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Multilevel Factors Influencing Young Mothers' Breastfeeding: A Qualitative CBPR Study

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Abstract

Background: Young mothers (age 14–24 years), who are often low income, are less likely than other mothers to breastfeed for 6 months. They also are more likely to be diagnosed with aggressive forms of breast cancer; breastfeeding significantly reduces this risk. While adolescent breastfeeding has been investigated from the perspective of the individual, the social ecological model recognizes the influence of factors at multiple levels.

Research Aim: The aim was to identify social and structural barriers to and motivators of breastfeeding that young mothers may encounter.

Methods: Using a cross-sectional prospective qualitative design with a community-based participatory research approach, we sought to identify influential factors at each social ecological level: individual, relationship, community, and societal/structural. We used purposeful sampling, and enlisted snowball sampling. We interviewed stakeholder experts (n = 9) and dyads (n = 6) consisting of a young mother and her decision-making partner. Groups of young mothers (n = 6 groups) collectively created community maps while discussing their feelings about infant feeding in different locations. Using collaborative data analysis, we identified themes and categorized barriers and facilitators according to the social ecological levels.

Results: Four meta-themes emerged: roles, place, stigma, and support. While some barriers and facilitators were similar to those experienced by mothers of all ages, participants reported multiple overlapping stigmas, requiring more support.

Conclusion: Young mothers who decide to breastfeed encounter barriers at multiple levels. Policies and programs aiming to increase breastfeeding rates in this group must address these barriers and enlist identified facilitators.

Keywords

breastfeeding, breastfeeding barriers, breastfeeding support, maternal behavior, qualitative methods, social ecological model

Background

Human milk is important for optimal infant health (World Health Organization, 2018). Breastfeeding improves mother-infant bonding and promotes maternal health, including maternal breast cancer risk reduction (Ma et al., 2017; Phipps & Li, 2014). Breastfeeding rates in the United States have increased since the 1950s among most demographics of new mothers, with one notable exception, young mothers (Kanhadilok & McGrath, 2015).

Breastfeeding Interventions With Young Mothers

At the start of the century, Wambach and Cole (2000) searched the literature for breastfeeding interventions targeting adolescent mothers and found none. In a subsequent review, Sipsma, Jones, and Cole-Lewis (2015) found only six peer-reviewed studies on breastfeeding interventions involving young mothers. Of those, one study reported improving breastfeeding initiation and duration (N = 248; Edwards et al., 2013), two studies reported improved initiation only (N = 91; N = 390; Volpe & Bear, 2000; Wambach et al., 2011), and three improved breastfeeding exclusivity (N = 78; N = 248; N = 41; DiMeglio, McDermott, & Klein, 2010; Edwards et al., 2013; Pugh, Milligan, Frick, Spatz, & Bronner, 2002). All interventions provided sup-

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*Indicates a current young mother.

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port and education through school-based programs ($n = 1$; Volpe & Bear, 2000), home visits ($n = 2$; Edwards et al., 2013; Mejdoubi et al., 2014;), telephone calls ($n = 2$; DiMeglio et al., 2010; Wambach et al., 2011), or a combination of home visits and telephone calls ($n = 1$; Pugh et al., 2002). In the intervention that improved both duration and initiation, a peer counselor and lactation support provider team provided counseling and education. Although breastfeeding rate improvement interventions targeting young mothers have been implemented across racial/ethnic/geographic/economic lines, breastfeeding duration and rate of exclusive breastfeeding remain low among this group compared to those of older counterparts (Sipsma et al., 2013). Thus, a new approach is needed.

Social and Structural Barriers to and Facilitators of Continued Breastfeeding Among Young Mothers

Research about breastfeeding behavior often has been guided by the theory of planned behavior (Arshad et al., 2017; Duckett, 2017; Giles et al., 2014; Guo, Wang, Liao, & Huang, 2016) or similar cognitive behavioral theories (health action process, theory of reasoned action) positing that behavior is an outcome of "intention plus motivation," both of which are influenced by attitudes, beliefs, subjective norms, and perceived behavioral control. While these theories recognize outside influences (e.g., norms and barriers to action), these are deemed relevant only insofar as they influence beliefs and intentions, rather than as direct contextual influences on behavior. The social ecological model (SEM; Krieger, 2001) posits that more geographically and/or temporally distant factors may profoundly influence health behavior. For young mothers' infant feeding decisions, a socially and culturally complex behavior, it is necessary to consider the multiple influences of daily life, and the interactions between factors across SEM levels.

Using SEM (Krieger, 2001) as a guiding framework and considering gaps in existing research and successful interventions, we hypothesized that barriers to breastfeeding exist at higher levels of the SEM (see Figure 1) and are not solely rooted in knowledge deficits or individual decision-making. This hypothesis was supported by data from Brighter Beginnings (BB), an organization in Northern California that serves young mothers and their families in low-income communities. BB's client surveys revealed that most young mothers intended to breastfeed, but only 3% breastfed at least 6 months (BB, 2012). This disconnect between intention and behavior is consistent with national data; young mothers affirmatively decide to breastfeed at similar rates as older mothers, yet a significant disparity exists in fulfilling their intention through the child's first months (Sipsma et al., 2013). Therefore, exploring only the intention to breastfeed (Godbout, Goldsberry, & Franklin, 2016; Leclair, Robert, Sprague, & Fleming, 2015) is useful but does not provide the whole picture.

Key Messages

- While young mothers, who are disproportionately women of color and women with low incomes, have similar intentions to breastfeed their infants as mothers of other ages, they are less likely to be breastfeeding after 6 months.
- By analyzing three sets of qualitative data obtained using a community-based participatory research approach, we found that multiple factors contribute to reduced breastfeeding amongst this population. These include, among others, young mothers' multiple roles, the places they spend time, their experiences of stigmatized identity and behavior of breastfeeding, and lacking or insufficient familial, peer, and professional support.
- Implications for future programmatic and policy interventions that could be more efficacious in increasing breastfeeding rates among young mothers for consistency. mothers are presented.

Community-Based Participatory Research

A community-based participatory research (CBPR) approach emphasizes collaborative community partnerships through all phases of research (Wallerstein, Duran, Oetzel, & Minkler, 2017); it provides a valuable orientation for investigating multilevel factors. Unlike traditional investigator-driven research models, CBPR enables stakeholders to actively participate in determining research aims, collecting, analyzing, and interpreting data, and disseminating and applying results (Wallerstein et al., 2017). Furthermore, working in collaboration with end-user partners significantly improves the potential for effective translation into practice (Trickett & Beehler, 2013).

While several CBPR studies have been conducted in partnership with youth (Holliday, Wynne, Katz, Ford, & Barbosa-Leiker, 2018; Kia-Keating, Santacrose, Liu, & Adams, 2017; Lewis et al., 2018; Ramanadhan et al., 2016; Yarbrough et al., 2016), we are aware of only one that engaged young mothers as research partners. Gill, Black, Dumont, and Fleming (2016) examined sexual/reproductive health needs of young mothers ($N = 9$), but not their parenting behaviors. We aimed to describe the social and structural barriers to and facilitators of breastfeeding duration and exclusivity among young mothers.

Methods

Design

We chose to utilize a cross-sectional prospective qualitative design with a CBPR approach. This design enabled open exploration of possible influential factors that have not yet

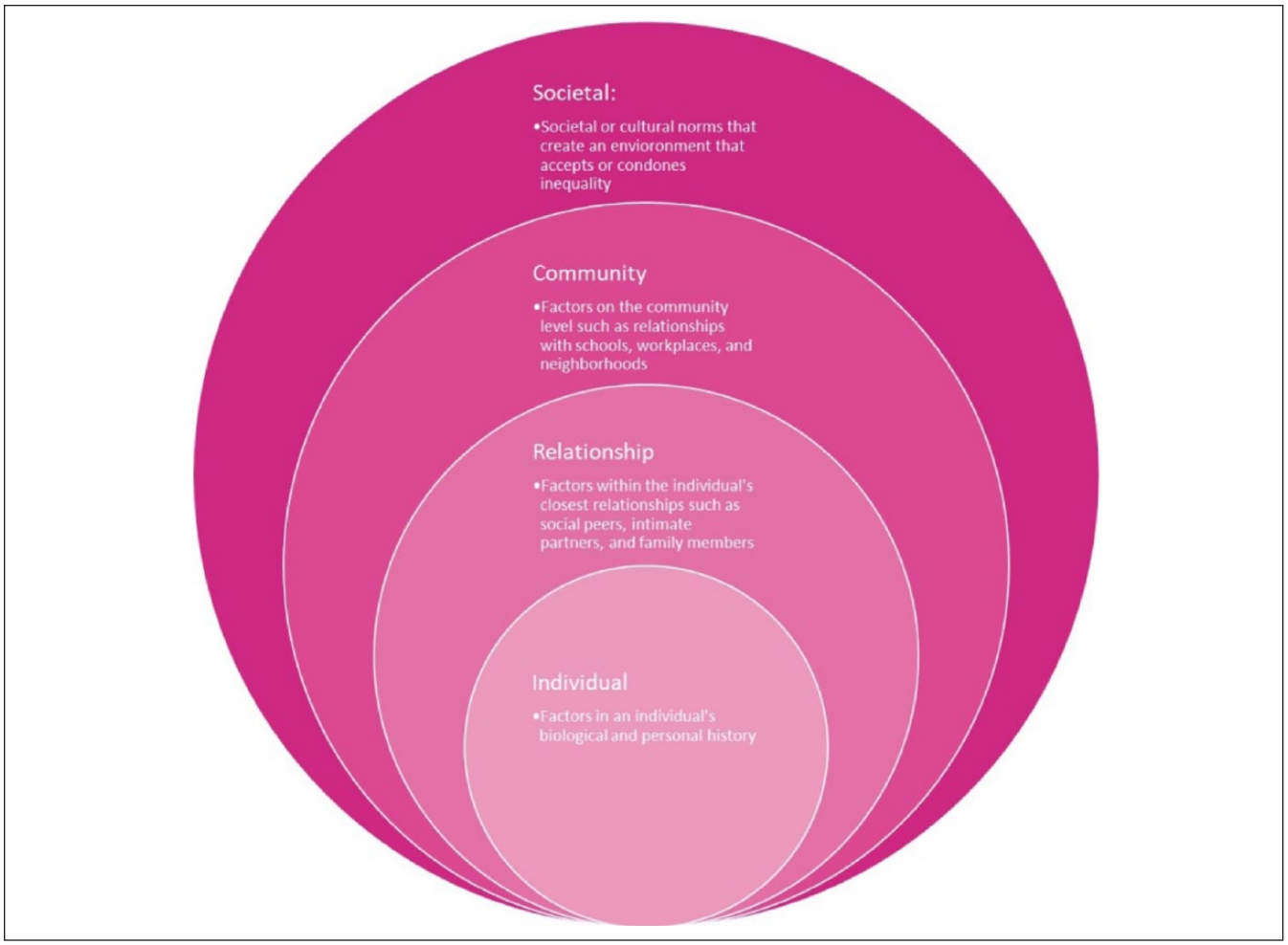

Figure 1. Social Ecological Model.

been investigated (as opposed to a quantitative study that would measure effect of previously identified factors). The cross-sectional prospective design allowed us to create data collection instruments in an iterative fashion, so that we could incorporate new findings from each stakeholder group into our questions for the next. Our research protocol was approved and monitored by the Public Health Institute's Institutional Review Board.

Setting

The California Adolescent Health Collaborative (CAHC) partnered with BB to investigate factors influencing young mothers' infant feeding behaviors in Northern California. Data were collected in Alameda and Contra Costa counties of the East Bay Area of California's San Francisco Bay. Potential participants lived in a racially and ethnically diverse region that has a high concentration of poverty, pronounced socioeconomic inequities, and accelerated displacement of people of color due to rapidly rising housing costs (gentrification). The urban communities of focus included one that is predominantly Latino with a high concentration of immigrant families; a second that is predominantly African American and suffers from concentrated poverty; and a third that is a historically African American, working-class city, with an increasing Latino population. All three had adolescent birth rates greater than 21.4 births per 1,000 women age 15–19, which is 1.75 times the county average (Malin, Miller, Goldberg, & Taherbhai, 2018). We also recruited participants from two suburban areas that have experienced a recent influx of both African American and Latino residents, who were being displaced from nearby urban centers due to gentrification.

In all of these areas, the availability of health care services is limited, especially for people with low incomes. To address this need, BB has entered into the process of becoming a Federally Qualified Health Center in order to provide accessible, affordable family health care in these marginalized communities. Many families in the area include undocumented immigrants, adding to the difficulty and fear around accessing health care. In addition, while there are resources for breastfeeding mothers in the two counties, they are not

always accessible or perceived as welcoming. For example, La Leche League is viewed as being primarily for white mothers. The federally funded Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) provides group and peer support for breastfeeding in combination with nutritional support in the form of specific healthy foods and is actively welcoming to low-income mothers and mothers of color. The First Five Program is a statewide program to improve health of children under the age of five years and works to establish county policies in support of breastfeeding. BB and two local health centers provide services for young mothers, but at this time, this does not include breastfeeding support services.

Sample

The target population was young mothers and their families, community members, service providers, and people who create and implement policies with young mothers in mind or conduct research about them. The inclusion criteria were (a) to live, work, or attend school in Alameda or Contra Costa County and (b) to either work with (for key informants), be (for mothers in a dyad), be in close relationship with (for partners in a dyad), or have been a mother between the ages of 14 and 24 years (for young mothers in a community mapping group). There were no exclusion criteria. Potential participants were recruited via service organizations, flyers, word of mouth, or personal introduction in the case of key informants. Participant recruitment and data collection continued until saturation was reached, as determined by the Data Collection and Analysis subcommittees of the study's Advisory Committee (AC).

Data Collection

The research team consisted of academic researchers, community members, practitioners, and representatives of the focus population (young mothers), who worked together to collect, analyze, and interpret data. We operationalized the CBPR approach by forming an AC consisting of the co–primary investigators (co-PIs) and other academic researchers, young mothers, and policy makers and service providers who influence their lives. This body reviewed and approved all research decisions throughout the study. Including young mothers as coresearchers and AC members enriched the team with their experiential expertise and built their capacity as researcher-scholars.

We collected data from three different groups of participants. (a) Key informants ($n = 9$) enhanced our understanding of this topic at all levels via in-depth interviews. (b) Dyadic interviews with six young mothers and their decision-making partners ($n = 12$) enabled us to directly observe interactions at the relationship level. (c) Six community mapping sessions with young mothers ($n = 21$) focused on the community level in both the physical and the social senses.

Prior to data collection, researchers obtained informed consent via signature after reading a standardized script aloud. Data were collected from 2015 to 2017. Interviews were audio-recorded and professionally transcribed; community mapping sessions were video-recorded. Researchers involved in data collection reviewed the tapes and transcriptions to verify their accuracy. Young mother and decision-making partner participants received gift cards for their participation. Participants' privacy and confidentiality were always protected.

Data were collected in three stages (the key informant interviews stage, the dyadic interviews stage, and the community mapping groups stage), with preliminary data analysis informing data collection in the subsequent stage. Key informant interview data analysis revealed that multiple types of relationships influenced young mothers' feeding decisions. Therefore, rather than conducting dyadic interviews with young mothers and the babies' maternal grandmothers, we asked each young mother to invite someone they consult when making important family decisions (their "decision-making partner"). Similarly, while we expected that place was important in young mothers' lives and behaviors and had included community mapping as part of the design, we had not fully understood that place, roles, and stigma were so intertwined until we analyzed the dyadic interviews. This prompted us to create a mapping activity that explored those themes together.

Key informant interviews. Key informants were local experts, identified by AC members as being from relevant sectors, who held positions of influence in young mothers' lives, or had done related research (Table 1). The co-PIs conducted in-depth interviews at convenient times and places for these participants. Broad general questions elicited input on higher-level factors that may influence young mothers' breastfeeding (see the Supplemental Material online for interview guide).

Dyadic interviews. For dyadic interviews, young mothers were encouraged to invite their decision-making partner to an interview (see the Supplemental Material for a list of relationship types represented). Both dyad members were consented, and then dyads were jointly interviewed, with specific questions for each participant about how parenting decisions are made, the degree of independence the mother has, her perspective on how others view her, and the places she feeds her infant and how (see the Supplemental Material for the interview guide). This approach specifically investigated family, interpersonal, and social influences.

Community mapping. This research method allowed multiple participants to explore issues in graphic cooperative form and was employed to "support the power and capacity of people to represent themselves and their understanding

Table 1. Key Informant Affiliations ($N = 9$).

Position	Organization type
Doula	Nonprofit foundation
International board certified lactation consultant	Women, Infants, and Children (WIC) program
Physician (Ob-Gyn)	Local health system
Policy maker	Children's services agency
Principal investigator	Reproductive health research firm
Public health planner	Parent/child health unit of county health department
Registered nurse	Major university hospital research center
Researcher	Health policy research agency
Reverend	Christian church

Table 2. Demographic Characteristics of Community Mapping Session Participants ($N = 21$).

	Maternal age (years)[a]				
Characteristic	14–17 $n = 1$ *n* (%)	18–20 $n = 4$ *n* (%)	21–24 $n = 7$ *n* (%)	⩾25[b] $n = 9$ *n* (%)	Total $N = 21$ *n* (%)
Ethnicity/race[c]					
African American or black	1 (100.0)	1 (25.0)	5 (71.4)	8 (88.9)	15 (71.4)
Asian	0 (0.0)	0 (0.0)	1 (14.3)	0 (0.0)	1 (4.8)
Hispanic or Latino	0 (0.0)	3 (75.0)	1 (14.3)	0 (0.0)	4 (19.0)
Number of children[a]					
0 (pregnant with first child)	0 (0.0)	0 (0.0)	2 (28.6)	0 (0.0)	2 (9.5)
1	0 (0.0)	3 (75.0)	4 (57.1)	0 (0.0)	7 (33.0)
2	1 (100.0)	0 (0.0)	0 (0.0)	3 (33.3)	4 (19.0)
⩾3	0 (0.0)	1 (25.0)	1 (14.3)	6 (66.7)	8 (38.1)
Lives with[c]					
Boyfriend with children	0 (0.0)	1 (25.0)	1 (14.3)	0 (0.0)	2 (9.5)
Husband with children	0 (0.0)	0 (0.0)	2 (28.6)	4 (44.4)	6 (28.6)
Parent(s) with children	1 (100.0)	1 (25.0)	2 (28.6)	1 (11.1)	5 (23.8)
Self with children	0 (0.0)	1 (25.0)	1 (14.3)	4 (44.4)	6 (28.6)

Note.
[a]At time of data collection.
[b]All participants who had children were younger than 25 years old at the birth of their first child.
[c]Missing data: One participant age ⩾25 years did not complete ethnicity/race information. One participant age 18–20 years and one participant age 21–24 years did not indicate with whom they lived.

of the world around them" (Amsden & VanWynsberghe, 2005, p. 361). Teams of one community researcher and one academic researcher facilitated six community mapping sessions in English or Spanish with small groups of one to eight young mother participants (Tables 2 and 3). Activities were both dialogue questions and interactive activities, including creating "paper dolls" to represent roles they see themselves playing in different places in their everyday lives, collectively drawing a map of their communities, using stickers to represent infant feeding and comforting methods (breastfeeding, bottle-feeding formula, bottle-feeding human milk, pacifiers (dummies) and expressing human milk) they utilized in different settings, and indicating their levels of comfort breastfeeding in various locations.

Data Analysis

The Data Analysis (DA) subcommittee (consisting of both co-PIs, one young mother, two international board certified lactation consultants [IBCLCs], and two program managers who worked directly with CAHC and BB in addition to collecting data for the study) systematically coded the data using an inductive-deductive analysis process that integrated both social phenomenological and grounded theory approaches (Fereday & Muir-Cochrane, 2008). This process was appropriate for this CBPR project because it utilized both the a priori SEM theory that informed the research design, and the "everyday theories" as described by Furnham (1988) that all people, including participants and coresearchers, hold. In other words,

Table 3. Infant Feeding Practices of Community Mapping Session Participants with Children ($N = 19$).

Variables	Maternal age (years)[a] 14–17 $n = 1$ *n* (%)	18–20 $n = 4$ *n* (%)	21–24 $n = 5$ *n* (%)	⩾25[b] $n = 9$ *n* (%)	Total $N = 19$[c] *n* (%)
Feeding method(s) when child was younger than 6 months[c,d]					
Breastfeed and/or bottle-feed only human milk	1 (100.0)	2 (50.0)	5 (100.0)	7 (77.8)	15 (78.9)
Bottle-feed only formula	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Mixed feeding (both human milk and formula)[e]	0 (0.0)	1 (25.0)	0 (0.0)	2 (22.2)	3 (15.8)
Current feeding method(s)[c, d]					
Breastfeed and/or bottle-feed only human milk	1 (100.0)	2 (50.0)	5 (100.0)	5 (55.6)	13 (68.4)
Bottle- or cup-feed only formula or cow's milk	0 (0.0)	2 (50.0)	0 (0.0)	2 (22.2)	4 (21.1)
Mixed feeding (both human milk and formula or cow's milk)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Solid food	0 (0.0)	2 (50.0)	2 (40.0)	4 (44.4)	8 (42.1)

Note. If participant has more than one child, data are about her youngest child.
[a]At time of data collection.
[b]All of the mothers were younger than 25 years old at the birth of their first child.
[c]Missing data: No data are reported for the two participants who were expecting their first child. One participant age 18–20 did not answer the question on feeding method(s) when child was younger than 6 months. Two participants age ⩾25 years did not answer the question on current feeding method(s).
[d]Participants could select multiple feeding methods, so column totals may exceed *n*.
[e]Data collection method did not distinguish between concurrent feeding of both human milk and formula, and sequential feeding of human milk and/or formula.

levels were predetermined by the SEM framework; within that framework, we identified emergent codes and themes through iterative analysis of the data.

Collaborative data analysis of key informant interviews began concurrently with data collection and was an iterative process. Each interview transcript was first independently analyzed by at least two DA subcommittee members, who identified relevant codes. These individually developed codes were then presented to the full subcommittee for collaborative discussion and analysis and were grouped into larger themes. When differences between coders were identified, the entire subcommittee of seven people would review the original data and discuss, until consensus was reached. During each session we analyzed two interviews and built on the previous analysis until we reached saturation, identifying similar themes and codes across transcripts.

Dyadic interviews and community mapping sessions were similarly analyzed using inductive-deductive analysis and triangulation. While we built upon codes and themes developed from analysis of previous sources of data collected by different methods, we approached each source of data anew, bringing both new and previously identified codes and themes to each collaborative analysis session. This enabled us to compare and integrate findings and then to highlight those that emerged repeatedly across data sources. While we identified ten general themes through this coding process (see Table 4), in the process of synthesizing the data across all three types of data sources, we found four prominent meta-themes (see Results section). These meta-themes were those themes that arose repeatedly across all three types of data sources.

All identified codes and themes were compiled into a codebook (see Table 4 where codes are grouped by theme, and each theme and code is defined). We then integrated all themes and codes via an interactive process of placing the concepts into a matrix (Table 5 illustrates the organization of this matrix). The matrix combined the elements of the conceptual framework, that is, the four levels of the SEM, and the four meta-themes that arose from analysis of all data (i.e., place, stigma, roles, and support). Each theme or code was placed at one or more of the four SEM levels (i.e., individual, relationship, community, and societal/structural). Within each level, the concept was then placed in the stigma, roles, place, or support column (Table 5). We included an additional column for concepts that did not relate to the four meta-themes.

Reflexivity. A core tenet of CBPR is to address power relations in the production of new knowledge. This requires recognizing the types of power relations that are brought into the research team and intentionally confronting them. While this process minimizes the structural power differentials, it cannot neutralize those innate within the perceptions of individual team members. In the tradition of reflexive analysis, we reveal some aspects of our identities that were likely to have influenced what we noticed in our coding and our collegiate relationships; as Muhammad et al. (2015) suggest, we must address not only the "what" of CBPR but the "who" as well. As explained in their article, "Our ascribed or achieved identities may impact our capacities to share power, even with our ideals to collaboratively produce and disseminate knowledge for community benefit" (p. 1049). Our research team engaged

Table 4. Data Analysis Structure.

Theme	Theme definition	Code	Code definition
Breastfeeding vs. bottle- vs. formula-feeding, "pros" and "cons"	Any explicit mention of positives or negatives related to any of the three feeding types (differentiating bottle-fed human milk from bottle-fed formula).	Commitment/persistence[a]	Any statement expressing or implying dedication to continue behavior, in spite of difficulties or barriers, in the context of infant feeding methods
		Intent/goals	Mention of a desired outcome a person is trying or hoping to achieve
		Personal experiences	Mention of a person's prior direct observations or actions as a basis of knowledge and beliefs about infant feeding
		Role switching[b]	Mention of the need to switch between different, potentially conflicting, behavior patterns depending on the current situation
Culture	Social or group influence on behavior, thinking, and decisions, from religion to norms to expectations	Norms	Statements that suggest that decisions and behavior are influenced by the perception of what behavior is expected and typical within a particular group
		Religion	Any mention of being influenced by beliefs or assumptions about the rules imposed, or behavior expected, by one's religion—a system of beliefs and rituals
		Values	Statements about commonly held beliefs about what is most important within the surrounding community, especially in the context of infant feeding decisions
		"Normal" behavior	What behavior is considered typical within a particular group
		Lifestyle	Statements that pertain to a group's established routine and preferences
		Expectations	Statements about commonly held assumptions within the community regarding how people will most likely behave in the context of infant feeding
		Euro vs. Latino culture	Statements suggesting that there is a different set of norms and expected behaviors within Latino or Hispanic culture compared to the dominant Euro culture
		Euro vs. African/African American culture	Statements suggesting that there is a different set of norms and expected behaviors within African or African American culture compared to the dominant Euro culture
		Peer norms	Perception of what behavior is expected and typical among one's friends, colleagues, and others of similar age or status
		"Takes a village" concept	The idea that all members of a community share responsibility for taking care of needs, especially regarding raising and caring for children
		Lack of reward for raising next generation	Statements reflecting the idea that the culture/community does adequately respect and value people for bringing up and nurturing children
		Breastfeeding as too sexual (for mother; for children to witness)[a]	Mention of it being inappropriate/unacceptable for breasts to be seen in the context of infant feeding, due to the association of breasts with sexual arousal in the surrounding community
		Stigma of being, or being perceived as, unmarried mother[b]	Statements mentioning the experience of, or fear of, being viewed by others with extreme disapproval for being, or being assumed to be, a parent without a spouse/partner (often, in particular, a mother without a husband)
Emotions	Influences from the inside, a person's mental state or feelings, that may affect or are affected by parenting and feeding options, choices, spaces, resources, large unnecessary space here. and other people's reactions to feeding and parenting decisions	Motivated/committed[a]	Any statement expressing or implying that the participant has felt, or would feel, dedicated to continue the chosen behavior, in spite of difficulties or barriers
		Breast as sexual	Discomfort resulting from the belief that the cultural association of breasts with sexual arousal is incompatible with viewing breasts in nonsexual contexts, including for infant feeding
		Determined	Any statement expressing or implying dedication to continue behavior, in spite of difficulties or barriers
		Value (breastfeeding)	Mention of positive feelings associated with the belief that breastfeeding is important and beneficial
		Nurturing	Statement expressing positive feelings experienced by the participant for being the one person capable of providing both nourishment and parent/child closeness through breastfeeding
		Choice	The feeling and belief that one has several options and can select the preferred one
		Shame	Mention of the influence of actual or potential painful feelings of embarrassment, humiliation, and/or disgrace, especially in the context of parenting and infant feeding behavior
		Embarrassed/judged	Any statement expressing or implying that the participant has felt, or would feel, uncomfortable and/or denigrated due to the belief that others have or would regard them with contempt and disrespect
		Disappointed not breastfeeding[a]	Expressions of feelings of sadness or regret as a result of not meeting own breastfeeding goals
		Self-identity	Statements suggesting influence of a person's own perceptions of his or her traits and attributes as an individual, especially in relation to social context
		Motherhood	The influence of feelings associated with becoming and being a mother
		Anxiety	Any statement expressing or implying feelings of worry or unease in the context of infant feeding behavior or decisions
		Acceptance	Expression of and reception of one's motherhood being honored and valued by others

(continued)

Table 4. (continued)

Theme	Theme definition	Code	Code definition
		Body image	Any statement regarding feelings toward the appearance of one's physical body, especially regarding postpartum changes in physical appearance
		Body autonomy	Expression of emotional response to being able to decide what one does with one's own body
		Isolation	Feelings of being alone, without support
		Vulnerable	Feelings of being weak or marginalized, of being unprotected from potential harm
		Ambivalence[a]	Any statement expressing or implying doubt, indecision, or mixture of both positive and negative feelings in the context of infant feeding behavior or decisions
Information	Any knowledge or supposed knowledge (even if not factual), or lack of knowledge, that influences parenting or feeding behavior, comfort, or decisions	Resourceful	The ability or skill of identifying, finding, and accessing resources that ease one's journey or facilitate completion of goals
		Limits	A statement regarding personal barriers and boundaries that influence decision or ability to breastfeed
		Questions	A statement reflecting that there are some things still unknown that, if known, may have a bearing on infant feeding decisions
		Prenatal breastfeeding education	Mention of the value and importance of informing expectant parents about infant feeding, particularly about breastfeeding, before infant is born
		Timing of education (pre- vs. postnatal)	Comparing the value of providing information about infant care before vs. after the infant is born
		Education	The value and importance of providing information about infants and breastfeeding to people in general
		Prenatal education	Mention of the value and importance of providing information to expectant parents
		Misinformation	Statement about the belief that people receive incorrect information about infants care in general, or infant feeding methods in particular
		Breastfeeding rights (laws)[a]	Mention of existing laws that protect the rights of breastfeeding people
		Prenatal "life after baby" education	Mention of the value and importance of informing expectant parents about changes to expect in their lives after infant is born
Interventions	Any mention of an idea to improve breastfeeding rates among young mothers, whether programmatic, organizational or public policy, or changes in clinical practice and services provision, including both existing interventions and ideas for future designs	Home visiting	Suggestions that breastfeeding might be more successful if there was a program of consistent care by a lactation support person, provided at the person's home
		Long-term doula	Suggestions that breastfeeding might be more successful if there was a person to give ongoing support before and after infant is born, and for some time after
		Programs designed to support specific group, such as young parents or women of color	Suggestions that breastfeeding might be more successful if new parents attended a support group targeted at parent who identify as being in same cultural/racial/ethnic/age demographic group
		Laws	Suggestions that breastfeeding might be more successful if there were more laws that support breastfeeding, and/or if current applicable laws were better enforced
		Policy	Suggestions that breastfeeding might be more successful if there were more policies, both public and within organizations, that support breastfeeding, and/or if current applicable policies were better enforced
		Follow-up care	Suggestions that breastfeeding might be more successful if more consistent follow-up care, and coordination of care after hospital discharge, were provided
		Access	Suggestions that breastfeeding might be more successful if access to relevant support services were easier and universally available
		Referrals	References to collaboration between agencies or organizations in which a client is recommended by one to go to the other
		Support agencies	Reference to any organization, public or private, that provides organized support to mothers or families in the form of money, goods, or services
		Flexibility of organizations and services	Statements suggesting that breastfeeding might be more successful if current restrictive qualification rules for obtaining relevant support services were eliminated
		First-time mothers as target population	Interventions designed specifically for women who are pregnant with their first child or have only one young child
		Continuum of care	Interventions designed to improve the experience of a client or patient as she changes status—whether from prenatal to birthing mother to postpartum, or from new mother to experienced mother, or another change in status, requiring a different way of accessing services and/or different services
		Lactation spaces in public places	Suggestions that breastfeeding might be more successful if there were more dedicated/designated spaces—particularly private spaces—for people to breastfeed in public settings

(continued)

Table 4. (continued)

Theme	Theme definition	Code	Code definition
Place[b]	Physical spaces and communal locations mentioned in discussions about parenting or infant feeding behaviors, or expressing milk	Workplace	Mention of experiences or feelings about feeding or comforting infant, or expressing milk (or needing to do so), while at work
		Faith-based communities	Mention of experiences or feelings about feeding or comforting infant while in a church or other place of worship
		Home	Mention of experiences or feelings about feeding or comforting infant while in own home, or home of a close family member
		Hospitals	Mention of experiences and related feelings associated with a hospital, especially as a patient in the perinatal period, as related to infant feeding
		School	Mention of experiences or feelings about feeding or comforting infant, or expressing milk (or needing to do so), while at own school or child's school/child care site
		Public spaces	Mention of experiences or feelings about feeding or comforting infant while in any place open to the public
		Car	Mention of experiences or feelings about feeding or comforting infant while in private vehicle
		Safety	Mention of considerations about whether a person would be or feel at risk of harm in a particular place
		Grocery stores[a]	Mention of experiences or feelings about feeding or comforting infant while shopping for food
		Bus[a]	Mention of experiences or feelings about feeding or comforting infant while on a public transportation vehicle
Power	Agency or lack of agency, outside influences that remove decision making from the mothers; also includes any discussion of uneven relationship dynamics	Power structure	The notion that there is a hierarchy of authority and influence in any group of people, and a person of lower rank is to defer to those of higher rank in the hierarchy when making decisions
		Decisions	Statements reflecting that someone makes a choice between different options
		Public	Mention of the influence of assumed beliefs of people in the wider community
		Stigmatized/judging in public[b]	Statements mentioning the experience of, or fear of, being viewed by others with extreme disapproval for belonging to a particular group and/or engaging in a particular behavior, especially in the context of parenting and infant feeding decisions and behaviors
		"Nasty" (both young mother participant and DMP)	Use of the word "nasty" to describe a particular behavior—in this case, typically breastfeeding—as offensive and disgusting
		Trauma	Mention of possible influence of past or current experiences that cause severe emotional distress, with or without physical injury
		Trust	Statements reflecting confidence in a particular person, and the belief that one has that person's support and respect
		Power struggle	Statements about actual or potential conflicts regarding who has the authority to make a particular decision
		Sabotage	The actions of a person who has a relationship with the mother or parent that are actively and intentionally undermining her/their decisions, often through emotional manipulation or blocking access to necessary resources
Relationships	Connections to other people in specific roles, and the quality of that connection, as well as its influence on parenting decisions and behaviors	Validation	Statements where a mother feels others in her life are reinforcing, approving, and supporting her decisions and leadership
		Supporting[b]	Statements about how others have or might provide assistance and encouragement to help a person, especially in the context of infant feeding goals and decisions
		Not supporting[a,b]	Statements about how others fail to provide assistance and encouragement, or actively discourage a person, especially in the context of infant feeding goals and decisions
		Peers	Mention of the influence of one's friends, colleagues, and others of similar age or status
		Family	Mention of the influence of one's (close) relatives
		Role models	Mention of the influence of seeing others engage in a behavior
		Behavior (roles)[b]	Statements regarding how one's actions may differ depending on the person's relationship to others in a particular situation
		Advocating	Actively and intentionally supporting decisions and facilitating behavior to achieve one's (or someone else's, as in the mothers') stated goals, including appealing to people in power and gaining access to necessary resources
		Self-advocacy	Being willing and able to defend one's choices and behaviors in response to challenge
		Communication	Being able to accurately convey an idea or feeling to another person
		Male involvement	Statements regarding the influence a father, partner, or other man may have, especially regarding infant feeding behavior and decisions
		Community	A group of people who share an aspect of their identity (can be geographically related, demographically related, or an ascribed or assigned characteristic) and relate to each other within a certain space (can be physical or virtual)
		Isolation	Being in a situation with little or no contact with or support from others
		Adult resources	Resources that require an adult in order to gain access to them
		Employer/employee	The influence of the relationship between a worker and the person who hired that worker
		Other pregnant people	Any reference to other pregnant people besides the speaker, regardless of age
		Doula	A nonmedical professional who assists mothers throughout the process of pregnancy, birth and/or the postpartum period
		Infant/mother attachment/bonding	Any mention of the increasingly close relationship between a parent (especially mother) and infant, especially in the context of infant feeding

(continued)

Table 4. (continued)

Theme	Theme definition	Code	Code definition
Structural inequalities	Any connection made to larger oppressions, or the ways that these oppressed identities intersect in young mothers, including all of those mentioned in the codes	Marginalized communities	Communities of people who do not have access to traditional sources of privilege and power, who have historically been oppressed or currently experience oppression, or who are systematically stigmatized
		Age	Mention of inequalities experienced based on age
		Race/ethnicity	Mention of inequalities experienced based on racial or ethnic identity
		Gender	Mention of inequalities experienced based on gender or gender expression
		Social class/ socioeconomic status	Mention of inequalities experienced based on social class or income/wealth level
		Wanted pregnancy	Mention of inequalities experienced based on whether the pregnancy was intended and wanted
		First-time mother	Mention of inequalities experienced based on experiencing motherhood for the first time, and therefore not having the benefit of experience
		Intersections	Mention of inequalities experienced based on multiple characteristics, typically magnifying the effect
Timing/schedule/ priorities	Logistical issues that influence parenting/feeding decisions and priorities	Timing of milk supply	Statements regarding the effect on one's life and daily schedule of the differential flow of breastmilk during the different stages of postpartum and during the child's infancy, as well as the impact of outside factors on one's milk supply
		Job hours	Statements indicating that the need to work at certain available hours, in order to support the family, might influence the participant's parenting/feeding decisions
		Infant's feeding schedule	Statements asserting that the specific times and/or frequency with which an infant needs to be fed may influence feeding decisions or behaviors
		Acclimation to breastfeeding (mother and infant)	Statements reflecting the belief that it takes time for both mother and infant to become accustomed to breastfeeding, and that this might influence infant feeding decisions or behaviors
		Decision to breastfeed	Any reference to a mother's decision to initiate breastfeeding or to use formula, whether exclusively or in combination with formula; this is in contrast to breastfeeding behavior
		Maintaining breastfeeding	Reference to a mother's decision to, or ability to, continue or discontinue breastfeeding after she has begun doing so
		Balancing	Statements asserting that there are potentially conflicting needs, and that one must consider how to meet those needs when making decisions
		Weaning age	Statements indicating that anticipated future difficulties with weaning influenced or may influence infant feeding decisions

Note. Themes are listed alphabetically. DMP = Decision-making partner in dyadic interview.

[a]These codes were not found in analysis of the key informant interviews, but arose as new codes in subsequent data source types, i.e., either the dyadic interviews or the community mapping sessions. All other codes were identified in analysis of the key informant interviews, constituted the original codebook, and were reinforced in subsequent analyses of data from dyadic interviews and/or community maps.

[b]These themes and codes represent the primary themes that arose repeatedly in connection with other themes, across all sources, and after all three analysis sessions, and emerged as meta-themes in the data.

Table 5. Sample Concepts and Quotes Illustrating Meta-Themes at Each Level of the Social Ecological Model.

Social ecological model level	Meta-Themes			
	Stigma	Role	Place	Support
Societal	− Breasts considered only sexual; shamed for breastfeeding in public. *Young mother, on visiting her baby's father in jail*: "I was breastfeeding . . . and the woman [guard] totally kicked me out. She was like, 'cause they might sexually excite him that my titty was out." + Normalization through visibility. *Young mother*: "[I would breastfeed] everywhere. 'Cause I see everybody do it. . . . So I don't feel ashamed about it."	− Lack of job protection. − Difficulty combining worker role with mother role. *Young mother, on difficulty finding time to spend with her children*: "I need to work. There's no really way around it. . . . The [overnight] schedule I work, it's the only one I can work." − Limited resources for young parents. *Key informant, on why common barriers may affect young parents more than others*: "They tend to be more vulnerable based on the resources that are available specific to them."	− Lack of time/support for expressing milk at school or workplace.	+ Possibility of providing trained supporters. *Key informant, suggesting possible intervention*: "Hire teenagers who have nursed to be part of the workforce to be able to go to the homes and be supportive there and call them each morning."
Community	− Experience of being shamed in community settings for breastfeeding in public. *Young mother, describing being criticized by another parent for breastfeeding at her young child's school*: "She told me, 'I don't want my kid to see that.'"	− Perception that mother role conflicts with other roles. *Key informant*: "Many of the teen moms are working, as well as going to school. So, how are they going to fit that, breastfeeding?" + Positive images of role of breastfeeding mother. *Young mother, on images of breastfeeding dyads decorating hospital*: "Like the pictures at the hospital, they're encouraging, like when you see the baby and the mom cuddling and stuff. That's encouraging."	− Intersection of stigma and place in community settings. *Young breastfeeding mother*: "Like at church, like I'll have a bottle ready, and that way . . . just in case. . . . If [I don't have a bottle], . . . I'll go sit in the car and feed him." + Community locations where breastfeeding is explicitly welcome.	− Inadequate breastfeeding support in the community. *Key informant*: "So there's this need that we're hearing overwhelmingly from our doulas that all moms—and we've heard this from almost all of our moms—need more support for breastfeeding just broadly in the postpartum period than we support them with." *Young mother who reported she stopped breastfeeding early due to pain, when asked who helped her learn to breastfeed*: "Nobody."
Relationship	− Stigma of being a young mother communicated by loved ones. *Young mother, on her family's response to her pregnancy*: "They told me my life was over, but I don't feel like my life is over." + Support may reduce effect of stigma. *Friend (decision-making partner)*: "When we're out in public, I feel like people around us are giving us looks, and I definitely feel like—Because I just noticed that when people get judgmental—A lot of times even me and her laugh about it."	− Messages from family members that breastfeeding mother is not compatible with worker.	+ (Intersection of role and place). Family members who recognize that young mothers want private places to breastfeed, to help combine mother role with other young-person roles: *Mother of young mother (decision-making partner)*: More [public places] for them where they can breastfeed there. Because [the baby's] got to eat. And [the young mothers] got to do their things, their shopping or whatnot. Yeah."	+ Supportive partner, family members, peers. *Friend (decision-making partner), on learning of young mother's pregnancy*: "I was basically surprised and shocked at the same, but happy at the same time also. And I just went with it, and said, 'Oh, if you need anything I'm here.' And I feel like after that, we got more closer." − Unsupportive family members, or others. *Young mother, on her brother's response as she starts to breastfeed her baby*: "My brother will say, 'No, no, don't do it.'"
Individual	− Internalized stigma. *Young mother, speaking about peers who breastfeed in public: "They nasty! . . .* They shouldn't be in public with that. Okay, it's okay if they're covering, but a lot of moms just don't care when it comes to breastfeeding." − Emotional impact of stigma on individual. *Young breastfeeding mother*: "And people were walking by, looking at me [breastfeeding], and I was just like—I felt so ashamed, so terrible."	+ Satisfaction with role of breastfeeding mother. *Young breastfeeding mother of one-year-old*: "I tell everybody—I kinda make a joke about it, only because it's like—I'm not miserable that I'm still breastfeeding, it's just a simple fact."	− Individual's lack of access to spaces to store expressed milk: *Key informant*: "So I'll give you a perfect example. You can get water to mix formula in public places—maybe, but you can't have anywhere to store your breast milk, right?"	+ Internalized confidence as result of ongoing support. *Young breastfeeding mother*: "Yeah, my mom would help me a lot. And when we were out in public help me cover up. But now I kind of don't care anymore because I'm feeding my baby."

Note. − = barrier; + = facilitator.

in regular check-ins about our process and group functioning, and we intend to write about the lessons we learned from the process elsewhere. Besides complicating power sharing, the diversity of our group served to attenuate or temper the influence of our individual unconscious biases. Other researchers have recognized this benefit of including multiple investigators in qualitative data analysis; according to Cohen and Crabtree (2006), "This can . . . lead to the development of complementary as well as divergent understandings . . . and provide a context in which researchers'—often hidden—beliefs, values, perspectives and assumptions can be revealed and contested" (p. 173).

Our entire team identifies as cis-gender females, though we sought counsel from two male colleagues at several points in the process. While both co-PIs hold doctoral degrees, neither held positions at an academic institution at the time of the study. One is Latina and one is white, both grew up poor, and one had previously identified as a young mother. The young mother researcher identifies as African American and is currently a student as well as a mother of two (having given birth to her second child during the writing of this article) and was employed for this project at a nonprofit and supervised by another researcher/employee of the same organization. The two IBCLC practitioners on the team are white and Latina; both are mothers, one a former young mother and current grandmother. The two program managers are Latina; one is young (within the age range of study participants) with no children, the other is a mother but not young, and both are bilingual and bicultural. The two young team members grew up in neighborhoods that were the focus of data collection.

Results

Data collected from young mothers, their decision-making partners, and field professionals revealed multiple, intersecting social and structural factors that influence breastfeeding in this population. Four meta-themes emerged from the key informant interviews (i.e., roles, place, stigma, and support) and were strongly reinforced across all data sources.

Roles: A Social Barrier

Young mothers referred to the multiple **roles** they inhabit along with being mothers, including, among others, student, worker, sexual/romantic partner, daughter, and granddaughter. Each role was associated with specific barriers to breastfeeding. One young mother participant described her experience: "My Grandma gets mad and [says] 'you never gonna find a job . . .'cause he won't take a bottle. . . . You ain't gonna find nobody to babysit him.'" Another participant described work as stressful and sometimes causing lack of sleep, which the participant believed interfered with milk production. Some young mothers, who were also employees, contended with a lack of support for expressing milk at work, "Pumping at work was super hard. . . . I only have 15 minutes on my break." This challenge also was experienced by participants who were student mothers, and described by key stakeholders as a complex barrier confronted at schools.

Place: A Structural Facilitator

Place was correlated with breastfeeding comfort. Young mother participants described a store where they felt especially welcome: "They love breastfeeding moms there. . . . They be like, 'come on, whip it out, you ain't gotta go in the bathroom.'" While the community mapping methodology had a predetermined focus on place, the importance of place in how comfortable and even safe a young mother felt while breastfeeding was emphasized repeatedly throughout all data sources. However, we found that the types of places were not consistently supportive of breastfeeding. For example, some places of worship were supportive of breastfeeding, while others were less so; some even discouraged breastfeeding (see the section on Stigma). Those young mothers who felt unsupported exercised their agency to find alternative places that were supportive; after one participant was forced to leave a grocery store for breastfeeding, she found another store to patronize.

Stigma: A Structural Barrier

Young mother participants experienced multiple layers of **stigma** related to being young mothers and being perceived as unmarried. One participant said, "He told me I wasn't going to be anything but a baby mama." Added to this stigma were stigmatizing judgments from others while breastfeeding in public, for needing to express milk at work or school, or even breastfeeding in private spaces in front of other people, including their own children or their partners' families; one young mother described being criticized by another parent for breastfeeding at her young child's school: "She told me, 'I don't want my kid to see that.'" It was notable that while many young mother participants explicitly stated they did not let judgment of others bother them, they nonetheless described changing their feeding behaviors, particularly in places they experienced stigma. Some participants mentioned bottle-feeding at church: "Like at church, like I'll have a bottle ready, and that way . . . just in case. . . . If [I don't have a bottle] I'll go sit in the car and feed him," or no longer breastfed at their children's schools after other parents made disapproving comments.

Support: A Social Facilitator

Support from peers, family members, partners, and service providers was frequently identified as an important facilitator of breastfeeding, often tempering the influence of stigma as a barrier. A particularly influential source of support was peer counselors trained by WIC or other social services

programs. Young mother participants who had formed either formal or informal relationships with peers who had breastfed found them to be invaluable. Even friends who did not have breastfeeding experience themselves, but who were encouraging, played a notable role in enabling young mother participants to continue to breastfeed. Almost all participants expressed that breastfeeding requires support. One key informant put it this way:

> It is difficult sometimes, it can start off difficult, but if you have support, you can do it. It's what our bodies were made to do. Whether they have a GED [general equivalency diploma] or a PhD, they all need support.

Factors That Act as Both Barriers and Facilitators

Several additional concepts arose from our analyses. One unexpected pattern was that some issues were not easily classified as either a barrier or a facilitator; they manifested as both. One example was expense: Some participants indicated that, when deciding whether to breastfeed or formula-feed, the no-cost option (of breastfeeding) might not be considered "the best" in a society saturated with messages that higher cost is associated with better quality. Although WIC provides no-cost formula to mothers who are not exclusively breastfeeding, families typically purchase additional formula because WIC does not supply all of the formula needed, especially for older infants. Similarly, bonding was sometimes identified as a positive consequence of breastfeeding. "I was attached because he was attached, and it was just like well, I'm the baby's bottle," explained one mother, who continued breastfeeding despite early difficulties. On the other hand, clingy attachment to mother was perceived as a negative result. As described by one father, "[Breastfeeding] is healthy, but [not] the attachment and the whining and the crying that goes along with the breastfeeding when she's not around."

Discussion

To ensure the veracity of our conclusions, we adhered to the principles of CBPR, including young mother representatives, community practitioners, and scientific experts in all research activities. Through participatory analysis, we found that young mothers' competing roles and multiple and intersecting layers of stigma presented substantial barriers to continued breastfeeding, while support from peers, professionals, and family members and the physical places that were supportive and nonstigmatizing served to facilitate increased comfort with and ability to breastfeed. In addition to our findings, a lot was learned about the methodology of our study. We believe that we would not have yielded the findings that we did if we had used a traditional investigator-driven approach. Developing a diverse team of researchers to lead the study enabled us to design appropriate data collection methodologies and tools for the diverse group of participants from whom we sought to collect data. Furthermore, this team created a unique collaborative perspective for data analysis in which people who met the inclusion criteria for each group of participants were engaged in analyzing data collected from their peer/colleague group. While collecting and analyzing qualitative data from three different groups, using three different consenting processes, instruments, and methods presented multiple challenges, this approach improved our understanding of influential factors beyond cognitive processes.

In line with data from BB client surveys (BB, 2012), we found that most young mothers understood the importance of breastfeeding and intended to breastfeed, yet many did not sustain breastfeeding for a multitude of reasons. It is important to note that many identified factors did not easily fit into one of the social ecological levels. Most influential factors cross multiple social ecological levels, as almost everything is both shaped by the society and experienced by the individual, and these factors and experiences are filtered through the intermediate levels of communities and relationships. We found many factors influenced breastfeeding as both facilitators and barriers at multiple levels of the SEM and did our best to match each factor to the SEM level at which it seemed most relevant. As our research aim was to identify social and structural barriers and facilitators, we highlight those factors here. Roles, place, stigma, and support are the four metathemes that emerged from all our data, and all are located above the individual level. Several implications for practice can be drawn from our findings, and some unanswered questions require further study.

We found that among young mothers, the stigmatized identity of "teen mom" (Everson, 2015) was compounded by the often-stigmatized behavior of breastfeeding (Bresnahan et al., 2018). This has implications for breastfeeding initiation interventions and policies, but more so for breastfeeding duration and exclusivity. While some interventions that improve breastfeeding initiation rates overall may be helpful, such as Baby-Friendly designated hospitals (Pérez-Escamilla, Martinez, & Segura-Pérez, 2016), it may be more effective to tailor multilevel interventions for young mothers. While many of the barriers we found are not necessarily unique to younger mothers, they are amplified among this population. Breastfeeding in public is widely stigmatized across the United States (Tomori, Palmquist, & Dowling, 2016), yet young mothers experience this stigma *along with* the strongly stigmatized identity of "teen mom." Society is moving in the right direction by increasingly implementing and evaluating breastfeeding programs tailored for young mothers, and incorporating lessons from our findings into multilevel interventions may move us toward even more interventions that successfully improve breastfeeding initiation, duration, and exclusivity for young mothers.

Interventions should aim to reduce the multiple layers of stigma experienced by young mothers and to create more supportive spaces where young mothers feel comfortable breastfeeding. Other researchers have posited that the stigma surrounding young motherhood contributes to negative outcomes disproportionately affecting adolescent-headed families (Chambers & Erausquin, 2018; Everson, 2015). Based on our findings, we suggest a direct connection between the "teen mom" stigma and lower continued breastfeeding rates. This hypothesis could be tested with a pilot study comparing the outcomes of breastfeeding behavior, community-level breastfeeding attitudes, and stigmatizing or accepting attitudes about young mothers in three discreet communities implementing an evidence-based breastfeeding intervention, an evidence-based antistigma intervention, and a combination intervention incorporating elements from both.

Peer support may counteract the negative influence of stigma (Komninou, Fallon, Halford, & Harrold, 2017). This aligns with the findings of researchers who have identified the outsized importance of adolescents' peers as behavior influencers (Ramanadhan et al., 2016; Weed & Nicholson, 2015). Support groups and peer counselors have been found to be effective at increasing breastfeeding for mothers of all ages (Edwards, Peterson, Noel-Weiss, & Shearer Fortier, 2017; Kapinos, Bullinger, & Gurley-Calvez, 2017), but these interventions may be even more important for young mothers.

Young mother participants identified factors that made a place feel supportive or unsupportive of breastfeeding, and dyadic interviews revealed that relational influence was often supportive or unsupportive of breastfeeding. The encouraging influence of support for young mothers in their multiple roles, the feeling of a supportive place, and the protective influence of support in the face of stigma all underscore that support can be enlisted against barriers. Our findings mirror those of a Canadian study where the authors found that the most influential factor enabling young mothers living in maternity shelters to reach their breastfeeding goals was a "combination of emotional and practical supports from multiple trusted sources" (Edwards et al., 2017, p. 359). For young mothers lacking family support, the centering pregnancy model is a promising intervention that has been found to double exclusive breastfeeding rates (Trotman et al., 2015), reinforcing the importance of both peer support and normalization.

In addition, messaging and awareness campaigns should consider the distinct perspectives of this population regarding issues including but not limited to maternal-infant closeness and the expense of human milk substitutes. While these features are generally considered benefits of breastfeeding, some of our participants expressed that they are not necessarily experienced as benefits—rather, issues including clingy attachment or the status associated with paying for formula may be deterrents to breastfeeding. This also can be traced to oppressions and marginalizations experienced by some young mothers (Weed & Nicholson, 2015), who often are low-income women contending with classism and who, because of their age, are commonly fighting a de facto "bad mother" label. In other words, a young mother who is especially vulnerable to being accused of being a bad mother may instinctively protect herself from this threat by buying formula, thus creating a visible indicator that she is investing money in and prioritizing her child, two things that young mothers are consistently accused of not doing. These findings can be further explored by message-testing breastfeeding campaigns specifically aimed at mothers of all ages in low-income communities and communities of color and young mothers. This could deepen understanding of the influence of community and societal norms on these populations; these data would be invaluable in improving communications-based breastfeeding interventions.

The work of Kanhadilok and McGrath (2015) concerning factors influencing adolescent breastfeeding demonstrated that if we do not specifically focus attention on influences at the social and structural levels, we are unlikely to find them. They concluded, "Personal factors appear to be the most important in influencing adolescent mothers' decision to initiate and maintain breastfeeding" ("Discussion," para. 1). They viewed stigma, a structural issue, in individual terms, rather as embarrassment. Embarrassment is a personal issue to be fixed internally, while stigma is socially created and structurally reinforced. Solivan, Wallace, Kaplan, and Harville (2015) investigated young mothers' reproductive outcomes using a resiliency framework and came to similar conclusions: "Social and structural supports as well as . . . adolescent-friendly . . . policies may be key to promoting healthy maternal and infant outcomes among young women who become pregnant" (p. 349). Further exploration into the influence of stigma experiences and the efficacy of stigma reduction interventions, the primacy and intersection of the multiple roles that young mothers play, and the characteristics of spaces that feel welcoming or safe for breastfeeding might contribute to effective interventions reducing the breastfeeding disparities detrimental to young families' health.

Limitations

While we collected data on infant feeding practices of young mother participants in the community mapping sessions, the characterization of feeding was not precise (e.g., exclusive vs. mixed feeding, or duration), and the study aims did not include determining association of specific feeding behaviors with qualitative interview data. This must be considered when interpreting study results. Our participants all lived in urban/suburban environments in a limited geographical area. Further research should include participants in rural areas. In this study, young mothers were interviewed only in dyadic interviews and in community mapping group sessions. Individual

in-depth interviews with young mothers might provide further insight into the intersection between young mother stigma, breastfeeding stigma, and other factors, including racial, economic, and sexual/gender identity stigmas and the influence of personal traumas. Comparative research with young mothers and older mothers in the same communities would provide further insight.

The CBPR approach adds its own limitations. Researchers always bring their own biases to their work; in our case, many of the members of the research team had their own connection to the topic and population that may have increased the bearing of our biases on the data collection and analysis processes. In addition, qualitative research is often limited by participants' desire to please and provide socially acceptable responses; with health topics where health campaigns have made clear the "healthy choice" (e.g., breastfeeding), that bias can be even more limiting. While we attempted to temper any bias by choosing terms like "infant feeding" over "breastfeeding" and avoiding asking specifically about health benefits, it is unlikely we were able to eradicate it. Lastly, while CBPR can improve data collection and analysis methodologies, improving the "rigor, relevance and reach" of research (Balazs & Morello-Frosch, 2013, p. 2), it is also possible that strict adherence to these methodologies may suffer when lay researchers involved in data collection have less training and no research experience prior to joining the project, which was beyond the scope of our study to determine.

Conclusion

We found multiple barriers to and facilitators of breastfeeding among young mothers at all levels of the SEM. Although more research remains to be done, we do propose implications and applications to practice based on our findings. We strongly suggest that additional interventions involving peer counselors and community peer support targeting young mothers be created, implemented, and tested. To reduce the enduring disparity in breastfeeding duration and exclusivity between young mothers and other mothers, we must work toward equity by revealing and removing barriers that exist at higher social ecological levels and are maintained by our institutions.

Authors' Notes

Bre'Jaynae Joiner is a current young mother. Alison Chopel's current address is Data In Action, LLC, 6114 La Salle Ave. Suite 647, Oakland, CA 94611.

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Supplemental Material

Supplemental material may be found in the "Supplemental Material" tab in the online version of this article.

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