BREASTFEEDING MEDICINE
Volume 1, Number 4, 2006

Early Infant Feeding Decisions in Low-Income Latinas

MAYA BUNIK,[1] LAUREN CLARK,[2] LORENA MARQUEZ ZIMMER,[2] LUZ M. JIMENEZ,[1,4] MARY E. O'CONNOR,[1,4] LORI A. CRANE,[3] and ALLISON KEMPE[1]

ABSTRACT

Breastfeeding rates remain low, especially among low-income minority women. The objective of this qualitative study was to assess barriers to breastfeeding and reasons for combination feeding among low-income Latina women and their families. Meetings were held with key informants to inform the sampling plan and develop questions for focus groups. Data were collected from eight qualitative focus groups with primiparous mothers postpartum, mothers breastfeeding at 4 to 6 months, mothers formula feeding at 4 to 6 months, grandmothers and fathers, and 29 individual interviews with formula- and combination-feeding mothers. Transcripts of focus groups and interviews were content coded and analyzed for thematic domains and then compared for concurrence and differences. Four main domains with 15 categories were identified: (a) Best of both: Mothers desire to ensure their babies get both the healthy aspects of breast milk and "vitamins" in formula. (b) Breastfeeding can be a struggle: Breastfeeding is natural but can be painful, embarrassing, and associated with breast changes and diet restrictions. (c) Not in Mother's Control: Mothers want to breastfeed, but things happen that cause them to discontinue breastfeeding. (d) Family and cultural beliefs: Relatives give messages about supplementation for babies who are crying or not chubby. Negative emotions are to be avoided so as to not affect mother's milk.

Those counseling Latina mothers about infant feeding should discourage and/or limit early supplementation with formula, discuss the myth of "best of both," understand the fatalism involved in problem-solving breastfeeding issues, and enlist the altruism embedded in the family unit for support of the mother–infant pair.

INTRODUCTION

DESPITE THE KNOWN health benefits for both infant and mother, breastfeeding rates remain low in the United States, especially among low-income women.[1,2] Racial and ethnic discrepancies have been described regarding the decision to breastfeed, breastfeeding initiation, and duration.[3–5] According to national surveys, Latina women have breastfeeding initiation rates of 73%, but only 30% are breastfeeding at 6 months.[6] In addition, lower socioeconomic status mothers and mothers enrolled or eligible in the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) have even lower initiation rates in the hospital and continuation rates at 6 months of age.[6,7]

The authors and others noticed that many of the Latina mothers in Denver initiate breastfeeding with *los dos* combination feeding (Table 1) in the nursery. The frequent bottle feedings

[1]Department of Pediatrics, [2]School of Nursing, [3]Preventive Medicine and Biometrics, University of Colorado at Denver and Health Sciences Center, Denver, Colorado.
[4]Department of Pediatrics, Denver Health and Hospitals, Denver, Colorado.

of formula in the first week of life often result in poor milk supply and babies who refuse to latch onto the breast by the time they are 2 weeks of age.[8] Unfortunately, there is little published on this combination feeding phenomenon, although there is a consensus that this appears to be more common in Latinas than in other cultures and in those who live in the United States as opposed to their Spanish-speaking, Latin American country of origin. The authors found reports that it is more common with increased acculturation.[9,10] For these purposes, acculturation was defined as "a social process that occurs in a context [in which] newcomers and members of the host culture are in dynamic contact" in which immigrants "must, in one form or another, adapt to their new cultural environment."[11]

This study was designed to explore *los dos* and early termination of breastfeeding among

Table 1. Spanish Vocabulary and Concepts Related to Infant Feeding

Spanish vocabulary pertinent to infant feeding	*English translation*	*Concepts related to infant feeding*
Los Dos*	The two, both	Combination feeding of breast and formula
La Cuarentena*	40 days postpartum period	Recommended time to stay inside, relax, not get cold, not lift things, not do household chores, not have sex, avoid bathing, not eat certain spicy or acidic foods
Gordito*	Chubby or fat	Affectionate term for a baby's overweight body habitus
No tengo leche*	I have no milk	Common phrase, reason, or excuse given for not breastfeeding
Ranchero*	Ranch or farm hand	Those experienced with animal husbandry in Mexico have an understanding of colostrum and human milk
Coraje**	Pathologic anger	Negative emotions believed to spoil milk or cause miscarriage
Susto**	Shock, a sudden disturbance of emotions	Negative emotions believed to spoil milk or cause miscarriage
Atole*	Cornstarch gruel	Drink felt to be good for nursing mothers to drink, enhance milk production, and thicken the quality
Sympatía or respeto†‡	Mutual support, respect	Often used to describe patients trying to please their provider, not always telling the truth about problems
Familismo†	Strong attachment to nuclear and extended families, including loyalty, reciprocity, and solidarity	Strong family influence or opinions in Hispanic families as they relate to infant feeding practices
Batallar*	Struggle	Breastfeeding can be difficult, mothers may struggle initially
Machismo§	Macho, strong, not sensitive	Negative term used to describe father's place of control in the family, perhaps not so supportive of breastfeeding
Podermismo§	Powerism, a positive term to reflect maintaining control	Alternative to machismo, yet still relating the importance of father's role as head of the family unit; importance in recognizing father's role in support of mother and breastfeeding

*Kay MA. *Southwestern medical dictionary: Spanish-English, English-Spanish*, 2nd ed. University of Arizona Press, Tucson, 2001.

**Guerrero ML, Morrow RC, Calva JJ, et al. Rapid ethnographic assessment of breastfeeding practices in periurban Mexico City. *Bull WHO* 1999;77:323–330.

†Marîn G, Marîn BV. *Research with Hispanic Populations*. Sage, Newbury Park, CA, 1991.

‡Triandis HC, Marin G, Lisansky J, et al. *Simpatia* as a cultural script of Hispanics. *J Personality Soc Psychol* 1984;47:1363–1375.

§Preloran HM, Browner CH, Lieber E. Strategies for motivating Latino couples' participation in qualitative health research and their effects on sample construction. *Am J Public Health* 2001;91:1832–1841.

Latina women in Denver, Colorado. Latinos are the predominant racial-ethnic group in this geographic area and have similar low duration rates as are reflected nationally.[6,7] Focus groups and individual interviews were conducted with low-income Latino women and their families to discuss barriers to breastfeeding and reasons for formula supplementation, with particular attention to experiences and barriers related to community cultural beliefs and practices.

METHODS

Study design

This three-phase cross-sectional qualitative study was designed to explore early infant feeding decisions among Latino families in Denver. Language and culture were important considerations in the design and conduct of the focus groups and individual interviews.

Study setting

Denver Health (DH) is the largest vertically integrated community health center system in the United States. DH was the access point for the study sample population because it serves the Latino population of the city of Denver. DH comprises nine community health centers, a hospital (Denver Health Medical Center), school-based clinics, and the public health department. DH provides 42% of the indigent care in the Denver metropolitan area, and 30% of indigent care for the entire state of Colorado. The patient population is reported as 68% Latino. (The breakdown of other races based on internal statistics as of March 2005 are: white (non-Hispanic) 9%, black (non-Hispanic) 9%, American Indian or Alaskan 0.5%, Asian or Pacific Islander 1%, other 12.5%.) The majority of Latinos cared for through the DH system are from Mexico and approximately 30% are monolingual Spanish.

Procedures

Phase I: Key informant meetings. To help determine recruitment strategies to better understand the health care and community context of breastfeeding among Latinas, health care providers and community leaders from WIC, the Breastfeeding Promotions Committee (Colorado Department of Health and Environment, CDPHE), and those working in the communities served by DH were brought together for a series of four meetings in the summer of 2004. Their perceptions were elicited regarding barriers to and successes in breastfeeding in low-income Latina women. This information helped the authors specify the sampling plan and develop questions for the focus group agenda. After completion of the analysis the authors returned to these key informants to verify the themes.

Phase II: Focus groups. Focus groups were conducted of breastfeeding and formula-feeding Latino family members to assess beliefs and perspectives on breastfeeding. Flyers were posted in the hospital and the two largest pediatric clinics in the community health centers to recruit a convenience sample of participants. Physicians and physician assistants/nurse practitioners recruited patients who met study criteria. Participants signed up by providing their name and a telephone number for a specific focus group date and time. A research assistant contacted participants to confirm attendance.

Participants were eligible if they belonged to one of the following groups:

1. *Primiparous mothers with a healthy newborn in the inpatient nursery*. These women were early in their feeding decision process.
2. *Breastfeeding mothers with 4- to 6-month-old infants*. These women had avoided early supplementation and other outside pressures and considered themselves successful at breastfeeding.
3. *Formula-feeding mothers with 4- to 6-month-old infants*. These mothers had never breastfed or ceased breastfeeding their infant prior to 4 months of age.
4. *Grandmothers of newborns or of infants at outpatient sites*. The importance of the mother's extended family (her own mother or mother-in-law) can be influential in the decision-making process. Many grandmothers are live-in relatives with life experiences around child feeding, and they play a large role in helping care for grandchildren.

5. *Fathers visiting their newborn in the hospital*. Paternal opinions on breastfeeding have been described important in other cultures, mainly African-American families.

Each group was conducted separately for English and Spanish-speaking participants and lasted about 1 hour. A trained, bilingual research assistant and a clinician moderated the groups using a semistructured question guide developed from relevant literature, consultation with focus group experts, and key informant review. The intent was to have homogeneous groups within the preceding categories, with gender-specific groups planned to increase both male and female subjects' comfort level when discussing the personal and possibly sensitive topic of breastfeeding. Bilingual Latino male physicians facilitated the fathers' group, a bilingual Latina physician's assistant (who is a grandmother) facilitated the grandmothers' group, and the first author (MB) cofacilitated the other groups. With the possible exception of the physician assistant, the clinician facilitators were not involved in giving care to the infants of families in the study. The facilitators probed in each three major areas to insure comprehensive responses:

1. What are the main barriers to breastfeeding in your community? Probes: Modesty? Pain? Return to work or school?
2. Why do mothers use *los dos*? Probes: Is colostrum an issue? Milk supply?
3. What is the best way to support exclusive, successful breastfeeding in the first 2 weeks after birth? Probes: Prenatal classes? Home visits? Telephone calls?

Focus groups were held in either a hospital or clinic conference room. Food and onsite child care was provided and each participant received $25 for their time and help.

Phase III: Focused interviews. Following completion of the planned focus groups, focused interviews were conducted in a semistructured approach with formula feeding or combination feeding mothers in an outpatient setting to further explore the issues of decision making and experience around breastfeeding and supplementation. The purpose of these interviews differed from that of the focus groups, in that the authors planned to explore in more depth the topics of barriers, motivators, and decision-making points in breastfeeding and to do so with a subset of mothers who had either chosen formula only or a combination of formula and breast milk. Aspects of breastfeeding support available to mothers and how they might be enhanced also were explored. Providers at the hospital postpartum unit and community clinic identified these mothers as eligible for recruitment in this convenience sample. A nonclinician research assistant conducted these interviews, in comparison with the clinician-researchers who conducted the earlier focus groups, owing to concerns that: (a) participants' responses may have been influenced by the social desirability of breastfeeding; and (b) there might have been medical bias or participants might try to please the provider or show *simpatía* (see Table 1) with their responses.[12,13] Focused interviews have a potential advantage over focus groups in that the personal nature of breastfeeding and family choices are disclosed in a more private setting with a single interviewer, and focus group themes can be explored in more depth.[14] The interview questions included the following:

1. Tell me about how you are feeding your baby.
2. Tell me why you chose to feed your baby _____ (both breast milk and formula, or formula)?

The Colorado Multiple Institutional Review Board approved the study. Informed consent was obtained from all participants.

Analysis

Focus groups and individual interview responses were transcribed verbatim in the language in which the interaction was conducted. A bilingual team (MB, LMZ) analyzed the transcripts in the language of the interview for themes and patterns, using Atlas TI® Software Version 4.1 (Scientific Software Development, Berlin, Germany) to facilitate coding. Investigators refrained from translating the raw Spanish-

language transcripts into English to preserve their linguistic authenticity, and instead conducted analysis in Spanish. Three of the seven authors speak Spanish. At the time of manuscript preparation coded data were translated for the purpose of publication for an English-speaking audience. The research team (MB, LMZ) analyzed all data from the focus groups and the individual interviews in a single analytic unit, congruent with an ethnographic method that allows for multiple views and methods of data collection to illuminate shared cultural beliefs and experiences.[15] The research team (MB, LMZ) inductively developed codes for the study, following standard qualitative coding practices for labeling interview content, explanations, processes, and data-based theoretic or interpretive observations of the researchers.[16,17] Most codes were descriptive in nature, with a few considered interpretive.[18] Code development was a negotiated process among the research team (MB, LMZ) until they agreed on codes and definitions and could apply the codes to text segments similarly.[19] A coding dictionary contained definitions for the codes to ensure that the codes were "consistently applied by the researchers over time and so that multiple researchers were thinking about the same phenomena as they code."[18] A post hoc analysis of the data coding was conducted using a codes-by-methods matrix to determine if the method of data collection (focus group versus individual interview) influenced the frequency of responses in each code category and the nature of the content in the data categories differed.

The research team (MB, LMZ) then defined categories of comments from the participants in the focus groups and interviews. These categories formed the basis for a systematic analytic summary of each focus group and interview. To enhance the dependability of the data analysis process,[20,21] two researchers (MB, LMZ) developed a procedure for and coded all data into categories. A third researcher (LC) (not involved in focus groups or interviews), who was experienced in qualitative analysis, then assisted in the theme development from the categories.[22] Three researchers (MB, LMZ, LC) reached consensus about the codes, categories, and the four themes that best described the data about cultural dimensions of early infant feeding.

RESULTS

Between October 25, 2004 and February 1, 2005 eight focus groups (three in English and five in Spanish) were conducted with 35 participants (Table 2). Recruitment of English-speaking grandmothers and English-speaking primiparous mothers was difficult; thus, only eight focus groups were conducted. The primiparous and formula-feeding groups had mixed groups in that some multiparous and breastfeeding mothers participated, respectively. A total of 29 individual interviews were conducted before data saturation was reached, meaning no more unique information was elicited in subsequent interviews.[23] In the post hoc code review, the results showed more discussion of programmatic aspects of breastfeeding support and education in the individual focus interviews, in comparison with the group interviews. This was consistent with the intention of emphasizing this area of data collection with individuals. Queries of codes and associated quotations that showed discrepancies in frequency between the two data collection methods were not related to differences in content.

Fifteen main categories were clustered in four themes.

Theme One: Best of both. By giving both breast milk and formula, the baby is sure to get the best of both-the healthy aspects of breast milk and the vitamins in formula (Box 1).

- *Vitamins and other things*: Even mothers with good milk supply felt they wanted to provide insurance that the baby was getting both, in case there was something in formula (vitamins and other things) that was necessary.

TABLE 2. FOCUS GROUPS (n = 8)

Focus group type (and language)	*Participants*
Mothers:	
Primiparous (Spanish only)	n = 6
Breastfeeding (English, Spanish)	n = 11
Formula (English, Spanish)	n = 6
Fathers (English, Spanish)	n = 7
Grandmothers (Spanish only)	n = 5

Box 1. Best of Both

Mother: "I give her formula. But I only breastfeed her at night because it is easier. I want her to have the formula too because it has vitamins, just in case."

Mother: "Yes, well the formula has to based on vitamins, and that's a benefit for the baby, also. . . . Both is good too, because there are times that the mom, because of the diet that she has, she doesn't fill up the baby with breastmilk and so she has to give formula. And well that way it's better to get both for the baby."

Mother: "When you go over there to the office or WIC . . . each time they give you formula. So some [mothers] think that formula is more healthy maybe."

Mother: "They [in the hospital] keep pushing the bottle on you."

- *Mixed messages*: Mothers get mixed messages from medical providers regarding formula supplementation and samples from hospital at discharge. Mothers brought up issues of getting WIC supplement and formula bags from the hospital as giving a mixed message.

Theme Two: Breastfeeding can be a struggle. Breastfeeding is natural but is associated with hardship (Box 2).

- *Pain*: Breastfeeding hurts and causes sore nipples. Pain was the main reason given for why women do not breastfeed and use a breast pump.
- *Modesty*: Many expressed concerns about breastfeeding in public, but felt more comfortable at family events in which those women who wanted to nurse could use another room. A few fathers mentioned the potential of other men looking at their wives while nursing, but most felt it was natural and a minor concern.
- *Breast changes*: Breastfeeding changes the appearance of breasts. According to the women interviewed they change in size, become saggy, and leak milk. Some mothers said they had heard discussions in the community about breastfeeding making your breasts look larger and then afterward more saggy. One father mentioned that milk squirting out during sex had upset his friend.
- *Diet restrictions*: Women commonly expressed concern that mothers who ate chile, spicy foods, and beans would cause problems in the baby as well as colic. Many talked about nursing mothers avoiding soda and caffeine. Mothers reported that if they did not eat well their milk was more watery. Most participants described the importance of drinking atole for breastfeeding mothers (see Table 1). This information is shared widely, although never specifically linked with professional advice or instruction.

Box 2. Breastfeeding Can Be a Struggle

Mother: "I didn't know it would hurt like it did. I had no idea. I didn't know it would be painful, and I would sit there crying. (Laughing). It hurts, it really hurts."

Mother: ". . . Cause you never know when they [babies] are hungry and right there they get all fussy and you know how they get, and just all of a sudden in front of the world, lift your shirt, and you have to go to the bathroom."

Father: "I would not want her [my wife] to pop out her tit on the bus."

Mother: "With all of us there are eight sisters, we fed them all with the breast and one sister didn't and has beautiful ones [breasts] and the rest of us have saggy ones."

Mother: "When my boy was little, I didn't eat chile, nor beans, nor soda, none of that so he wouldn't get colicky and he never got colic. One time I did eat chile and I pumped the milk and I got 12 bottles worth, and I threw them out because they said it would give him colic."

Grandmother: "Many times, to me, they said that the milk, because of poor nutrition of the mom, would come out watery."

Theme Three: Not in mother's control. I want to breastfeed but things can happen that are beyond my control (Box 3).

- *Violation of La Cuarentena*: Violation of *La Cuarentena* (see Table 1) offers explanation for milk supply issues and other problems. Going outside or getting cold exposure to the back was often used to explain low milk supply or milk supply going away. Evaluation by a medical expert was not sought for problems of milk supply. Most grandmothers and mothers reported that the rules of *La Cuarentena* are difficult to keep, particularly in the United States.
- *I don't have milk/No tengo leche*: This (see Table 1) is a common reason for not initiating or stopping breastfeeding. Successful breastfeeding mothers felt that formula-feeding mothers who quit breastfeeding because it was hard told others "*no tengo leche*" as an excuse because it was more socially desirable. It was perceived as easier than saying, "it was too hard and I didn't want to struggle anymore." Some grandmothers said mothers who choose not to breastfeed are just too "lazy."
- *Return to work or school*: Breastfeeding is challenging if a mother needs to return to work or school. Being away from baby for any reason necessitates formula supplementation. This was a common reason given by many participants for breastfeeding cessation. Mothers pumped (using a manual pump) to remove milk and relieve full and engorged breasts, but discarded this milk. For these women, pumping was extraneous to the breastfeeding experience. Mothers only used electric two-sided pumps with premature babies. Most did not store pumped breast milk or feed it to their baby. Most reported pumping in the bathroom, which was a "dirty place."
- *Baby factors*: Some women explained failed breastfeeding attempts because the baby did not like breast milk and preferred formula. They also said that the baby pulled away and did not want to latch on (did not want to breastfeed). Again, most did not seek help with latching on from a health care provider.
- *Mother factors*: Mothers' body factors can be a problem. A few described trouble with breast shape, including flat or inverted nipples or illness (e.g., a mother staying in the hospital postpartum for antibiotics) as a cause for breastfeeding failure. Again, a clinical evaluation was rarely considered.

BOX 3. NOT IN MOTHER'S CONTROL

Mother: "We tried to give him breast milk, but my milk went away because I had to bring him here to the clinic and because it was cold, I didn't have breast milk to give him."

Mother: "Yes, with the cold my milk went away and we are only bottle-feeding."
Interviewer: "OK, so when you were outside it was cold?"
Mother: "Yes, I had to bring him here [clinic] and I went out. That cold hits you makes your breast milk dry up."

Mother: "I think they [formula feeders] just say 'I don't have milk' because it is easier. They do not want to say it was too hard and I didn't want to anymore."

Mother 1: "The only thing that turned me off about pumping was that when I went back to school you had to go to the bathroom, in the bathroom stall, and that seemed like gross."

Mother 2: "Yes, like with my niece, my sister always combined, she gave her one time breast and when she was going to feed her again, she gave her formula, or she gave her breast milk at home and when she had to go out she gave her formula."

Grandmother: "Well, yes it [breastfeeding] has its benefits, sometimes it's that the baby doesn't want it. There are times that it's the baby. It doesn't want it and it prefers the bottle, or that it [the baby] can't [breastfeed], or because sometimes there isn't enough [breast milk]."

Mother: "Well I think, it's better breastfeeding than formula, but I tried."
Interviewer: "Were you able to breastfeed with your son?"
Mother: "No, he didn't want it either."

Mother: "No, it's that sometimes, because the breast, the nipple was too small and she struggled a lot, so since she was born I had to pump the milk."
Interviewer: "So she never latched on much?"
Mother: "No, never."

Theme Four: Family and cultural beliefs. Latino parents and grandparents want what is best for the baby and give strong messages about cultural beliefs (Box 4).

- *Knowledge of benefits*: Most participants knew that colostrum and breast milk are healthier for the baby than formula. All groups were able to list many benefits of both colostrum and breast milk. Reasons to breastfeed included it being healthier, convenient (especially at night), cheaper, and creating a closer bond between mother and infant. In addition, it was found that families who were involved with raising animals in Mexico (*rancheros*) came with a knowledge and appreciation for colostrum and breast milk.
- *Make a better life*: A few fathers we talked to felt it was their job to take care of the family, and make a better life in the United States than they had experienced themselves as children in Mexico. This meant leaving behind the *machismo* of the past and supporting their wives, not only when the child was sick but all the time, including when breastfeeding.
- *Feed the baby*: Mothers reported family members advising supplementation with formula if the infant cried excessively or was not *gordito* (see Table 1). Some mothers commented that fathers do not like to hear crying babies when they come home from work tired. Often fathers suggest formula. Also, a few mothers said that others commented on the infant's body size or shape, implying a chubby child is more desirable and a leaner child may be associated with not getting enough breast milk. One mother explained that sometimes her baby cried for reasons other than hunger. Mothers and family members have to realize that sometimes they just want to be held and tended.
- *Avoid negative emotions*: Mothers should not be upset postpartum. It is common knowledge among Latino families that any negative emotion can affect breast milk in mothers—*coraje* (pathologic anger) is believed to spoil breast milk, and *susto* (a sudden disturbance of emotions) also is believed to affect milk. Both are to be avoided. Fathers are advised to not get the mother angry or emotional so as to not affect breast milk. Fathers told us their own mothers commonly gave them this advice: Everyone needs to be nice to the new mother.
- *Support of mother's mother*: Grandmothers, if present in this country, were a source of advice and support for successful motherhood.

DISCUSSION

In this focused ethnography it was learned that Latino women and their families clearly understand the health benefits of colostrum and breastfeeding. Yet, at the same time, they have a low threshold for formula supplementation early in the newborn's life. To the authors' knowledge, this is the first qualitative study that

Box 4. Family and Cultural Beliefs

Facilitator: "How did you come to learn all of this?"
Father: "I'm from a ranch. We would even take the colostrum from the cows so we could drink it, because that produces three times as many vitamins as the milk."

Father: "I want to come here [United States] and make a better life. No drugs or violence. I want to support my family and my wife. It is important not just when the baby is sick and you have to go to the hospital."

Mother: "Yes, when you live with other people, and you just gave her [breast milk], and she is still crying, well they say, give her milk [formula], give her food. But they don't cry only because they are hungry, they also cry when they are sick, when they have urinated, when their diaper is dirty, and they also want to be held because it is very uncomfortable to be laying down all day."

Mother: "Well for example when you get a fright, you shouldn't feed the baby. It will get diarrhea. Before you feed them, calm yourself down."

Mother: "My mother told me breastfeeding was going to be hard at first but benefits for baby last a lifetime."

explores the phenomenon of doing both (*los dos*). This combination feeding seems to be happening for several reasons. First, mothers want to breastfeed but at the same time give their baby the "best of both" or whatever substances are in formula as insurance. Second, breastfeeding can be a struggle (*batallar*), and formula feeding is an easy alternative. Third, expressing breast milk to feed the baby is not a common practice; therefore, being separated from the baby for any reason necessitates formula supplementation. The perceived ease of bottle feeding also was a common reason for formula supplementation. In this study participants described baby factors out of the mother's control, such as refusing or not liking the breast. Modesty also was commonly described as a difficult aspect of the breastfeeding experience.[24,25] Lack of family support for breastfeeding made it difficult to avoid supplementation.[25–27]

Little has been published exploring the issue of the reasons Latinas have shorter duration of breastfeeding rates than women in general, although pregnant Latinas report a strong intent to breastfeed.[28] In one study, Latinas expressed an increased willingness to breastfeed after attending a lactation class that addressed specific barriers of returning to work or school, diet avoidance, and uncertainty of milk supply.[29] Another influence in Latinas may be fatalism, the belief that certain events are inevitable. Fatalism has been described in relation to other medical issues and was found to be more strongly associated with those with less acculturation and lower educational level.[30,31] In this study, fatalism applies primarily to the Latinas' approach to breastfeeding problems and getting assistance or advice from others. Early termination of breastfeeding also may be caused by lack of access to helpful breastfeeding resources when problems arise.[26,32–34]

Sensitivity toward cultural issues is important for health care providers. Violation of *la cuarentena* for many Latinas is explanation enough for low milk supply, so mothers may not consider asking for lactation help from a health care provider. If "dried up" breast milk is addressed not as a completed process resulting from violation of the *la cuarentena*, but as a continuum of milk supply, mothers may be able to gain confidence in their ability to increase the milk supply by more frequent nursing, pumping, and fluid intake. In addition, knowledge of beliefs about the avoidance of certain traditional foods and negative emotions affecting milk is important. Some of these beliefs may have a physiologic basis. A few studies have shown that stress can affect prolactin levels in lactating women.[35–38]

Understanding and involving the family (*familismo*; see Table 1) is vital. Successful breastfeeding mothers heard from their own mothers that the struggle to breastfeed is worthwhile. A few studies have addressed the importance of the mother's extended family (her own mother or mother-in-law) as very influential in the decision-making process.[39,40] Some grandmothers are live-in relatives; however, many live in Mexico. Fathers play a strong role in the family, and are powerful decision makers.[12] Latino fathers in this study expressed a sense of altruism for the family unit. Many felt it was their job to make a better life for their family in the United States than they had experienced as children. This included leaving behind the *machismo* of the past and replacing it with *podermismo* (see Table 1) and sensitivity.[41] ("What is good for the baby is good for the family.") Studies in African-American families in which breastfeeding education was directed at the father showed a 20% increase in breastfeeding rates, indicating that paternal influences on maternal feeding practices are critically important in early breastfeeding decision making.[42–44] Providers should enlist family members to encourage and support breastfeeding at home.

An important limitation of qualitative research is that these data from focus groups and interviews may not be generalizable, particularly to other non-Mexican Latino groups. The fathers recruited from the newborn nursery who are visiting the mother in the hospital may not be representative of fathers in the community. The focus groups and interviews were held in a convenient but clinical setting. Perhaps if the groups or interviews had been conducted in a recreation center, church, or shopping mall the study might have yielded different results. The authors did not have specific information on participants because demographic surveys were not collected.

Investigators need to gather more data on

women from other Latin American countries and data on the duration of time these women have lived in the United States. Lastly, qualitative results are usually hypothesis generating and not hypothesis testing; here they led the authors to design an intervention study using nurses to deliver culturally enhanced telephone support to breastfeeding mothers in the first 2 weeks of life.

CONCLUSION

Many of the same breastfeeding issues found in low-income Latinas are those of women in general. The experience of culture change and acculturation for Mexican-American mothers contributes to similarities between these findings and those of other researchers in the area. The cultural dimensions and understandings of how *los dos*, or feeding both breast milk and formula, described by these mothers is not as well understood from other studies of women and breastfeeding. Aside from these unique findings, the Mexican-American mothers and family members studied adopt the biases, experience the positive influences, and face the barriers to exclusive breastfeeding that other mothers in American culture also encounter. According to these data, they may respond with the choice to combination feed with *los dos*.

These findings led to several recommendations for providing breastfeeding support to Latino populations. Providers need to be honest with new mothers and tell them that breastfeeding is hard but worthwhile. Counseling about breastfeeding should include discussing the myth of "best of both," understanding the fatalism involved in solving breastfeeding problems, emphasizing delayed supplementation, and perhaps offering specific recommendations, such as a maximum of one bottle of formula a day. Policies regarding free formula samples at hospital discharge and through WIC need to be reevaluated. Scheduled home or outpatient visits with peer counselors or health care personnel could help mothers with problems latching on or experiencing low milk supply. Improved access to electric breast pumps or better instruction in hand expression is needed for mothers returning to work or school. Emphasis on the benefits of feeding pumped milk to the baby rather than discarding it should be communicated to mothers and family members. Providers should appeal to the traditional family values by including fathers and grandmothers in supporting the breastfeeding mother, especially during the critical period of *la cuarentena*. Finally, further studies are needed to discover if these findings are generalizable to other Latino groups, and the effects of these recommendations in supporting breastfeeding in Latino families should be tested.

ACKNOWLEDGMENTS

The authors acknowledge Patricia Shobe, M.P.H., for her assistance with this project and preparation of this manuscript. Funding was provided by the Colorado Department of Public Health and Environment and the Primary Care Research Fellowship under the Health Research Services Administration.

REFERENCES

1. United States Department of Health and Human Services. *Healthy People 2010*. U.S. Dept. of Health and Human Services, Washington, DC, 2000.
2. Zimmerman DR, Guttman N. "Breast is best": Knowledge among low-income mothers is not enough. *J Hum Lact* 2001;17:14–19.
3. Forste R, Weiss J, Lippincott E. The decision to breastfeed in the United States: Does race matter? *Pediatrics* 2001;108:291–296.
4. Corbett KS. Explaining infant feeding style of low-income black women. *J Pediatr Nurs* 2000;15:73–81.
5. Li R, Grummer-Strawn L. Racial and ethnic disparities in breastfeeding among United States infants: Third National Health and Nutrition Examination Survey, 1988–1994. *Birth* 2002;29:251–257.
6. Centers for Disease Control and Prevention. *Pediatric Surveillance Survey*, 2003. Accessed September 30, 2005: www.cdc.gov.
7. Centers for Disease Control and Prevention. *Pregnancy Risk Assessment and Monitoring*, 2006. Accessed September 30, 2005: www.cdc.gov/nccdphp/drh/srv_prams.htm.
8. Loughlin HH, Clapp-Channing NE, Gehlbach SH, et al. Early termination of breast-feeding: Identifying those at risk. *Pediatrics* 1985;75:508–513.
9. Rassin DK, Markides KS, Baranowski T, et al. Acculturation and the initiation of breastfeeding. *J Clin Epidemiol* 1994;47:739–746.

10. Denman-Vitale S, Murillo EK. Effective promotion of breastfeeding among Latin American women newly immigrated to the United States. *Holist Nurs Pract* 1999;13:51–60.
11. Padilla AM, Perez W. Acculturation, social identity, and social cognition: A new perspective. *Hispanic J Behav Sci* 2003;25:35–55.
12. Marîn G, Marîn BV. *Research with Hispanic Populations*. Sage, Newbury Park, CA, 1991.
13. Triandis HC, Marin G, Lisansky J, et al. *Simpatia* as a cultural script of Hispanics. *J Personality Soc Psychol* 1984;47:1363–1375.
14. Bernard HR. *Research Methods in Anthropology: Qualitative and Quantitative Approaches*, 2nd ed. Altamira Press, Walnut Creek, CA, 1995.
15. Pelto PJ, Pelto GH. *Anthropological Research: The Structure of Inquiry*, 2nd ed. Cambridge University Press, Cambridge, MA, 1978.
16. Rubin HJ, Rubin I. *Qualitative Interviewing: The Art of Hearing Data*. Sage, Thousand Oaks, CA, 1995.
17. Lofland J, Lofland LH. *Analyzing Social Settings: A Guide to Qualitative Observation and Analysis*, 3rd ed. Wadsworth, Belmont, CA, 1995.
18. Miles MB. *Qualitative Data Analysis: A Sourcebook of New Methods*. Sage, Beverly Hills, CA, 1984.
19. MacQueen KM, McLellan E, Kay K, et al. Codebook development for team-based qualitative analysis. *Cult Anthropol Meth* 1998;10:31–36.
20. Brink PJ. Issues of reliability and validity. Aspen, Rockville, MD, 1989, 151–168.
21. Kurasaki KS. Intercoder reliability for validating conclusions drawn from open-ended interview data. *Field Meth* 2000;12:179–194.
22. DeSantis L, Ugarriza DN. The concept of theme as used in qualitative nursing research. *West J Nurs Res* 2000;22:351–372.
23. Creswell JW. *Qualitative Inquiry and Research Design*. Sage, Thousand Oaks, CA, 1998.
24. Raisler J. Against the odds: breastfeeding experiences of low income mothers. *J Midwifery Womens Health* 2000;45:253–263.
25. Stopka TJ, Segura-Perez S, Chapman D, et al. An innovative community-based approach to encourage breastfeeding among Hispanic/Latino women. *J Am Diet Assoc* 2002;102:766–767.
26. Wood SP, Sasonoff KM, Beal JA. Breast-feeding attitudes and practices of Latino women: A descriptive study. *J Am Acad Nurse Pract* 1998;10:253–260.
27. Baranowski T, Bee DE, Rassin DK, et al. Social support, social influence, ethnicity and the breastfeeding decision. *Soc Sci Med* 1983;17:1599–1611.
28. Libbus MK. Breastfeeding attitudes in a sample of Spanish-speaking Hispanic American women. *J Hum Lact* 2000;16:216–220.
29. Roby JL, Woodson KS. An evaluation of a breast-feeding education intervention among Spanish-speaking families. *Soc Work Health Care* 2004;40:15–31.
30. Chavez LR, Hubbell FA, Mishra SI, et al. The influence of fatalism on self-reported use of Papanicolaou smears. *Am J Prev Med* 1997;13:418–424.
31. Flores G. Culture and the patient-physician relationship: Achieving cultural competency in health care. *J Pediatr* 2000;136:14–23.
32. Hill PD. The enigma of insufficient milk supply. *MCN Am J Matern Child Nurs* 1991;16:312–316.
33. Barber CM, Abernathy T, Steinmetz B, et al. Using a breastfeeding prevalence survey to identify a population for targeted programs. *Can J Public Health* 1997;88:242–245.
34. Milligan RA, Pugh LC, Bronner YL, et al. Breastfeeding duration among low income women. *J Midwifery Womens Health* 2000;45:246–252.
35. Altemus M, Deuster PA, Galliven E, et al. Suppression of hypothalamic-pituitary-adrenal axis responses to stress in lactating women. *J Clin Endocrinol Metab* 1995;80:2954–2959.
36. Heinrichs M, Meinlschmidt G, Neumann I, et al. Effects of suckling on hypothalamic-pituitary-adrenal axis responses to psychosocial stress in postpartum lactating women. *J Clin Endocrinol Metab* 2001;86: 4798–47804.
37. Tu MT, Lupien SJ, Walker CD. Measuring stress responses in postpartum mothers: Perspectives from studies in human and animal populations. *Stress* 2005;8:19–34.
38. Groer MW. Differences between exclusive breastfeeders, formula-feeders, and controls: A study of stress, mood, and endocrine variables. *Biol Res Nurs* 2005;7:106–117.
39. Wambach KA, Koehn M. Experiences of infant-feeding decision-making among urban economically disadvantaged pregnant adolescents. *J Adv Nurs* 2004;48: 361–370.
40. McIntyre E, Hiller JE, Turnbull D. Community attitudes to infant feeding. *Breastfeed Rev* 2001;9:27–33.
41. Preloran HM, Browner CH, Lieber E. Strategies for motivating Latino couples' participation in qualitative health research and their effects on sample construction. *Am J Public Health* 2001;91:1832–1841.
42. Waletzky LR. Husbands' problems with breast-feeding. *Am J Orthopsychiatry* 1979;49:349–352.
43. Bar-Yam NB, Darby L. Fathers and breastfeeding: A review of the literature. *J Hum Lact* 1997;13:45–50.
44. Arora S, McJunkin C, Wehrer J, et al. Major factors influencing breastfeeding rates: Mother's perception of father's attitude and milk supply. *Pediatrics* 2000;106:E67.
45. Kay MA. *Southwestern medical dictionary: Spanish-English, English-Spanish*, 2nd ed. University of Arizona Press, Tucson, 2001.
46. Guerrero ML, Morrow RC, Calva JJ, et al. Rapid ethnographic assessment of breastfeeding practices in periurban Mexico City. *Bull WHO* 1999;77:323–330.

Address reprint requests to:
Maya Bunik, M.D., MSPH
1056 E. 19th Avenue, B032
Denver, CO 80218

E-mail: bunik.maya@tchden.org

This article has been cited by:

1. Veronica Barcelona de Mendoza, Emily Harville, Katherine Theall, Pierre Buekens, Lisa Chasan-Taber. 2015. Acculturation and Intention to Breastfeed among a Population of Predominantly Puerto Rican Women. *Birth* n/a-n/a. [CrossRef]
2. Diana Cartagena, Suzanne W. Ameringer, Jacqueline M. McGrath, Saba W. Masho, Nancy Jallo, Barbara J. Myers. 2015. Factors contributing to infant overfeeding in low-income immigrant Latina mothers. *Applied Nursing Research* **28**, 316-321. [CrossRef]
3. Melissa D. Rossiter, Cynthia K. Colapinto, Mohammad K. A. Khan, Jessie-Lee D. McIsaac, Patricia L. Williams, Sara F. L. Kirk, Paul J. Veugelers. 2015. Breast, Formula and Combination Feeding in Relation to Childhood Obesity in Nova Scotia, Canada. *Maternal and Child Health Journal* **19**, 2048-2056. [CrossRef]
4. Diana Cartagena, Jacqueline M. McGrath, Saba W. Masho. 2015. Differences in Modifiable Feeding Factors by Overweight Status in Latino Infants. *Applied Nursing Research* . [CrossRef]
5. Marta Rivera-Pasquel, Leticia Escobar-Zaragoza, Teresita González de Cosío. 2015. Breastfeeding and Maternal Employment: Results from Three National Nutritional Surveys in Mexico. *Maternal and Child Health Journal* **19**, 1162-1172. [CrossRef]
6. Susan L. Wilhelm, Trina M. Aguirre, Ann E. Koehler, T. Kim Rodehorst. 2015. Evaluating Motivational Interviewing to Promote Breastfeeding by Rural Mexican-American Mothers: the Challenge of Attrition. *Issues in Comprehensive Pediatric Nursing* **38**, 7-21. [CrossRef]
7. Britt Rios-Ellis, Selena T. Nguyen-Rodriguez, Lilia Espinoza, Gino Galvez, Melawhy Garcia-Vega. 2014. Engaging Community With Promotores de Salud to Support Infant Nutrition and Breastfeeding Among Latinas Residing in Los Angeles County: Salud con Hyland's. *Health Care for Women International* 1-19. [CrossRef]
8. Glassman Melissa E., McKearney Karen, Saslaw Minna, Sirota Dana R.. 2014. Impact of Breastfeeding Self-Efficacy and Sociocultural Factors on Early Breastfeeding in an Urban, Predominantly Dominican Community. *Breastfeeding Medicine* **9**:6, 301-307. [Abstract] [Full Text HTML] [Full Text PDF] [Full Text PDF with Links]
9. Jean Hannan. 2014. Minority mothers' healthcare beliefs, commonly used alternative healthcare practices, and potential complications for infants and children. *Journal of the American Association of Nurse Practitioners* n/a-n/a. [CrossRef]
10. Diana C. Cartagena, Suzanne W. Ameringer, Jacqueline McGrath, Nancy Jallo, Saba W. Masho, Barbara J. Myers. 2014. Factors Contributing to Infant Overfeeding with Hispanic Mothers. *Journal of Obstetric, Gynecologic, & Neonatal Nursing* **43**:10.1111/jogn.2014.43.issue-2, 139-159. [CrossRef]
11. Lydia M. Furman, Elizabeth C. Banks, Angela B. North. 2013. Breastfeeding Among High-Risk Inner-City African-American Mothers: A Risky Choice?. *Breastfeeding Medicine* **8**:1, 58-67. [Abstract] [Full Text HTML] [Full Text PDF] [Full Text PDF with Links]
12. Marianne Neifert, Maya Bunik. 2013. Overcoming Clinical Barriers to Exclusive Breastfeeding. *Pediatric Clinics of North America* **60**, 115-145. [CrossRef]
13. Darcy A. Thompson, Ashish Joshi, Raquel G. Hernandez, Megan H. Bair-Merritt, Mohit Arora, Rubi Luna, Jonathan M. Ellen. 2012. Nutrition Education Via a Touchscreen: A Randomized Controlled Trial in Latino Immigrant Parents of Infants and Toddlers. *Academic Pediatrics* **12**, 412-419. [CrossRef]
14. Jo Carol Chezem. 2012. Breastfeeding Attitudes Among Couples Planning Exclusive Breastfeeding or Mixed Feeding. *Breastfeeding Medicine* **7**:3, 155-162. [Abstract] [Full Text HTML] [Full Text PDF] [Full Text PDF with Links]
15. Melissa Bartick, Catherine Reyes. 2012. Las Dos Cosas: An Analysis of Attitudes of Latina Women on Non-Exclusive Breastfeeding. *Breastfeeding Medicine* **7**:1, 19-24. [Abstract] [Full Text HTML] [Full Text PDF] [Full Text PDF with Links]
16. Rachelle Lessen. 2012. Breastfeeding 101. *Topics in Clinical Nutrition* **27**, 196-205. [CrossRef]
17. Donna J. Chapman, Rafael Pérez-Escamilla. 2011. Acculturative type is associated with breastfeeding duration among low-income Latinas. *Maternal & Child Nutrition* no-no. [CrossRef]
18. Alison Volpe Holmes, Peggy Auinger, Cindy R. Howard. 2011. Combination Feeding of Breast Milk and Formula: Evidence for Shorter Breast-Feeding Duration from the National Health and Nutrition Examination Survey. *The Journal of Pediatrics* **159**, 186-191. [CrossRef]
19. Nancy F. Krebs. 2011. Infant Feeding Matters. *The Journal of Pediatrics* **159**, 175-176. [CrossRef]
20. L. Barry Seltz, Lorena Zimmer, Luis Ochoa-Nunez, Matthew Rustici, Lucinda Bryant, David Fox. 2011. Latino Families' Experiences With Family-Centered Rounds at an Academic Children's Hospital. *Academic Pediatrics* . [CrossRef]
21. Sari Laanterä, Tarja Pölkki, Anna-Maija Pietilä. 2011. A descriptive qualitative review of the barriers relating to breast-feeding counselling. *International Journal of Nursing Practice* **17**:10.1111/ijn.2011.17.issue-1, 72-84. [CrossRef]

22. Jennifer Bañuelos, Luz Vera Beccera, M. Jane Heinig. 2010. Getting to Know Your Baby: Development of a 6-week Countdown Calendar for Participants in WIC Program. *Journal of Nutrition Education and Behavior* **42**, S69-S71. [CrossRef]
23. Ashley Alexander, Donna Dowling, Lydia Furman. 2010. What Do Pregnant Low-Income Women Say About Breastfeeding?. *Breastfeeding Medicine* **5**:1, 17-23. [Abstract] [Full Text HTML] [Full Text PDF] [Full Text PDF with Links]
24. Alison Volpe Holmes, Cynthia R. Howard. 2010. How Do We Support Women and Families in Breastfeeding?. *Academic Pediatrics* **10**, 10-11. [CrossRef]
25. Lisa M. Vaughn, Candace Ireton, Sheela R. Geraghty, Tiffiny Diers, Vanessa Niño, Grace A. Falciglia, Jessica Valenzuela, Christine Mosbaugh. 2010. Sociocultural Influences on the Determinants of Breast-feeding by Latina Mothers in the Cincinnati Area. *Family & Community Health* **33**, 318-328. [CrossRef]
26. Maya Bunik, Patricia Shobe, Mary E. O'Connor, Brenda Beaty, Sharon Langendoerfer, Lori Crane, Allison Kempe. 2010. Are 2 Weeks of Daily Breastfeeding Support Insufficient to Overcome the Influences of Formula?. *Academic Pediatrics* **10**, 21-28. [CrossRef]
27. 2009. Position of the American Dietetic Association: Promoting and Supporting Breastfeeding. *Journal of the American Dietetic Association* **109**, 1926-1942. [CrossRef]
28. Maya Bunik, Nancy F. Krebs, Brenda Beaty, Maureen McClatchey, David L. Olds. 2009. Breastfeeding and WIC Enrollment in the Nurse Family Partnership Program. *Breastfeeding Medicine* **4**:3, 145-149. [Abstract] [Full Text PDF] [Full Text PDF with Links]
29. Donna A. Dowling, Jennifer Shapiro, Christopher J. Burant, Amel Abou Elfettoh. 2009. Factors Influencing Feeding Decisions of Black and White Mothers of Preterm Infants. *Journal of Obstetric, Gynecologic, & Neonatal Nursing* **38**:10.1111/jogn.2009.38.issue-3, 300-309. [CrossRef]
30. Sara L. Gill. 2009. Breastfeeding by Hispanic Women. *Journal of Obstetric, Gynecologic, & Neonatal Nursing* **38**:10.1111/jogn.2009.38.issue-2, 244-252. [CrossRef]
31. S. Pak-Gorstein, A. Haq, E. A. Graham. 2009. Cultural Influences on Infant Feeding Practices. *Pediatrics in Review* **30**, e11-e21. [CrossRef]
32. Jane M. Brotanek, Damon Schroer, Lee Valentyn, Sandy Tomany-Korman, Glenn Flores. 2009. Reasons for Prolonged Bottle-Feeding and Iron Deficiency Among Mexican-American Toddlers: An Ethnographic Study. *Academic Pediatrics* **9**, 17-25. [CrossRef]
33. Gail C. Frank. 2008. Changes in Women, Infants, and Children (WIC) Food Packages: An Opportunity to Address Obesity. *Obesity Management* **4**:6, 333-337. [Citation] [Full Text PDF] [Full Text PDF with Links]