Journal of Health Science & Education
An open access journal
eSciRes
JHSE-1-183
Original Research

# A Latino Family Approach: The Design and Effectiveness of a Community Informed Breastfeeding Curriculum

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## Abstract

**Background:** Research indicates that although initiation to breastfeeding may be high among Latinas, rates of breastfeeding exclusively without supplementing vary and are affected by perceived barriers of lack of support from family and community and sometimes cultural beliefs that have negative connotations for only feeding breast milk. Given the growing Latino population and heterogeneity of cultures, the development of programs for breastfeeding promotion in U.S. Latino communities is imperative. **Aim of the study:** The aim of this article is to describe the community informed development of the "Latino Best Start" breastfeeding curriculum. Results of pre and post-test knowledge and attitudes are provided as well. **Subjects and Methods:** A paired samples t-test was conducted for 262 matched pre and post-test surveys. The survey instrument consisted of 17 items designed to assess knowledge and attitudes about breastfeeding, childrearing, health, Hispanic cultural values, leadership, and advocacy. **Results:** Pre and post-tests show gains in knowledge regarding the benefits of breastfeeding and cultural beliefs of health. Increased knowledge and movement toward positive attitudes about exclusive breastfeeding are reported. **Conclusion:** Results indicate that knowledge and attitudes regarding health behaviors can be positively affected when community input is considered. In communities such as these, where rates of exclusive breastfeeding are low, health education practitioners should first understand cultural beliefs before promoting changes in behavior. Lessons learned regarding community engagement to inform culturally responsive curriculum were discussed.

**Keywords:** Latina mothers; Breastfeeding; Community-based intervention

## Abbreviations:

CFBOs: Community Faith-Based Organizations, LBS: "Latino Best Start" (the community-based curriculum used in the study)

## Introduction

Latinas have the highest rates of breastfeeding initiation and continuation among general population in the United States [1] yet, their rates of exclusive breastfeeding (i.e., giving the infant nothing but breast milk) fall behind the Healthy People 2020 recommendations [2]. In fact, Latinas have one of the highest rates of formula supplementation during the first two years of the child's life [3]. Potential language barriers for those who are foreign-born, a 24% uninsured rate (with even higher among Latinos who are not U.S. citizens) [4], higher than average fertility rates, and younger than average age at childbirth [5] make the development of culturally compatible, community based programs for breastfeeding promotion in U.S. Latino communities imperative.

Li et al. [6] evaluated data from the 2002 National Immunization Survey and found that out of 3,444 children, 71.4% had ever been breastfed and the percentage who continued to breastfeed over the next six months declined resulting in approximately 13.3% being exclusively breastfed at six months. When the researchers examined differences in breastfeeding initiation and duration across demographics they found that older mothers and those with higher socioeconomic status had higher rates of breastfeeding. Rates of exclusive breastfeeding dropped off between three to five months with 14.8% of non-Hispanic White babies, 13.8% of Hispanic babies and 5.4% of non-Hispanic Black infants having been breastfed exclusively. While the Hispanic sub-group is not far behind the non-Hispanic White group, the rate lags behind the Healthy People 2020 goal by over 10% [7]. Research also suggests that initiation and duration of breastfeeding among Latinas varies depending on acculturation. Latinas with higher acculturation levels initiate at lower rates and exclusively breastfeed for shorter times than less acculturated Latinas [3,8]. In a cross cultural comparison [9], breastfeeding was associated with higher socioeconomic status, particularly education, but regardless of socio-demographic features, foreign born Latinas had the highest breastfeeding rate suggesting a focus on cultural factors that promote breastfeeding.

The disparity between high rate of initiation breastfeeding and low rates of enduring, exclusive breastfeeding among Latinas may be attributable to perceived barriers. Barriers such as the need to return to work, lack of

support from family or health providers or cultural beliefs and practices such as breastfeeding exclusively being associated with poverty, or the belief that breast milk will not provide enough nutrition for a healthy baby [10,11]. Research that presents findings from studies of Latina women and breastfeeding promotion efforts suggest that peer counseling that provides education and support is effective in increasing the duration of breastfeeding and delaying of supplementation [4,13,14].

In conclusion, previous literature did not reveal information about community informed and based, culturally relevant programs to promote the knowledge and value of breastfeeding among Latinas. This article addresses that gap in the literature by describing the development of a curriculum informed by community input and delivered by community-based agencies. Latinos are a growing and heterogeneous population. Knowledge of benefits of breastfeeding and rates of breastfeeding exclusively are likely influenced by country of origin beliefs and practices [12].

## Background

This article describes the development of the "Latino Best Start" (LBS) community-based curriculum and outcomes of knowledge learned. The curriculum was designed to increase knowledge and influence attitudes about exclusive breastfeeding and healthy behaviors by empowering mothers, and those who support them in the community, to value health. The curriculum was primarily delivered in Spanish, but materials were available in English if needed.

### The context of the Latino Best Start curriculum

In 2012 Urban Strategies, a firm that provides technical assistance and capacity building strategies to grassroots organizations that serve children and families in need, worked with Center for New Communities to launch the "Latino Best Start Health and Nutrition Initiative" [15]. With funding from the W.K. Kellogg Foundation and in partnership with community faith based organizations (CFBOs) throughout the country, the program was designed to provide tools and resources to support Latino-serving CFBOs' efforts to promote, educate, and support the practice of breastfeeding exclusively in the Latino community [16].

The Latino Best Start curriculum was largely influenced based on feedback from 27 focus groups conducted by Urban Strategies. Latino mothers/fathers/families, Latino businesspeople, and health and service providers among Latino communities were invited to participate in focus groups by the local CFBOs. An Urban Strategies employee facilitated all focus groups in English and Spanish as needed. Findings from the focus groups revealed that members of the Latino community felt that family is strength of the culture but health is not valued highly. Health care providers perceived themselves as providing culturally sensitive care but lacked understanding of culture in depth. Most mothers in the focus groups did breastfeed and understood the benefits of breastfeeding. Mothers experienced barriers such as racism in healthcare settings, lack of health care provider support, lack of employer support for on-site breastfeeding or pumping, and fear of public shaming. Another barrier to sustained breastfeeding raised in the focus groups was the perceived pressure to acculturate to U.S. norms. Findings also suggest that breastfeeding promotion programs for Latinos must include focus on family support, culture and health leadership as a means of self-advocacy [17].

Given findings of the focus groups, the Urban Strategies team developed a curriculum to help Latino populations served at the CFBOs overcome the barriers described. With modules on leadership and advocacy for health that were connected to traditional cultural values, the curriculum was designed to empower Latino families to provide the community support that many found lacking in medical and community settings [18].

The primary aims of the LBS curriculum were to increase positive attitudes and knowledge on health benefits of exclusive breastfeeding and to develop community leaders who could support breastfeeding practices and values related to health and well-being among Latinas. As stated in the introduction of the facilitator's guide of the LBS:

Rather than focusing solely on changing health behaviors, this curriculum begins with the idea that values drive all of our decisions, including the way we eat and take care of our physical and mental health. It also returns to the belief that everyone can be a leader because there is a leader inside each one of us….Our new leaders will have the information and skills necessary to help prevent obesity and diabetes in their communities by sharing the fundamentals of exclusive breastfeeding, health eating and physical activity [17, p. 5].

Urban Strategies used feedback from the focus groups, expertise in Latino culture and health, concepts from the cultural dimensions theory [19], and leadership models to design the LBS curriculum. The curriculum was informed by the Health Belief Model [20] and gives much attention to beliefs and attitudes that will, in theory, affect intention to adapt breastfeeding behaviors. Interwoven throughout the curriculum was attentiveness to value-based decisions. Efforts were made to increase the participant's awareness of their own values regarding family health and well-being. Attention to values is essential in program planning for Latino communities according to Delgado who states, "Latino cultural values form the heart and soul of interventions embracing cultural assets." [21,p.143]. Delgado [21] also makes the point that culture is dynamic and target audiences (for community programs) must be asked about their own cultural values to decrease overgeneralizing and stereotyping.

## Aim of the study

This article reports the findings of the LBS program evaluation. It is a secondary analysis of the changes in attitudes and knowledge among some of LBS program participants. The article aims to add to the knowledge of CBFO interventions focusing on knowledge and attitudes that may affect intentions to breastfeed in Latino/a communities.

## Subjects and Methods

As part of the program evaluation, the CBFOs involved staff sat with LBS program participants and asked them to complete pen-and-paper pretest and posttest surveys designed to assess their history, knowledge, and attitudes regarding breastfeeding, child rearing, leadership, advocacy and cultural values and health. Both pre- and post- tests' data were collected throughout the year of 2015. Eight community sites participated in data collection, including two sites in Phoenix, Arizona; one site in Puerto Rico; one site in San Antonio, one site in Waukegan, IL, one site in Homestead, FL, one site in Columbia, SC, and one site in Los Angeles. The dataset included a total of 877 the Latino Best Start participants. The University of Houston Institutional Review Board approved a secondary analysis of the de-identified data.

### Sample

Eligibility criteria for this secondary analysis included participation in at least one lesson of the LBS and having matched pre- and post-test surveys. Participants in LBS curriculum included Latina mothers, partners, family members and community members associated with Latina mothers of young children. Because of the emphasis on community support in the LBS curriculum, employers of Latina mothers and service providers (e.g., social service or health-oriented provider) were asked to participate in the curriculum as well. The CBFOs who administered the surveys reported challenges in survey administration and collection of completed pre- and post-tests with identifying information. As a result, of the 877 people who completed surveys, complete and matching pretests and posttests were available from only 262 participants, which comprised our sample for this analysis. Of these 262 participants, 94% completed the pretest/posttest interviews in Spanish, 34.6% were mothers or their partners/family members, 9.4% were Latino employers in the community and 56.4% were "health or service providers." Health providers were community health providers who often worked with the CFBO sites and received the LBS curriculum such as obstetrician/gynecologists and nurses. Service providers were people such as case workers, family service workers and community health workers.

### Curriculum

The five-module curriculum (Table 1) was written in English and Spanish and designed to be easily delivered by the community partner agencies to groups of Latina mothers and people they consider family. Each module was participatory and interactive. Modules were taught in conversational tone with many visual aids, case vignettes, handouts and sometimes homework. A critical message that was strongly conveyed by the focus groups is that because of the collective nature of Latino communities, behaviors are most influenced by members of their own community. Therefore, the leadership module teaches participants how to lead through influencing one's community.

| Module | Concepts taught in the module | Based on Focus group Input | Example from curriculum |
|---|---|---|---|
| Module 1: Part 1: Values | Health and wellness are values to live by and growing healthy families should be a value | Health decisions are influenced by individually and community values. | Facilitator led in a discussion of how values guide our decisions and affect behaviors. Vignettes of parents making food and health behavior choices are given and audience is asked to identify the values being expressed. |
| Module 1: Part 2: Health and Wellness | Increase knowledge of benefits of breastfeeding | More education on how breastmilk is superior to formula is needed | Education is provided on importance of "first food" provided to infants. Benefits of breast milk are presented, and audience is encouraged to share what they have heard about breastfeeding in their communities. Exclusive breastfeeding is promoted as best choice for first 6 months of life. |
| Module 2: Leadership | Leadership with attention to values of collectivistic community vs. individualistic. | Participants conveyed they are most influenced by their own families and close community members | An open-ended conversation about what leadership means to the participants is facilitated. This definition of leadership is provided by facilitator: "leadership is a process of social influence, which maximizes the efforts of others, toward the achievement of a goal" [26]. |
| Module 3: Advocacy | Individuals must learn to advocate for their best health and health of family | Mothers face barriers such as racism, discrimination, language barriers and cultural differences with health providers. | The concept of advocacy is introduced. Facilitator does an experiential group activity with rocks and pebbles to demonstrate shared responsibility that can result in better outcomes. A guided discussion of observed leadership and advocacy in people's communities is conducted. |
| Module 4: Making | Creating change is | Cultural beliefs that | A common 'dicho' is 'preguntando se llegue a |

| | | | |
|---|---|---|---|
| Things Happen | hard and takes persistence and usually, help from others. | you should not ask for help exist. | Roma': Asking questions will get you to Rome. Facilitator led a discussion on what does that mean to the participants?<br>A case vignette of a new mothers who is excited to breastfeed but the infant has trouble latching on. The mother eventually seeking help at a WIC center and having success with breastfeeding. Facilitator led a discussion on how to ask for help. |
| Module 5 Part 1 &2: Developing a Plan | | | Case vignettes and experiential activities are used to demonstrate the importance of having a plan to reach family goals. Participants are asked to share their family or personal values and then led through activities to document with words and art projects what solutions they can take to reach goals. For example, if the value is "breastfeeding is best" the participant is asked to brainstorm ways she/he can take community leadership to promote breastfeeding in their own communities. |

**Table 1:** Modules of the "Latino Best Start" curriculum.

In addition to creating the five-module curriculum, Urban Strategies created a 47-page facilitator guide with carefully scripted cues and prompts [17]. Employees from Urban Strategies trained administrators from all of the six affiliated CBFOs to administer the curriculum. In turn, the administrators trained their staff (nurse practitioners, community health workers, volunteer church outreach) to deliver the curriculum in a group setting to Latinas, their family members, community members and health providers who support mothers. By presenting the curriculum to a broad group of community members, the program sought to build capacity at the six sites to support Latina mothers in their efforts to make healthy choices for their children within Latino communities. The LBS campaign's long-term goals of increased exclusive breastfeeding in these communities were undertaken by first empowering the communities to advocate for their health and support mothers healthy feeding practices.

The LBS campaign and resulting curriculum is an example of a program that was developed and administered in a culturally sensitive manner to address concerns articulated by community members.

### Measures

The pretest/posttest survey instrument consisted of 17 items designed to assess knowledge and attitudes about breastfeeding, childrearing, health, Hispanic cultural values, leadership, and advocacy. Each item was a statement that could be answered true or false. Correct or desired responses were those that indicated accurate knowledge or attitudes that were supportive of healthy behaviors. For example, an item on the pretest/posttest was "Breastfeeding is connected with a lower risk of many health problems for babies, including ear infections, stomach viruses, respiratory infections, asthma, obesity, type 1 and type 2 Diabetes, and childhood leukemia." The number of correct responses were totalled to give a mean score for each pretest and posttest.

### Statistical analysis

The hypothesis of this study was that participants will increase learning as evidenced by scores on the posttest would be higher than on the pretest. To test this hypothesis, data were analyzed to ensure no violation of assumptions and a paired samples t-test was conducted. SPSS 24.0 [20] was used to conduct the analysis.

## Results

The means of correct answers for the 17 items were combined to get a total mean for pretest and posttest scores (Table 2). The pretest score mean for correct answers was 14.157 (SD=2.6). The mean posttest score for correct answers was 14.947 (SD=1.9). This increase in scores was statistically significant, t (261) = -5.637, p = <0.001.

| | **Pretest** | | **Posttest** | | | **95% CI for Mean Difference** | | | |
|---|---|---|---|---|---|---|---|---|---|
| Outcome | M | SD | M | SD | n | | r | t | df |
| | 14.157 | 2.596 | 14.947 | 1.852 | 262 | -1.066, -0.514 | .522* | -5.637* | 261 |

*p<0.001

**Table 2:** Results of t-test and Descriptive Statistics for scores of knowledge and attitudes n=262.

## Discussion

These results indicate that participants in the LBS program improved their knowledge and attitudes about breastfeeding, childrearing, health, Hispanic cultural values, leadership, and advocacy over the course of the program. It is interesting to note that mothers' attitudes changed and so did the participants who were providers to mothers. The overarching goal of LBS was to empower communities to support breastfeeding practices and it appears that providers who participated in the program will be supportive. The results hold promise for the development and implementation of culturally sensitive programming through CBFOs. For example, traditional Latino values on the power of faith may contribute to feeling that one does not have control over their own health [22]. The LBS curriculum acknowledged this value and relied on empowering participants to advocate for their own health and overcome barriers. The Familias Sanas study also utilized the approach of training members from the community to educate and empower Latinos to take ownership of their health and had measured success [23].

Health promotion that supports Latinas breastfeeding exclusively is warranted given the Healthy People 2020 goal [2]. Given the tendency for more acculturated Latinas to breastfeed for shorter amounts of time than less acculturated Latinas [9], cultural fit [24] is likely a key ingredient to successful recruitment, retention, and effectiveness for breastfeeding promotion among Latino populations. ¬Successful efforts in community informed health curriculum for Latinos have been reported [25,26]. Community-led education about breastfeeding is a practical option for Latinas of various acculturation levels and nativities.

## Limitations

The process of evaluating the program was our biggest limitation. Large amounts of missing data due inaccurately labeled pre- and post-tests from the six sites restricted the ability to match the tests for analysis. As a result, we analyzed data from only 262 of the total participants in the LBS program. This limitation highlights the need for CBFO-based studies to give much forethought and planning to recruitment, retention and quality data collection to ensure meaningful data analysis. Continuous input from the research institution and the community workers who deliver curriculum is needed to create an environment of culturally grounded rigorous and systematic research. As Castro, Barrera, and Martinez recommended, researchers interested in effective interventions "must educate community leaders, gatekeepers and stakeholders on the importance of rigorous scientific research as conducted within minority communities" [24, p. 45].

The study used a one-group pretest-posttest design. Without a control or comparison group, we cannot rule out alternate explanations for the increase in the test scores. A final limitation is that behavioral changes (e.g., the practice of breastfeeding exclusively) were not measured as outcomes for the program evaluation. Knowledge and attitudes are only moderately correlated with behavior [27]. In spite of these limitations, the study still adds value to literature by the demonstrating the possibility of creating a community informed curriculum that attends to cultural beliefs, provides community support, and is associated with increases in knowledge and attitude change.

## Conclusion

The innovation of the LBS curriculum lies in its culturally informed and community based development and delivery. Lessons learned from the LBS process may benefit other Latino serving CFBOs. Flexibility in the project was critical so that each organization could deliver the curriculum in the setting that works best for their community. The data limitations encountered in this secondary data analysis are typical of community based research where data collection and rigor is dependent on agency workers who are not trained in research methods. However, challenges such as these should not stop researchers from forming partnerships with agencies who have garnered trust in the community and are invested in improving client well-being. We must strive to find balance between rigorous data collection and analysis and community grounded research that can directly affect services for vulnerable populations. Future goals for this research team include a more rigorous data collection and evaluation with larger dissemination to build evidence for the effectiveness of the program.

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**Received date:** March 10, 2020; **Accepted date:** April 21, 2020; **Published date:** April 24, 2020

**Citation:** Sampson M, Derige DN, Al Rawwad TA, Gonzalez LG, Hojvat-Gallin N, Torres LR (2020) A Latino Family Approach: The Design and Effectiveness of a Community Informed Breastfeeding Curriculum. *J Health Sci Educ* 4(2): 183.

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