Describing Maternal Knowledge of Infant Feeding Practices

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Background

- Rate of infant growth from birth to age 12 months is associated with weight status in later childhood.
- Infant feeding practices contribute to the rate of growth.
- Recommendations regarding infant feeding practices are provided by organizations such as the American Academy of Pediatrics, yet parents are not following infant feeding recommendations.
- Research is lacking on parental knowledge of infant feeding practices, preventing healthcare providers from knowing how best to intervene.

Purpose

The purpose of this study was to describe first-time mother’s knowledge of responsive infant feeding, infant growth, & readiness for complementary foods.

Methods

Design: Descriptive, qualitative study

Sample:
- First-time mothers in the 3rd trimester (28 weeks & beyond) of a healthy, singleton pregnancy
- Age 18 years or older
- Able to speak and understand English
- No prior experience feeding an infant (biological or adopted)
- Recruited from community settings

Procedures:
- Demographics & Feeding Plans (Tables 1 & 2)
- Face-to-face or telephone interviews:
  1) How will you know when your baby is hungry?
  2) How will you know when your baby is full?
  3) When will you know if your baby is growing properly?
- Data Analysis:
  - Audio recordings were transcribed by two researchers and a random selection of transcripts were reviewed by research assistants for accuracy.
  - Nvivo 12 Pro was used for coding and thematic analysis
  - Strategies to enhance trustworthiness included: o Audit trail, reflexivity, two researchers independently analyzed and established interpretive convergence

Table 1. Descriptive Status

<table>
<thead>
<tr>
<th>(N=30)</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maternal age (years)</td>
<td>28.2 ± 3.8</td>
<td>18-36</td>
</tr>
<tr>
<td>Weeks gestation at interview</td>
<td>35.1 ± 3.3</td>
<td>28-1-40.7</td>
</tr>
<tr>
<td>Marital Status, married or living as married</td>
<td>23</td>
<td>76.7</td>
</tr>
<tr>
<td>Education level, some college or college graduate</td>
<td>27</td>
<td>90.0</td>
</tr>
<tr>
<td>Employed full time</td>
<td>18</td>
<td>60.0</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caucasian</td>
<td>16</td>
<td>53.3</td>
</tr>
<tr>
<td>African-American</td>
<td>10</td>
<td>13.3</td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
<td>13.3</td>
</tr>
<tr>
<td>Ethnicity, non-Hispanic</td>
<td>28</td>
<td>93.3</td>
</tr>
</tbody>
</table>

Table 2. Feeding Plans (N=30)

<table>
<thead>
<tr>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plans to breastfeed, yes</td>
<td>30</td>
</tr>
<tr>
<td>Breastfeeding Duration</td>
<td></td>
</tr>
<tr>
<td>&lt; 6 months</td>
<td>3</td>
</tr>
<tr>
<td>6-11 months</td>
<td>5</td>
</tr>
<tr>
<td>12 months</td>
<td>16</td>
</tr>
<tr>
<td>&gt; 12 months</td>
<td>5</td>
</tr>
<tr>
<td>Age at Complementary Food Intro</td>
<td></td>
</tr>
<tr>
<td>&lt; 4 months</td>
<td>2</td>
</tr>
<tr>
<td>4-6 months</td>
<td>15</td>
</tr>
<tr>
<td>&gt; 6 months</td>
<td>11</td>
</tr>
<tr>
<td>Does not know</td>
<td>2</td>
</tr>
</tbody>
</table>

Results

Theme 1: Responsive Feeding
- Most mothers did not know the term, but deduced the meaning

Theme 2: Feeding Cues
- Hunger – 2 subthemes
  1) Baby cries
  2) Baby shows hunger cues
- Fullness – “Stops eating”
- Crying
- “If he starts getting fussy…”
- “…crying would be a good indication”
- She’ll give us cues like she’ll start licking her lips or she’ll start moving her mouth… she might start rooting…”
- “I’m not really sure that I would just, like, decide on my own, I think that I’d probably just ask my doctor… I’d just rely on him.”
- “I have a lot to learn!”
- “…am I supposed to know this stuff?”
- “…this is my first baby, I have no idea what I’m doing…”

Theme 3: Resources
- Varying sources of information
- Reliance on healthcare provider for validation of growth & determining readiness for complementary foods
- “She’ll give us cues like she’ll start licking her lips or she’ll start moving her mouth… she might start rooting…”

Theme 4: Readiness for Complementary Foods
- 2 subthemes
  1) Readiness determined by age (6 months old)
  2) Infant’s interest
- “Whenever she starts reaching for stuff and trying to grab it off our plates.”

Theme 5: Parental attitudes toward knowledge of recommendations
- Positive vs negative attitude

Conclusions

- About half of mothers feeding plans were consistent with recommendations.
- Mothers were able to describe responsive feeding.
- Recognition of hunger cues was described by some mothers; others only expressed crying as the primary sign of hunger in infants.
- Recognition of fullness cues was lacking.
- Reliance on the healthcare provider for guidance was mentioned, literature suggests that family and friends are also important yet was not expressed in this sample of mothers.
- Mothers expressed starting complementary foods around 6 months, none spoke to developmental readiness for starting these foods.
- Some mothers recognized they have more to learn and others seemed comfortable in their current knowledge base.

Strengths & Limitations

- Qualitative technique provided rich data.
- Primarily a Caucasian, well educated, married sample of mothers.
- All mothers planned to breastfeed their infants.
- Mothers were anywhere between 28 and 40 weeks gestation, data prenatal infant feeding education was not gathered.

Future Directions

- Providing education regarding developmental readiness for complementary foods to examine the impact on timing of complementary food introduction.
- Examine the differences in knowledge based on demographic characteristics (mixed-methods analysis).
- Following mother-infant dyads after birth to examine what infant feeding practices are followed.

Acknowledgements

- This study was deemed exempt by the FSU IRB
- Support for this study was provided by FSU, Center for Research and Creativity, First Year Assistant Professor Grant
- Thank you to North Florida Women’s Care for allowing recruitment and data collection to occur in your office space.
- Special thanks to FSU undergraduate students: Rachel Alba, Anna Flinn, Katherynn Pledger, & Zoe White for assistance on this project

Contact: Jessica Bahorski, jbahorski@nursing.fsu.edu
Title: Describing Maternal Knowledge of Infant Feeding Practices

Purpose: The purpose of this study was to describe first-time mother’s knowledge of responsive infant feeding, infant growth, and readiness for complementary foods (CF).

Background/Significance: Infants who experience rapid growth over the first year of life are at increased risk for obesity later in childhood. Infant feeding practices are known to contribute to the growth pattern of infants. Recommendations regarding infant feeding are provided by organizations such as the American Academy of Pediatrics, however, these recommendations are not being followed. Research regarding parental knowledge of these recommendations is lacking and requires exploration to determine how best to assist parents adhere to these recommendations.

Methods: The descriptive research approach guided this study. First-time mothers in the third trimester of pregnancy were recruited from a local obstetric office. Mothers were eligible if they were at least 18 years, had not previously fed an infant (biological or adopted), and spoke English. Mothers were excluded if they were pregnant with multiple fetuses or the fetus had been diagnosed with a medical condition that would interfere with feeding or growth after birth (i.e., a congenital anomaly). Individual interviews were conducted with eligible mothers either face-to-face or over the phone. During the interview, mothers were asked demographic questions and four opened ended questions regarding infant feeding:

1) “How will you know when your baby is hungry?”
2) “How will you know when your baby is full?”
3) “How will you know when your baby is ready for food or drink other than breastmilk or formula?”
4) “How will you know if your baby is growing properly?”
5) “What does the term “responsive feeding” mean to you?”

The part of the interview regarding infant feeding was audio recorded. The study was deemed exempt by the university IRB.

Results: All mothers (n=30) intended to breastfeed their infant. Hunger cues such as rooting, clinching fists, moving hands to mouth, etc. were reported by mothers, however, the only fullness cue consistently reported was cessation of eating. When asked about “responsive feeding,” most mothers expressed unfamiliarity with the term, yet deduced that it meant feeding in response to their infant’s hunger/fullness cues. Readiness for CF resulted in themes of infant age and healthcare provider recommendations. Few mothers discussed readiness signs such as developmental abilities.

Discussion: Although mothers were unfamiliar with the term “responsive feeding,” many spoke to responding to their infant’s cues. It is unknown whether this knowledge goes beyond breastfeeding, such as when offering CF. This study indicates that, prenatally, many mothers do not know when their infant is ready for CF. Many infants are started CF earlier than recommended, therefore, additional research regarding readiness for CF is needed. Also, future research should examine demographic differences in maternal knowledge of responsive feeding and readiness for CF to determine which groups of mothers are in greatest need of intervention.

IRB: This study was deemed exempt by the Florida State University IRB.

Funding: Support for this study was provided by Florida State University, Center for Research and Creativity, First Year Assistant Professor Grant