Objectives

1. Identify disparities in breastfeeding.

2. Distinguish factors impacting African American women's breastfeeding behavior.

3. Discuss implications for practice to improve breastfeeding exposure, attitudes, and intentions.
Breastfeeding Rates

• 84% of women initiate breastfeeding (BF) in early postpartum
• Only 47% continue exclusive BF through 3 months

BF Initiation by Race:

<table>
<thead>
<tr>
<th>Race</th>
<th>BF Initiation Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asian</td>
<td>90%</td>
</tr>
<tr>
<td>White</td>
<td>87%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>84%</td>
</tr>
<tr>
<td>African American</td>
<td>74%</td>
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Breastfeeding among African American Women

• Cultural & personal influences overlay the impact of sociodemographic characteristics that influence BF

• Factors associated with BF:
  - BF Exposure
  - Knowledge of BF benefits
  - Positive attitudes toward BF
  - Self-determination
Theory of Planned Behavior

Background Factors:
- Exposure
- Personal Experiences
- Culture
- Personality
- Emotions
- Knowledge

Attitudes
Subjective Norms
Perceived Control
Intentions
Behavior

Infant Feeding Exposure, Attitudes, & Intentions
(College Students)

- Formula feeding was viewed as more convenient, but breast milk was viewed as healthier.
- Positive attitudes toward BF were associated with greater intentions to BF.
- BF exposure influenced attitudes toward BF.
- Race & gender were significant contributors to BF intentions
  - BF exposure & attitudes contributed the highest variance in BF intentions
Breastfeeding among African American Women

• Gap in breastfeeding behavior persists despite interventions

• Effective, culturally congruent interventions are needed

• Limited research on the specific impact of infant feeding exposure with formula feeding mothers commonly excluded

Infant Feeding Exposure & Personal Experiences

<table>
<thead>
<tr>
<th>Exposure</th>
<th>Participant Quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Contact with BF Mothers</strong></td>
<td></td>
</tr>
<tr>
<td>• My Personal Environment</td>
<td></td>
</tr>
<tr>
<td><strong>Guidance from Healthcare Providers</strong></td>
<td></td>
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<tr>
<td>• Specific Information about Breastfeeding Benefits</td>
<td>“Most of the women in my life who I keep close contact with if they have children, they all breastfed.”</td>
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<td></td>
<td>“When they gave me information about it...I wanted to at least try breastfeeding first because I know I was formula fed. It just helped me confirm it.”</td>
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<tr>
<td></td>
<td>“They weren’t pushy. They did reassure me that there are numerous resources in the community as far as other people I can reach out to.”</td>
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</tbody>
</table>
### Infant Feeding Exposure & Personal Experiences

#### Personal Experiences

<table>
<thead>
<tr>
<th>Navigating the Demands of BF</th>
<th>Participant Quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Didn’t Know What to Expect</td>
<td>“Well as far as breastfeeding I feel like you’re always told how easy it is and how natural it is and it’s just wonderful. And it really wasn’t.”</td>
</tr>
<tr>
<td>• Breastfeeding is Difficult</td>
<td>“One of the key factors in my switching from breast milk to formula was the convenience. I would say the consistency of how much he eats, is the main reason I switched to Enfamil.”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Making the Switch to Formula</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>• Formula Decisions</td>
<td>“I felt bad. I thought I was supposed to do this for him. So, I felt bad quitting...trying to weigh the pros and cons.”</td>
</tr>
<tr>
<td>• Feeling Guilty</td>
<td></td>
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</table>

#### Exposure

<table>
<thead>
<tr>
<th>My Own Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Easy Access to Information</td>
</tr>
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</table>

“I looked online a whole lot. Kelly mom, I think that’s what it’s called. I just did a lot of online research...reading and stuff like that to kind of try to prepare myself for it.”

“I went on messaging boards to ask questions to other moms. I went on YouTube to look at videos...because it was to the point where it hurt and I was like I just want to quit. So, I just looked up those resources to get through the weekend and then it also gave me some good questions to ask once I went to the appointment.”
## Formula Feeding Decisions

### Behavioral
- **Short Duration of BF**
  - BF was painful
  - BF in the first week was most important
  - Eating healthy & not smoking were deterrents to BF

### Personal
- **Simplicity of Formula**
  - Formula just as healthy
  - Uncomfortable with BF in public

- **Diverse Support Networks**
  - Support for both BF & formula feeding from family & friends

### Environmental
- **Lack Basic Needs & Resources**
  - Formula is expensive
  - No exposure to African American women BF
  - Missed opportunities for help

## Implications for Practice

1. **Improve prenatal BF exposure & attitudes**
   - Promote visibility of African American women BF in patient education, resources, & media
   - Ensure women are given the tools to successfully BF & know what to expect in the early weeks of BF
   - Talk about infant feeding in a positive way

2. **Increase racially-congruent support**
   - Need more African American lactation consultants & peer counselors
   - Need innovative ways to connect women
Innovative Technology

- Smartphone use is on the rise

- mHealth involves the use of smartphones complex functionality and Bluetooth technology to support achievement of health objectives.

- Incorporating technology into clinical practice can improve patient-provider communication and allow women to self-manage their breastfeeding experience.

Innovative Technology

**Smartphone Apps: mHealth**

- Useful & low cost way to distribute information
- Source of information often not identified
- Few are based on theories of health behavior change
- Functionality limited on current available apps with no customized experience
- Lack culturally congruent care for at risk populations
- A web-based monitoring system had a significant effect on breastfeeding outcomes
User-Centered Design Process

Concept Generation:
- Focus Groups
- Interviews
- Surveys

Prototype Design & System Development:
- Design Concepts
- Working Prototypes

Evaluation:
- Walk Throughs
- Usability Testing
- Field Studies

Users

Intervention Framework: MMC

- RESOURCES
  - Breastfeeding education and recommendations
- FEEDING LOGS
  - Track feeding patterns
- VIDEO CONFERENCES
  - Virtual Appointment with a breastfeeding expert
- PEER SUPPORT
  - Chat with other breastfeeding mothers
Connecting the Pieces for a Successful Breastfeeding Journey

Get started by choosing one of the options below

Resources
- Breastfeeding education and recommendations
- Peer Support
- Chat with other breastfeeding mothers
- Feeding Logs
- Track feeding patterns
- Video Conference
- Virtual appointment with a breastfeeding expert

Resources

BREASTFEEDING POSITIONS & HOLDS
Read More

PROPER LATCH
Read More

EARLY PHASES OF BREASTFEEDING: WHAT TO EXPECT THE FIRST FEW WEEKS
Learn about what to expect in your first few weeks of breastfeeding.
Read More

BREASTFEEDING BOOKS
A selection of useful books for breastfeeding.
Read More

BREAST PUMPS

Many mothers have reported the internet is their first source for infant feeding information. Just type in the word "breastfeeding" in your search engine and you will get a ton of web pages to explore. This information comes from a huge variety of sources making it difficult to determine good information from bad information. To help you identify breastfeeding information you can trust, here are a few links to credible websites.

General Information:
- Baby Gurus
- Missouri Breastfeeding Coalition
- Women's Health.gov - Breastfeeding Resources
- Women's Health.gov - Guide to Breastfeeding

Information for African American Mothers:
- Women's Health.gov - It's Only Natural

Breastfeeding and Medications:
- Drugs and Lactation Database (LactMed)
- Infant Risk Center
Video Consultation: Zoom

MOTHER'S MILK CONNECTION

Feeding Log

Your Activity Log
- Log Activities
- Video Activities
- Activity Logs

Log an Activity

- Breast
- Bottle
- Pumps
- Diaper

WHEN
- May 16, 2021
- 12:34 PM

HOW LONG (MINUTES):
- 5

WHICH BREAST(S):
- Left
- Right
- Both

Save to Log
MMC Design Guidelines

- Positions & Proper Latch
- What to Expect
- Online Resources
- FAQs
- Videos

- Breastfeeding
- Milk Expression
- Infant Output
- Infant Weight
- Personal Goals

- Video conference with a breastfeeding professional
- Personalized support

- Chat with other breastfeeding mothers
- Asynchronous discussions
References

9. Coughlin SS. The need for research-tested smartphone applications for promoting breastfeeding. mHealth. 2016; 2:1-3