism: A Global Problem

racism makes me sick

it affects my blood pressure & creates anxiety and depression

racism makes me sick

it damages my heart, blood pressure and my unborn baby

You can help - start by signing the pledge at ANTaR.org.au
Impact of Stress on Lactation

Maternal Stress is associated with decreased lactogenesis- Kathryn Dewey- Journal of Nutrition November 2001
If a multinational company developed a product that was a nutritionally balanced and delicious food, a wonder drug that both prevented and treated disease, cost almost nothing to produce and could be delivered in quantities controlled by the consumers' needs, the very announcement of their find would send their shares rocketing to the top of the stock market.

~Gabrielle Palmer, author of The Politics of Breastfeeding
The scientists who developed the product would win prizes and the wealth and influence of everyone involved would increase dramatically. Women have been producing such a miraculous substance, breastmilk, since the beginning of human existence.

~Gabrielle Palmer, author of The Politics of Breastfeeding
Breastfeeding’s Role

1. Reduces stress and supports good mental health
2. Protects mother and child against disease
3. Increases IQ in children
4. Strengthens bond between mother and child
Benefits of Breastfeeding

In one study breastfeeding was associated with reduced stress and an increase in positive mood, while bottle feeding made the mothers’ positive mood decrease from what it was before the feeding began.

Health Psychol. 2002 Mar;21(2):187-93
Health Benefits of Breastfeeding

A study in the journal *Pediatrics*, released April 5, 2010, indicates that if 90 per cent of mothers in the U.S. breastfed their babies for six months, the lives of approximately 900 babies would be saved each year.
Health Benefits of Breastfeeding

• Dr. Michael Kramer reports the results from following 14,000 children for 6.5 years.

• "Our study provides the strongest evidence to date that prolonged and exclusive breastfeeding makes kids smarter," said Kramer, a Professor of Pediatrics and of Epidemiology & Biostatistics in the McGill University Faculty of Medicine and lead investigator in the study.
What is needed?

- Policy
- Programs
- Peers
- Partners
The Stress Equation

\[ \text{Stress} = \text{Demands} - \text{Resources} \]
“We think sometimes that poverty is only being hungry, naked and homeless. The poverty of being unwanted, unloved and uncared for is the greatest poverty.”

Mother Theresa