Can Hospital Support Reduce Racial/Ethnic Disparities in Exclusive Breastfeeding? An Assessment Using Mediation Analysis

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**BACKGROUND**

Breastfeeding and Racial/Ethnic Disparities
- Breastfeeding (BF) is related to a dose-response manner to reduce in health risks for children in reductions, including: obesity, asthma, infectious diseases, and Sudden Infant Death Syndrome (SIDS).
- The American Academy of Pediatrics (AAP) recommends infants be exclusively breastfed for the first six months of life.
- Only 18.2% of infants born in 2011 were exclusively breastfed for at least six months.
- Non-Hispanic Black women are less likely to initiate and maintain BF than non-Hispanic White women.

Hospital Breastfeeding Support
- The Baby Friendly Hospital Initiative encourages hospitals to be more supportive of BF by implementing specific practices shown to improve BF outcomes.2
- Only 6/120 birthing hospitals in Illinois were designated as "Baby Friendly" as of July 2015.3
- Even an effective intervention may not reduce racial/ethnic disparities in the large outcome due to factors.4
- Differential access: Not all women are equally likely to experience supportive hospital practices.

Differential Effectiveness: Hospital support may not be equally effective for all subgroups of women

**Study Objectives**
- Extend the use of mediation methods to foster understanding of the mechanisms underlying racial disparities in exclusive breastfeeding.
- Explore whether differential access to and effectiveness of hospital support contributes to racial/ethnic disparities in exclusive breastfeeding for Illinois mothers and infants.

**METHODS**

- Mail- and phone-based survey of women who delivered a live birth about experiences and behaviors before, during, and after pregnancy
- Inclusion criteria: infant alive and living with mother at time of survey; mother ever breastfed infant

Outcome (Y): Exclusive Breastfeeding Cessation Before Six Weeks
- "Exposure" (A): Mother's Race/Ethnicity: non-Hispanic (NH) White, NH Black, or Hispanic

Mediator (M): Hospital Breastfeeding Support
- The Baby Friendly Hospital Initiative encourages hospitals to be more supportive of BF by implementing specific practices shown to improve BF outcomes.2

Assuming equal access to hospital support, the racial/ethnic disparities in exclusive BF could be explained by the "mediated disparity".

Counterfactual mediation analysis is a methodological tool that can be applied to identify factors that influence outcomes, and to estimate the effect of an intervention on the outcome.5

**RESULTS**

**Exposure – Outcome Relationship**

Percent of Illinois Breastfeeding Initiators Who Stopped Exclusive BF within 6 Weeks

<table>
<thead>
<tr>
<th>Maternal Race/Ethnicity</th>
<th>NH White</th>
<th>NH Black</th>
<th>Hispanic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent</td>
<td>0</td>
<td>0</td>
<td>0</td>
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</tbody>
</table>

**Exposure – Mediator Relationship**

Percent of Illinois Breastfeeding Initiators Who Experienced High Hospital BF Support

<table>
<thead>
<tr>
<th>Maternal Race/Ethnicity</th>
<th>NH White</th>
<th>NH Black</th>
<th>Hispanic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent</td>
<td>0</td>
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**Exposure-Mediator Interaction**

Percent of Illinois Breastfeeding Initiators Who Stopped Exclusive BF within 6 Weeks

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**Mediation Analysis**

**Mediation Results Interpretation**

High hospital breastfeeding support appears to be only a weak mediator of racial/ethnic disparities in exclusive breastfeeding cessation before six weeks. Medication of the Black-Hispanic disparity was statistically significant while mediation was not seen to white.

- Assuming equal access to hospital support, the racial/ethnic disparities in exclusive BF cessation were slightly reduced, but substantial disparities remained.
- NH Black vs. NH White: reduced from 1.82 (TE) to 1.66 (NDE)
- Hispanic vs. NH White: reduced from 1.76 (TE) to 1.70 (NDE)

**CONCLUSIONS & PUBLIC HEALTH IMPLICATIONS**

High hospital breastfeeding support was a very modest mediator of racial/ethnic disparities in exclusive breastfeeding cessation before six weeks.
- Equalizing access to hospital support would slightly decrease the Black-White disparity in early exclusive BF cessation, but a substantial Black-White disparity due to other factors would remain.
- One explanation for non-significant mediation of the Hispanic-White disparity may be that differential effectiveness of hospital support was less effective for Hispanics than for Whites at preventing exclusive BF cessation.

**REFERENCES**


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**CONTACT INFORMATION**