Breastfeeding Practices among Rural Women of Tamil Nadu

Natalia Napolitano; MSSRF
Benefits of Breastfeeding

- Colostrum
- Nutritional Outcomes of Breast milk
- Mother-Child Bonding
- International Standards by WHO
Breastfeeding & Tamil Nadu

• Exclusive Breastfeeding Rates: TN 48.3%, IN 54.9% (NFHS 2015)

• Possible Reasons based on Literature:
  
  – Supplementary Feeding
  
  – Maternity Leave
  
  – Pressure on Women’s Time and Return to Workforce
  
  – Social Norms Influencing Breastfeeding
I. What are the challenges to breastfeeding according to WHO guidelines as faced by rural women in Tamil Nadu?

II. What is the effect of the policy mechanisms on breastfeeding practices in Tamil Nadu?
Methodology

- Quantitative + Qualitative

- Detailed Individual Interviews:
  - Mothers

- Focus Group Discussions:
  - Women in Different Age Groups (20-35), (35-55), (55+)

- Case Study
Sample Selection

• Sample Size: 30
  – (ICDS Center Records, MSSRF Contacts, Self-Help Groups, Nurses)
  – Equal Women in Economic Activity (WEA) vs. Women Not in Economic Activity (WNEA)
• Focus Group Discussions: 5
  – Involved 5-6 Members of each age group separately
• Case Study Documentation: 1
• Descriptive Statistical Analysis
<table>
<thead>
<tr>
<th>Variables and Stress Indicators</th>
<th>Experience at Work</th>
<th>Support Group Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complications in delivery</td>
<td></td>
<td></td>
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<tr>
<td>(high stress)</td>
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<td></td>
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<tr>
<td>Prolonged Labour:</td>
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<tr>
<td>First time mothers &gt; 20 hrs,</td>
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<tr>
<td>Previous children &gt; 14 hrs</td>
<td></td>
<td></td>
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<tr>
<td>(high stress)</td>
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<tr>
<td>Return to work before 6 m.o</td>
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<tr>
<td>(high stress)</td>
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<tr>
<td>Return to work 6-10 m.o</td>
<td></td>
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<tr>
<td>(medium stress)</td>
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<tr>
<td>Return to work 10-24 m.o</td>
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<tr>
<td>(low stress)</td>
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<tr>
<td>Pregnancy Experience</td>
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<tr>
<td>Birth Experience</td>
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<tr>
<td>Familial Counsel and Pressures</td>
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<tr>
<td>Breastfeeding Practices</td>
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<tr>
<td>Financial Pressures</td>
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</tbody>
</table>
Study Area

- Reddiarchattiram Block (Dindigul District): 14 Days
  - Population: 102,682
    - Rural 83%
    - 20 Villages
  - Literacy: 71.53%
    - Male: 81.06%, Female: 62.01%
  - Resources
    - 19 SHG, 20 ICDS Centers, 6 Private Health Centers
    - Kannivadi Gov’t Hospital, Dindigul Gov’t Hospital

Source: Census 2011
Results: Demographics

- Average Age: 26
- Average Age 1st Pregnancy: 22
- Mode Number of Children: 2
- Women in Economic Activity: 15
- Women Not in Economic Activity: 15
- Work Before Marriage: 7

Table 1.2

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Total; n=30</th>
<th>WEA; n=15</th>
<th>WNEA; n=15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part of an SHG</td>
<td>15</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>Scheduled Caste</td>
<td>22</td>
<td>8</td>
<td>14</td>
</tr>
<tr>
<td>Sevenakayaranpatti Proportion</td>
<td>16</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>Ottakovilpatti Proportion</td>
<td>6</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Pudupatti Proportion</td>
<td>4</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Pupankiulam Proportion</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Kannivadi Proportion</td>
<td>3</td>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>

Distribution of Work

- Casual Labour Private
- Ag. Labour
- Hospital Nurse
- Teacher
- Shop
- Other
Results: Pregnancy and Birth Stress

- 8 worked until Date of Delivery
- All Attend Antenatal Checkups
- Receive Supplements

Table 2.1

<table>
<thead>
<tr>
<th>Birth Stress</th>
<th>Total</th>
<th>WEA</th>
<th>WNEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complications; n= 15</td>
<td>15</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>Complications occurring in Pvt. Hosp.</td>
<td>8</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Normal Birth Stress; n=3</td>
<td>3</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

- **Difficulty of Preg. vs. Hours Worked**

![Difficulty of Preg. vs. Hours Worked](image)

- **Causes for C-section**

![Causes for C-section](image)
Results: WHO Guideline Adherence

Exclusive Breastfeeding for 1st 6 Months
- Total EBF: 16
- Women in Economic Activity EBF: 7 (2 Stopped < 1 Mo)
- Women Not in Economic Activity EBF: 9 (0 Stopped < 1 Mo)

Breastfeeding Overall for 2 Years
- Total Able: 12
- Statistical Significance WEA vs. WNEA (p = 0.024)

Breastfeeding Within 1 Hour
- 24 Mothers Gave Colostrum
  - Immunity
  - Healthworker Advised
- 3 Not Given
  - Child in ICU
- 3 No Recollection
- 18 of 30 Breastfed within 1 Hour
Results: 6 Mo Exclusive BF Patterns

Reasons for Supp. Feeding < 6 Mo

- Total: 4 Insufficient Milk, 4 Afraid Baby, 3 Hungry/Thirsty, 2 Health Benefits, 1 Felt Natural to Wean, 1 Out of Mother’s Control, 1 Work
- WEA: 2 Insufficient Milk, 3 Afraid Baby, 1 Hungry/Thirsty, 1 Health Benefits, 1 Felt Natural to Wean, 1 Out of Mother’s Control, 1 Work
- WNEA: 2 Insufficient Milk, 1 Afraid Baby, 2 Hungry/Thirsty, 1 Health Benefits, 1 Felt Natural to Wean, 1 Out of Mother’s Control, 1 Work

Supplements for Breastmilk

- Water: 0 Total, 3 WEA, 1 WNEA
- Cow Milk: 1 Total, 2 WEA, 1 WNEA
- Rice: 1 Total, 1 WEA, 0 WNEA
- Cerelac: 3 Total, 2 WEA, 1 WNEA
- Biscuits: 2 Total, 1 WEA, 1 WNEA
- Powdered Milk: 1 Total, 1 WEA, 0 WNEA
- Other: 1 Total, 1 WEA, 0 WNEA

Total Amounts of Supp. Fed

- 45 mL: 3 Total
- 100 mL: 1 Total
- 150 mL: 1 Total
- 200 mL: 2 Total
- 300 mL: 1 Total
- 400 mL: 1 Total
- 1 L: 1 Total
- No Recollection: 1 Total
Results: 1st Hour Feeding

1st Feeding Distribution Times

<table>
<thead>
<tr>
<th>Time</th>
<th># Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>1hr</td>
<td>18</td>
</tr>
<tr>
<td>10 hr</td>
<td>7</td>
</tr>
<tr>
<td>No Recollection</td>
<td>2</td>
</tr>
</tbody>
</table>

Influence of Family Counsel on Time of Feeding

- 1 hr: 3
- 3 hr: 1
- 10 hr: 1
- 24 Hr: 1
- No Recollection: 1

Influence of Delivery Type on Time of Feeding

- C-section:
  - 1 hr: 7
  - 3 hr: 11
- Normal Birth:
  - 1 hr: 4
  - 3 hr: 3
  - 10 hr: 2
  - 24 Hr: 1
  - No Recollection: 2
# Results: 2 yr Feeding

Number of Women in Each Factor Able to Breastfeed for 2 Years

<table>
<thead>
<tr>
<th>Factor</th>
<th># Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total; n=30</td>
<td>12</td>
</tr>
<tr>
<td>WEA; n=15</td>
<td>1</td>
</tr>
<tr>
<td>WNEA; n=15</td>
<td>11</td>
</tr>
<tr>
<td>Health Issues; n=7</td>
<td>3</td>
</tr>
<tr>
<td>C-section; n=15</td>
<td>4</td>
</tr>
<tr>
<td>Fam. Counsel; n=6</td>
<td>1</td>
</tr>
</tbody>
</table>
Results: Influence of Multiple Factors

Proportion of Women in Selected Categories able to fulfill WHO Guidelines

- **EBF 6 Mo**
  - Working; n=15: 0.47
  - Non-Working; n=15: 0.6
  - Caesarian; n=15: 0.47
  - Normal Birth Stress; n=3: 0.43
  - Health Issues; n=7: 0.5
  - Only Family Counsel; n=6: 0.33

- **BF in 1 Hr**
  - Working; n=15: 0.73
  - Non-Working; n=15: 0.8
  - Caesarian; n=15: 0.867
  - Normal Birth Stress; n=3: 0.33
  - Health Issues; n=7: 0.29
  - Only Family Counsel; n=6: 0.5

- **BF for 2 Yr**
  - Working; n=15: 0.17
  - Non-Working; n=15: 0.43
  - Caesarian; n=15: 0.8
  - Normal Birth Stress; n=3: 1
  - Health Issues; n=7: 0.33
  - Only Family Counsel; n=6: 1
Results: Productive Work and Breastfeeding

- 10 Return due to Finances
- 3 Return due to End of Maternity Leave
- 8 of 15 in Unorganized Sector

Stress in Different Jobs Distribution

<table>
<thead>
<tr>
<th>Job</th>
<th>Low</th>
<th>Medium</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cas. Labour Priv.</td>
<td>3</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Ag. Labour</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Hospital Nurse</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Teacher</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shop</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
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</tr>
</tbody>
</table>

Table 4.1

<table>
<thead>
<tr>
<th>Time of Return to Labour Force</th>
<th>Low Stress</th>
<th>Medium Stress</th>
<th>High Stress</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>4</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Stress Categories Distribution Across Feeding Lengths. Chart 4.19

- <2 Mo: Low 1, Medium 1, High 1
- 2-4 Mo: Low 1, Medium 1, High 2
- 4-6 Mo: Low 1, Medium 1, High 1
- 6 Mo: Low 5, Medium 6, High 1
- 6 Mo+: Low 2, Medium 2, High 1
Results: Health Counselling and Support

- Household Labor Pressures on Women
  - Support in Health
- Multiple Sources of Counseling
- Public Breastfeeding
  - Perceptions Change Across Generations

Health Counselling Distribution

- Total
  - ASHA Worker: 4
  - Nurse: 8
  - Family: 13
  - Other: 19

- Working
  - ASHA Worker: 9
  - Nurse: 8
  - Family: 4
  - Other: 1

- Non-Working
  - ASHA Worker: 10
  - Nurse: 5
  - Family: 4
  - Other: 4

Household Work Help and Family Only Counsel

- Family Only Counsel
  - Total: 4
  - Working: 4
  - Non-Working: 2

- Intersec w/ HH Help
  - Total: 4
  - Working: 4
  - Non-Working: 4
Results: Cash-Scheme Effect

- **Popular Programs**
  - Maternity Benefits Program 2017
  - Maternity Benefits Act Amendment 2017
  - *Pradhan Mantri Matri Vandana Yojana 2017 (JSY)*
  - Dr Muthulakshmi Reddy Maternity Benefit Scheme 2015

- **Purpose**
  - Register Births, Decrease Maternal Mortality, Financial Incentive to Rest
  - Meant to Substitute the Income of the Mother for 6 Mo

**WEA Cash-Scheme Use**

- Household Expenses
- Business
- Husband Used
- Saved
- Jewelry
- Hospital Expenses

- **Cash-Scheme Access**

  - Total: 21
  - Working: 8
    - Easy: 6
    - NR Private: 1
    - NR Gov’t Employee: 1
    - NR Renter: 1
    - NR Other: 1
  - Non-Working: 13
    - Easy: 18
    - NR Private: 1
    - NR Gov’t Employee: 1
    - NR Renter: 1
    - NR Other: 1
Results: Policy Access and Initiative

• Policies Promoting Breastfeeding
  • Rajasthan Breastmilk Bank Program
  • Breastmilk Bank in Dindigul Hospital
  • Mother’s Absolute Affection Program 2016

• Limitations
  • Used for Babies in ICU and Abandoned Infants
  • Donation at Time of Delivery
Results: Case Study

1) Presentation
   – Mother in Sevenakaryanapatti Village

2) Story
   – 1\textsuperscript{st} Child
   – The In-Between Time
   – 2\textsuperscript{nd} Child

3) Analysis

4) Recommendation
Results: Recommendations

1) Increasing Quality of Care in Govt. Hospitals
   - Policy: Decreasing Indirect Medical Costs, Decrease C-section Rate, Culture of Sympathy Among Health Professionals
   - Goal: To Incentivize Use of Govt. Hospital Over Private
   - Intended Effect: Less Financial Burden on Women, Increase Use of Cash Schemes

2) Special Markers on Cash Withdrawn
   - Policy: Money from Cash-Scheme Marked for Special Use
   - Intended Effect: To Limit Diversion of Cash from the intended purpose to expenses on Products that Harm Family (e.g. Alcohol)

3) State-wide Breastmilk Bank Program
   - Policy: Expand to All Tamil Nadu Hospitals, Make Donations Centers in ICDS
   - Intended Effect: To Increase Availability of Expressed Breastmilk for All Children
Results: Recommendations

4) Comprehensive Maternal Healthcare
   - Policy: Comprehensive Health Care Available for all Women in Reproductive Age
   - Goal: Use Schools and Community Institutions to Prevent and Treat Health Issues
   - Intended Effect: To Decrease Occurrence of Reproductive and Associated Health Issues
     (e.g. Back Pain, High BP, Diabetes, etc. linked to pregnancy and delivery) Among Women

5) Village Health Groups
   - Policy: Local Group that Connects Women in Breastfeeding Discussions, Involves All Ages, Connects to Resources
   - Intended Effect: Promote Good Breastfeeding Role Models, Make a Larger Supportive Community, Safe Space to Publicly Breastfeed
Limitations of Study

• Small Sample Size and Study Area
  – Uneven Distribution Across Villages

• Difficulty Finding Women in Economic Activities

• Overlapping Populations
Future Research

• Future Research:
  – Cause of Health Issues in Rural Women
    • Appropriate Support Mechanisms Available
  – Generational Attitudes and Practices
    • Effect of Media and Technology on Shifting Attitudes
  – Women’s Value of Health Advice
    • Inconsistencies and Various Sources
Thank You