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Women's Perceptions of Breastfeeding Barriers in Early Postpartum Period: A Qualitative Analysis Nested in Two Randomized Controlled Trials

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Abstract

Objectives: This study examined women's perceptions of early infant feeding experiences and identified early postpartum barriers to successful breastfeeding.
Subjects and Methods: We conducted semistructured exit interviews at 6 months postpartum with a subsample of participants ($n = 67$) enrolled in two randomized controlled trials of breastfeeding promotion. Study arms included (1) routine pre- and postnatal visits with an International Board Certified Lactation Consultant (IBCLC) (LC group), (2) electronically prompted guidance from prenatal care providers (EP group), (3) EP + LC combined, and (4) standard of care (control group). Interview transcripts were coded using grounded theory and analyzed in MAXqda. Code matrices were used to identify early postpartum breastfeeding barriers and were further examined in relation to treatment group using a mixed methods analysis.
Results: The majority of the participants reported experiencing at least one barrier to breastfeeding. Barriers to breastfeeding were more commonly reported in the early postpartum than late postpartum period. The most common barrier during the early postpartum period was the perception of inadequate milk supply ("lactational") ($n = 18$), followed by problems with latch, medical problems that were perceived as precluding breastfeeding, and medical staff and hospital practices. Participants frequently reported that the IBCLCs assisted them in anticipating, managing, and overcoming these barriers.
Conclusions: Our findings underscore the importance of integrating IBCLCs into routine pre- and postpartum care because they provide critical support that effectively addresses early postpartum barriers to breastfeeding.

Introduction

Breastfeeding is recommended exclusively up to 6 months and at least until 12 months by all major medical associations.[1] Although most U.S. women intend to breastfeed and do initiate breastfeeding, the vast majority of U.S. infants are fed formula in the first year of life.[2,3] In a recent study, approximately 60% of mothers stopped breastfeeding earlier than desired.[4] Breastfeeding rates dramatically decrease shortly after birth. Premature weaning is particularly pronounced among minority and low-income mothers.[5–9] As many as 25–50% of these women stop breastfeeding in the first month,[10] and more than half of these stop in the first 2 weeks.[1,2,11,12] The most prevalent reasons for early cessation of breastfeeding are perceptions of insufficient milk supply, infant nutritional concerns, and psychosocial/lifestyle matters,[13,14] followed by illness and the need to take medications.[4,15]

Internationally Board Certified Lactation Consultants (IBCLCs), when integrated into primary care settings, have been shown to increase breastfeeding rates.[16] IBCLCs provide the type of support that women want, both skill- and relation-based,[17] and improve breastfeeding exclusivity, initiation, and duration.[18,19] Hospitals staffed with IBCLCs have increased breastfeeding rates at discharge.[20] Minority and low-income women frequently face barriers to breastfeeding and have been shown to especially benefit from IBCLC services, with increased rates of initiation and duration of breastfeeding noted when such services are present.[21]

We have previously demonstrated the effectiveness of IBCLCs in increasing breastfeeding duration and intensity among low-income women in two randomized controlled

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trials (RCTs).[22] The primary outcomes of the RCTs showed threefold higher odds of high (versus low) breastfeeding at 3 months with IBCLC support. To understand and explain the mechanisms of this effect via evaluation of women's perception of breastfeeding barriers, we performed a qualitative analysis of exit interviews from randomly selected participants from our study population. Prior qualitative studies have reported on the perception of providers and midwives,[23] as opposed to focusing on the maternal perspective.[24,25] Our objectives were (1) to describe women's recollection of early feeding experiences, (2) to identify early barriers to breastfeeding, and (3) to assess the women's perceptions of support from the lactation consultants.

Subjects and Methods

Study overview

This qualitative analysis is based on exit interviews on a 20% random sample of participants enrolled in two single-blind breastfeeding promotion RCTs. These RCTs aimed to assess the effectiveness of routine primary care-based pre- and postnatal interventions to increase breastfeeding intensity and exclusivity among low-income, minority women. Details of the RCTs and empirical breastfeeding outcomes are reported elsewhere.[22] This study was approved by the Albert Einstein College of Medicine Institutional Review Board.

Participants were recruited from two prenatal care sites located in Bronx, NY (2008–2010). Women enrolled in the study included those who were English or Spanish speaking and 18 years of age or older in the first or second trimester of a singleton pregnancy without known risk factors for premature birth or maternal/infant medical contraindications to breastfeeding. Upon consent and enrollment, women were randomized to one of four treatment groups: (1) routine prenatal care provider and integrated electronic prompts of anticipatory guidance during visits (EP group); (2) pre- and postnatal visits with an IBLC in addition to routine prenatal care provider (LC group); (3) both electronic prompt and pre- and postnatal IBCLC visits and routine care (EP + LC group); and (4) routine care with prenatal care provider only (control group).

Data collection and analysis

This mixed-methods analysis included data from semi-structured exit interviews from participants at 6 months postpartum and empirical data from 1-month postpartum phone questionnaires. The exit interview items (see Appendix) aimed to evaluate the study protocol and perceptions of the intervention effects.[26] Interviews ranged from 8 to 10 minutes in duration and were audio recorded, downloaded in Digital Wave, and transcribed verbatim by the research team. Members of a five-person study team (Principal Investigator, Study Coordinator, and three research assistants) independently coded interviews and met biweekly to develop a codebook, which was continually revised over the period of a year. Through an iterative process, team members coded interviews using a modified grounded theory methodology[27] until 80% inter-rater reliability was reached. Data saturation was met at 67 interviews. The transcripts were analyzed in MAXqda.[28] The code-matrix function was used to examine frequencies of codes and subcodes. We focused our analysis on the text coded as "breastfeeding barriers." We drew comparisons between the experiences of participants randomized to LC versus non-LC groups. To contextualize qualitative data, we selected variables about hospital stay/early postpartum characteristics and 1-month feeding outcomes (breastfeeding intensity) collected from the 1-month questionnaires. Variables that were selected included those with high associations with breastfeeding outcomes, including delivery type, maternal medications, neonatal intensive care unit (NICU), rooming in, time to breastfeeding after birth, and formula feeding during hospitalization.[29] Breastfeeding intensity (percentage of breastmilk feedings of all feedings in the last 7 days) was categorized as high (>80% breastmilk), medium (20–80%), or low (<20%).[30]

Each quote is followed by a brief participant profile, including the 1-month infant feeding profile and the randomized intervention arm. The notation "Missing 1-month data" is reported for participants who could not successfully be reached for the 1-month interviews but who completed/participated in the exit interviews at 6 months postpartum.

Results

Participant and hospital stay characteristics and 1-month feeding outcomes

The sample ($n=67$) was largely Hispanic or African American, and 55% were receiving federal assistance through the Special Supplemental Nutrition Program for Women, Infants and Children. More than half of the participants were born in the United States. The majority of the women intended to breastfeed (Table 1).

Table 1. Maternal Characteristics

Maternal characteristic	*Value*
Number of subjects	67
Maternal age (mean ± SD) (years)	27.9 ± 6.2
Gestation (mean ± SD) (weeks)	38.4 ± 2.6
BMI (kg/m^2) [*n* (%)][a]	
Normal/low (<25)	18 (26.9)
Overweight (25–<30)	22 (32.8)
Obese (≥30)	22 (32.8)
Race/ethnicity [*n* (%)][a]	
White	2 (3.0)
Hispanic	36 (53.7)
Black/non-Hispanic	21 (31.3)
Asian/non-Hispanic	4 (6.0)
Bi-/multiracial/other	4 (6.0)
Born in United States/50 states	40 (59.7)
Enrolled in WIC[a]	37 (55.2)
High school graduate[a]	53 (79.1)
Nulliparous	29 (43.3)
Never breastfed [*n* (%)][b]	5 (13.2)
Feeding intention[a]	
Exclusive breastfeeding	29 (43.3)
Exclusive formula feeding	1 (1.5)
Both breast and formula	37 (55.2)

[a]Columns may not add to 100% because of missing or "don't know" responses.
[b]Among parous.
BMI, body mass index; WIC, Special Supplemental Nutrition Program for Women, Infants and Children.

Almost half of participants (41%) delivered by cesarean section, and 16% of infants were in the NICU. Only 27% of participants initiated or attempted the first breastfeeding within an hour of delivery. Eighty-eight percent of participants reported that their infants received formula (supplementation) during hospitalization. At 1 month old, only a quarter of the infants were high-intensity breastfeeding (Table 2).

Barriers

The most frequently cited breastfeeding barriers included lactational, latch, medical, and medical staff and hospital practices (Table 3). Nearly three out of four women (73%) described at least one barrier to breastfeeding, and many interviews were coded for multiple barriers. It is notable that the majority of barriers took place in the first few days postpartum and in the hospital. Barriers after the first few days postpartum were less common in the interviews and thus are not reported in text below. Participants in all four study arms experienced a variety of early barriers. Descriptive differences in how the experiences of certain barriers were impacted by IBCLCs are described below.

Lactational: breastmilk supply. The most commonly reported barrier cited by women ($n=17$) was the perception of insufficient milk supply in the first few days. Frequently participants reported that this was the reason they introduced formula. In some cases they felt that it was the hospital staff that pushed them to formula-feed because they were not producing breastmilk:

> I did not produce enough milk that I wanted…I really wanted to breastfeed alone, but I was not producing enough milk so I made the decision. (Medium-intensity breastfeeding at 1 month, control group)

Although both those in the intervention and the control group described hospital staff pressuring them to give formula, those who received the intervention and met with an IBCLC described a heightened understanding and comfort with physiologic delayed lactogenesis:

> The nurses were actually telling me "Oh, give her some formula. You know she's still hungry. You're not producing enough…" And [the LC] put my mind at ease, like, you know, nobody produces that much in the beginning…It's gonna take a little while. But it's better for them. [She] showed me now to position the baby. (High-intensity breastfeeding at 1-month, LC + EP intervention group)

Latch. Difficulties with latch or nipple pain were commonly experienced ($n=14$), yet participants internalized this as unique scenarios that precluded their breastfeeding. Although this barrier was experienced by participants in all groups, those without the IBCLC intervention appeared to have more difficulty overcoming it:

> You know that, what is my problem in particular; I'm not going to say all moms because everyone has a different perspective.… When he did latch on it was to the one of my breasts over the other, and then he would just over time he just didn't want it. Most of my main problem was the latching on. (Medium-intensity breastfeeding at 1 month, EP intervention group)

On the other hand, several participants in the IBCLC arm who had latch difficulties described these problems as temporary and manageable issues, as opposed to the foregone conclusion of never being able to breastfeed:

> I was discouraged because it would hurt…My nipples were really like raw at one point then she [LC] told me it would go away in about two weeks. And two weeks later it went away. So that is the only reason why I didn't stop breastfeeding. (High-intensity breastfeeding at 1 month, LC + EP intervention group)

Medical: maternal medications, surgery, and illness. Many participants who underwent unexpected cesarean deliveries described how this impacted infant feeding:

Table 2. Early Postpartum Characteristics

Early postpartum characteristic	*Value*
Number of subjects	67
Delivery type [*n* (%)]	
Cesarean	28 (41.8)
Vaginal	39 (58.2)
Received delivery medications [*n* (%)]	57 (85.1)
NICU [*n* (%)]	11 (16.4)
Rooming in [*n* (%)][a]	52 (77.6)
Received breastfeeding help in hospital [*n* (%)][a]	46 (68.7)
Breastfeeding time after birth [*n* (%)][a]	
<1 hour	18 (26.9)
>1 hour	43 (64.2)
Hospital fed formula [*n* (%)]	54 (88.5)
Any breastfeeding problems in first 2 weeks [*n* (%)][a,b]	52 (77.6)
1-month breastfeeding intensity [*n* (%)][a]	
Low (<20%)	19 (28.4)
Medium (20–<80%)	26 (38.8)
High (>80%)	17 (25.4)

[a]May not add to 100% because of missing or "don't know" responses.
[b]Only asked to those who said "yes" to breastfeeding initiation.
NICU, neonatal intensive care unit.

Table 3. Breastfeeding Barriers

Breastfeeding barriers[a]	*Value*
Number of subjects	49
Early (first few days postpartum)	
Not enough milk/milk supply	18 (37%)
Latch/position (mechanics)	14 (29%)
Maternal illness/medication	13 (26%)
Hospital/staff	12 (25%)
Separated from baby[b]	15 (31%)
Late (after first days postpartum)	
General inconvenience	5 (10%)
Family responsibility	3 (6%)
Maternal exhaustion	5 (10%)
Work/school	11 (22%)
Baby rejection	5 (10%)
Perceived benefits of formula	4 (8%)
WIC/free formula	2 (4%)

[a]Sample includes those that reported at least one barrier ($n=49$).
[b]"Separation" from baby includes pediatric illnesses and neonatal intensive care unit.
WIC, Special Supplemental Nutrition Program for Women, Infants and Children.

> I definitely started with breast milk…The hospital did introduce formula 'cause I had a C-section and…also was operated…to not have any more children, so my blood pressure went up a bit…they were…constantly checking me out and…didn't allow me to have the baby at that point…I don't think I saw the baby 'till like maybe the second day after the surgery…obviously they needed to feed her so they introduced the formula to her. (Medium-intensity breastfeeding at 1 month, control group)

Cesarean deliveries that required certain medication led to the mother's concern about the safety of breastfeeding and in many cases, the decisions to formula feed:

> What happened was…I didn't get to see my baby for like four days. They decided to give me a blood transfusion and I was on medication so I decided to not feed…I was on so many medications. (High-intensity breastfeeding at 1 month, EP intervention group)

Participants also recalled confusion about the safety of breastfeeding with certain medications unrelated to cesarean section (i.e., medications for blood pressure, depression, and antibiotics):

> He just asked me if I was going to breastfeed…Then I said I can't. And they said, "Oh yeah, that's right, you can't because of the medicine." I asked them about that. Because I was on the antidepressant while I was pregnant with my daughter, and I figured, if you could take it while you're pregnant, why can't you breastfeed…I mean, I wanted to breastfeed but I couldn't. (Low-intensity breastfeeding at 1 month, control group)

Women across all groups described uncertainty and safety concerns about breastfeeding their infants while taking certain medications. Participants recalled trying to get help and information about these medical questions. Women in the non-LC groups were less likely to overcome medication-related barriers:

> I had a fever, when he was born. [I] wasn't pumping for [the] first three days…and he was on Enfamil…[It] was basically just about me being on the medicine…so it was better to give him the formula…I got hesitant with the medicine and stuff and I didn't get to speak to the doctor so I just completely cut it and by the time I wanted to start back I was already too late with it. (Medium-intensity breastfeeding at 1 month, EP intervention group)

On the other hand, several women in the IBCLC intervention groups who had unexpected hospital courses or needed medications recalled working with the lactation consultants to clarify medication safety and manage to breastfeeding:

> She [LC] showed me the information about that…I could continue breastfeeding, taking Tylenol, and um that was perfect, that I wasn't going to endanger the baby…and with [the other medication] I couldn't…but they told me how to store away…for when those days come along, so I have, you know, milk to provide. So she kind of helped me out with that part. (High-intensity breastfeeding at 1 month, LC + EP intervention group)

Medical staff and hospital practices. Many participants recalled difficulty with breastfeeding due to medical staff and hospital policy ($n = 12$). For instance, several participants reported that their infants were given formula without asking or despite maternal requests *not* to give formula:

> When he was born he was 5 lbs so they said he was a little underweight…being that I was full term…they started him off with Similac…it was he was just used to being fed Similac in the hospital so, it um it didn't change really. (1-month feeding data missing, EP intervention group)

On the other hand, participants in the IBCLC intervention in several interviews described feeling prepared to deal with the challenges of hospital culture or personnel:

> Well, I didn't want to give formula to my baby in the hospital at all. But they did feed him formula [in the hospital]. Because he was in the nursery…Whenever he was with me I would breastfeed instead…I wanted to just breastfeed but they would give him formula so I kept him with me. So I would feed him. (High-intensity breastfeeding at 1 month, LC + EP intervention group)

Separation from infant. Many participants encountered unexpected separation from their infants in the hospital after delivery, such as NICU stays for infants with health concerns ($n = 15$):

> She was in the NICU and I was in intensive care in the first two days, so she didn't actually eat anything for the first two days that she was born. I just kept telling them that I wanted to breastfeed her. While I couldn't go to her and she couldn't come to me, I just pumped and then when I could go to her, I fed her. (High-intensity breastfeeding at 1 month, control group)

It is interesting that several women from the IBCLC intervention group recalled the IBCLCs giving them tips about how they could still breastfeeding if/when separated from their infant in the NICU:

> The NICU was taking care of him, gave me Enfamil to take home…and gave me information in the bag…when I was feeling worried and frustrated that he was fussy and not latching on…she [LC] told me to give him a little milk first from bottle, then have him latch…I kept trying and trying and I did not give up on the breastfeeding. (Low-intensity breastfeeding at 1 month, LC intervention group)

Discussion

This study provides qualitative evidence from two RCTs on promotion of breastfeeding that IBCLCs can provide substantial support to women in the early postpartum period in overcoming the commonly observed barriers to breastfeeding in the hospital setting. We report that breastfeeding rates and intensity at 1 month were very low among our study participants. The early postpartum period was more commonly associated with barriers to breastfeeding than late postpartum. Barriers included perceptions of low milk supply, difficulty with latch, medical problems, and experiences with hospital policy and staff, which is largely consistent with barriers identified in previous studies.[15,31] Participants felt that IBCLCs were helpful in anticipating, managing, and overcoming all barriers—from the mechanics of latch to reassurance about milk supply.

Our study, providing a unique and in-depth insight from urban, low-income women's perspective about early postpartum experiences, had several key strengths. Sampling was random, whereas many related qualitative articles have relied on convenience sampling and focus groups. The semistructured design meant that participants were not asked leading questions, therefore reducing interviewer bias. We used mixed methods, including (1) quantitative data collected from the prenatal and 1-month postpartum survey and (2) qualitative data collected during the 6-month postpartum exit interview. A potential weakness was that conducting the interviews at 6 months introduced the potential for recall bias. Also, our sample was part of a breastfeeding intervention study, which may have influenced findings. Another limitation is that our sample is primarily low-income urban woman, which limits generalizability of the results.

Our findings suggest that IBCLCs' support to breastfeeding mothers occurs via two distinct mechanisms: (1) provision of accurate information by formal interactional education, which augments women's resolve to breastfeeding and strengthens their belief in the benefit and feasibility of breastfeeding initiation, and (2) support and encouragement in the performance of breastfeeding, therefore translating their desire to breastfeeding into actual performance. This fits the model proposed by the Theory of Planned Behavior, which has been applied previously to the study of infant feeding.[32] Thus ICBLCs' role appears to span both the formation of positive beliefs/intention to breastfeeding[33] and modification of performance of breastfeeding.

Although most participants (regardless of being in an IBCLC intervention arm) experienced breastfeeding barriers, those randomized to IBCLC intervention arms commonly described overcoming barriers in their interviews. IBCLCs helped address logistical and emotional challenges and manage unanticipated difficulties encountered in the hospital. They encouraged and empowered participants to keep breastfeeding even when milk letdown was slow, when latch was painful, or when they were separated from their infants in the hospital. The findings that women perceived IBCLCs to provide helpful support at a critical time are supported by previous reports on the role of lactation consultants.[12,21]

Support systems for breastfeeding women have been shown to improve breastfeeding success through various interventions, including those introduced into the established methodology of the Baby-Friendly Hospital Initiative.[32] IBCLCs are part of the success of these interventions, but also function in an additional dimension, which is in the implementation of interventions through the primary care health delivery model. In light of the accumulating evidence of benefit, including the results of two RCTs demonstrating the efficacy of IBCLCs to increase breastfeeding intensity and duration[26] and the 2011 *Surgeon General's Call to Action*,[34] New York and other states have recently begun to make IBCLC services reimbursable by Medicaid.[35] With increasing access to primary care services through provisions of the Affordable Care Act, future studies are needed to examine the effects of LC services on breastfeeding rates and maternal and child outcomes.

Conclusions

In conclusion, we found that many women perceived barriers to breastfeeding during hospitalization and the early postpartum period. Many participants felt IBCLCs, with whom they had been meeting during routine primary care, helped them successfully overcome the early hospital barriers. Clinicians and researchers can use findings of this study to further support breastfeeding initiatives.

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Disclosure Statement

No competing financial interests exist.

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(*Appendix follows* →)

Appendix

EXIT INTERVIEW/PARTICIPANT QUALITATIVE DATA
[Study IDs Ending in 2 or 3 to Complete Interview]
We've just finished your last regular BINGO/PAIRINGS interview. Now, the study director is very interested in hearing what you thought of the study. So, some participants, including you, have been randomly selected to provide this feedback. It will only take about 10 more minutes with me on the phone now. If you agree, you will be mailed a $25 Toys R Us gift card, instead of the regular $20 gift card. Your participation is completely voluntary. Since this part of the interview will be more of a discussion, I will be taping it. However, the tape will not contain any of your personal information—just your Study ID.Is it ok if we continue with the interview?Please answer honestly. There are no right, wrong, or "expected" answers.
BEGIN RECORDING

Today is __/__/__, Study participant B/P_____.

1. If a friend asked you what the study's about, what would you say?
   - From when the study started
   - When you were enrolled while you were pregnant at CFCC (Comprehensive Care Center at Montefiore Hospital) up until now

[Don't judge or correct, unless asked]

2. A. What parts of the BINGO/PAIRINGS Study did you like? [Probe for time, phone calls, questions asked in the interviews (interesting), gift cards, phone cards.]
   B. What parts of the study did you not like?
3. Did being in this study have an effect on how you fed (BABY'S NAME) at any point? For example, did being in the study affect how much formula and/or breastmilk you fed (BABY'S NAME)? [Listen for response]
   - Or when you first gave (BABY'S NAME) solids and/or other liquids?
   - Did it have an effect on what solids and/ or other liquids you gave your baby?
   - Did it have an effect on your decision to use a breast pump?
4. Now think back to when you were receiving care at CFCC while you were pregnant, did your doctor or midwife talk with you about your plans for feeding the baby?
   [If no, skip questions 5 and 6.]
   - Was this once? More than once? About how many times in all did your doctor or midwife talk with you about your plans for feeding the baby?
5. Do you remember what she or he said?
6. Do you think anything she or he said had an influence on how you fed your baby? Please describe.
7. Did you meet with [Lactation Consultant names(s)], the Study's Mother/Baby Specialist, before the baby was born?
   - [If YES] What did you think of the/those meeting(s)? Scheduling? Information/what you talked about? Supportive?
8. Did you see or speak with [Lactation Consultant names(s)], the Study's Mother/Baby Specialist, after [BABY'S NAME] was born?
   - [If YES] How did you get in touch with her? Could you tell me a bit about what you remember about those meetings or discussions after your baby was born? [Probe for site; what was helpful; what was not helpful.]
9. Overall, was there anyone or anything that had an effect on your choice of giving [BABY'S NAME] formula and/or breastmilk?
   a. While you were in the hospital after having your baby?
   b. In the first few weeks at home with your baby?
   - As [BABY'S NAME] got older, let's say in the first 2 or 3 months of his or her life, how did/do you decide what to feed him or her? Did anyone or anything have an influence of you?
   - What about now that [BABY'S NAME] is about 6 months old?
10. Finally, is there anything you would like to tell the researchers heading the study? [Any comments, suggestions.]