

Breastfeeding Self-Efficacy and Level of Acculturation among Low-Income Pregnant Latinas

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Abstract: *Objective:* The objective of the study was to determine whether less acculturated, compared to more acculturated, low-income pregnant Latinas, report higher levels of breastfeeding self-efficacy. Data on level of acculturation and breastfeeding self-efficacy were collected from 253 pregnant low-income Latinas.

Methods: This study was cross-sectional.

Results: This study found that less acculturated, compared to more acculturated, low-income pregnant Latinas had significantly higher breastfeeding self-efficacy.

Conclusions: Evidence suggests that breastfeeding self-efficacy is one of the strongest modifiable factors linked to high breastfeeding rates. Moreover, prenatal interventions designed to increase breastfeeding self-efficacy have effectively done so. Taken together it appears that one strategy practitioners and researcher may consider to increase breastfeeding rates among more acculturated low-income Latinas is to design a culturally appropriate prenatal breastfeeding intervention aimed at improving breastfeeding self-efficacy.

Keywords: Breastfeeding, Acculturation, Self-Efficacy, Latinas.

INTRODUCTION

Breastfeeding is linked to a substantial number of positive health outcomes for both the breastfeeding mother and the breastfed infant [1-4]. Despite the many benefits associated with breastfeeding, the majority of U.S. woman do not meet current breastfeeding recommendations of six months exclusive breastfeeding and continued breastfeeding for the first year of life [5]. Although Latinas' breastfeeding rates are comparable to Whites, significant disparities exist between the breastfeeding rates of more acculturated Latinas and less acculturated Latinas [6]. Acculturation is the process in which immigrants coming into contact with a new county or culture experience a change in behavior and values [7-10]). In particular, low-income more acculturated Latinas have low breastfeeding rates [11-13]. It appears that low levels of acculturation protect Latinas from choosing to formula feed [13]. Indeed, less acculturated, compared to more acculturated Latinas, have higher breastfeeding initiation rates [6]. Furthermore, less acculturated Latinas have longer durations of exclusive and any breastfeeding rates when compared to more acculturated Latina [11,12]. For example, research finding suggest that more acculturated Latinas, compared to less acculturated Latinas, were 2.4 times more likely to discontinue breastfeeding and 1.5 times more likely to discontinue exclusively breastfeeding

[12]. Moreover, more acculturated Latinas, compared to less acculturated Latinas, are 33% less likely to breastfeed [14].

Given particularly low breastfeeding rates among more acculturated low-income Latinas, practitioners developing breastfeeding intervention programs targeting more at risk more acculturated low-income Latinas would benefit from identifying modifiable factors that may explain these existing disparities. Prior research has identified a positive association between several modifiable factors and breastfeeding initiation and duration rates including: breastfeeding self-efficacy, perceived social support for breastfeeding and breastfeeding intentions [15-20]

Substantial evidence indicates that breastfeeding self-efficacy is one of the strongest modifiable factors linked with breastfeeding initiation and duration rates [15,21,22]. Research has also found that breastfeeding self-efficacy is a modifiable factor linked with exclusive breastfeeding among Latinas [23]. Self-efficacy is a construct of Bandura's social cognitive theory. Self-efficacy is one's perception of their ability to perform a behavior such as breastfeeding. It requires both the confidence in one's ability to perform the skills required of that specific behavior as well as the confidence to overcome the potential barriers to performing the particular behavior [24]. Research suggests that even when controlling for non-modifiable factors that have been linked to breastfeeding, including: maternal age, marital status, education and ethnicity, breastfeeding self-efficacy predicts breastfeeding initiation and

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duration rates [25]. Researchers also suggest that assessing a pregnant women's level of breastfeeding self-efficacy can be utilized as a way to identify women at high risk for not breastfeeding or early cessation of breastfeeding [21,26]. Furthermore, several breastfeeding interventions have been effective at improving breastfeeding rates by focusing exclusively on enhancing breastfeeding self-efficacy [27, 28].

OBJECTIVE

Limited research exists on modifiable factors, that may explain some of the disparities in breastfeeding rates of more acculturated and less acculturated low-income Latinas [29,30]. The objective of this study was to determine whether less acculturated low-income pregnant Latinas, compared to more acculturated low-income pregnant Latinas, report higher levels of breastfeeding self-efficacy. Such findings can help guide the development of breastfeeding interventions that are effective at increasing breastfeeding rates among more acculturated low-income Latinas.

METHODS

Procedures

This study was approved by the Northeast Valley Health Corporation Research Committee, Providence Holy Cross Medical Center Institutional Review Board and California State University, Northridge Institutional Review Board, Data utilized in this study is baseline data that was collected for a study which was previously published [31]. Two-hundred and eighty-nine pregnant low-income Latina mothers were recruited by case managers working at five community health clinics serving a large population of low-income Latinas in Los Angeles County. These five community health clinics are a part of the Northeast Valley Health Corporation (NEVHC) which operates 13 community clinics in the Los Angeles area and 15 Women Infant and Children (WIC) Supplemental Nutrition Programmes. The study inclusion criteria included: (a) 26 -34 weeks pregnant; (b) Medicaid recipient; (c) self-identified Latina; (d) available via telephone; and (e) not assigned to a WIC peer counsellor [31].

Research assistants utilized phone surveys to collect data from the participants during their third trimester of pregnancy. Data collected included: sociodemographic variables, level of acculturation, and breastfeeding self-efficacy.

Measures

Acculturation

In this study acculturation was measured using the shortened four-item version of the Short Acculturation Scale for Hispanics. The SASH was developed by Marin, *et al.* [10] and the four item version was validated by Hamilton *et al.* [32] This scale enables investigators to differentiate between Hispanics that are less or more acculturated. The SASH uses a 5-point bipolar scale where 1 was "Only Spanish" and 5 was "Only English", with a midpoint (3) of "Both equally".

Breastfeeding Self-Efficacy

In this study breastfeeding self-efficacy was measured using the Breastfeeding Self-Efficacy Scale-Short Form (BSES-SF) developed by Dennis [26]. This scale includes 14-items focused on determining a women's level of confidence with respect to breastfeeding. To better assess pregnant participants' attitude about their confidence with respect to breastfeeding in the future, the stem of each item on this scale was slightly modified from "I can always" to "I will always be able to" The BSES-SF scale used a 5 point Likert scale from 1 not at all confident to 5 very confident. Lower scores indicate low breastfeeding self-efficacy whereas higher scores indicate high breastfeeding self-efficacy. Breastfeeding self-efficacy (BSE) reflects the sum of 14 items scored on a scale of 1 – 5 with 1 being "Disagree a lot" to the statement and 5 being "Agree a lot" for a total score range of 14-70.

Data Analysis

Participant acculturation scores were computed as recommended by Hamilton *et al.* [32] Acculturation was divided into less acculturated (mean score <3.0) and more acculturated (mean score 3+). Breastfeeding self-efficacy (BSE) reflects the sum of 14 items scored on a scale of 1 – 5 with 1 being "Disagree a lot" to the statement and 5 being "Agree a lot" for a total score range of 14-70.

Comparison of participant characteristics were made using t-test or Mann-Whitney U for continuous variables, and χ^2 test for categorical variables. Due to small cell sizes education was dichotomized at having graduated high school and vocational training was dichotomized to having any training for group comparisons. BSE and intent to breastfeed were compared between groups using linear regression models. Due to left skew in the data, a cubed transformation was applied to the outcome for

modeling. First a model examining the difference in outcomes with the factor of acculturation (low vs high) was applied. Then, to explore possible factors that may influence the effect, a stepwise regression model was performed including participant characteristics known to be influential: age, marital status, education and vocational training, number of other children and prior breastfeeding experience. Variables were included if $p < .10$. in order to make sure there was sufficient power to detect differences. Analyses were performed using SPSS (v.24).

RESULTS

Table 1 reports the characteristics of the women in the sample by acculturation. There was data available for 253 women at baseline; 70% (N = 177) were categorized as less acculturated and 30% (N = 76) were categorized as more acculturated. Women who were more acculturated were younger, less likely to be married, reported more education and vocational training, had fewer children and were less likely to have breastfed prior (all p's, < 0.01).

Table 1: Sample Characteristics

		Less Acculturated (N = 177)		More Acculturated (N = 76)		Total	
		N	M \pm SD	N	M	N	M
Age		177	29.3 \pm 5.3	76	22.7 \pm 5.0	253	27.3 \pm 6.0
Acculturation score		177	1.24 \pm 0.44	76	4.06 \pm 0.69	253	2.09 \pm 1.39
		N	%	N	%	N	%
Marital Status	Single	56	31.60%	51	67.10%	107	42.30%
	Married	116	65.50%	24	31.60%	140	55.30%
	Divorced	3	1.70%	0	0.00%	3	1.20%
	Separated	2	1.10%	1	1.30%	3	1.20%
	Widowed	0	0.00%	0	0.00%	0	0.00%
Education	No formal education	0	0.00%	0	0.00%	0	0.00%
	Some grade school	13	7.30%	0	0.00%	13	5.10%
	Completed grade school	52	29.40%	0	0.00%	52	20.60%
	Some HS	42	23.70%	18	23.70%	60	23.70%
	Completed HS	55	31.10%	30	39.50%	85	33.60%
	Some college	6	3.40%	17	22.40%	23	9.10%
	Completed College	9	5.10%	9	11.80%	18	7.10%
	Some graduate school	0	0.00%	1	1.30%	1	0.40%
Vocational Training	No	136	93.80%	38	74.50%	174	88.80%
	Yes	8	5.50%	12	23.50%	20	10.20%
	Some	1	0.70%	1	2.00%	2	1.00%
Number of other children	0	1	0.70%	2	6.10%	3	1.70%
	1	61	42.70%	23	69.70%	84	47.70%
	2	56	39.20%	4	12.10%	60	34.10%
	3	17	11.90%	2	6.10%	19	10.80%
	4	7	4.90%	1	3.00%	8	4.50%
	5	0	0.00%	1	3.00%	1	0.60%
	6	1	0.70%	0	0.00%	1	0.60%
Breastfed prior	No	21	13.50%	13	31.00%	34	17.20%
	Yes	135	86.50%	29	69.00%	164	82.80%

Breastfeeding Self-Efficacy

Breastfeeding self-efficacy ranged from 28-70. Less acculturated women had average total scores of 63.9 (95% CI 62.8, 65.1), which were significantly higher than more acculturated women ($M = 60.1$, 95% CI 58.3, 62.0; $p < 0.001$). When potential covariates were added in the exploratory model, none had $p < 0.10$ and thus were excluded from the model. Collinearity statistics showed all but age were extremely collinear (≥ 0.89) with the acculturation score; age was also quite high (0.77).

DISCUSSION

It was expected that less acculturated low-income pregnant Latinas would have greater levels of breastfeeding self-efficacy when compared to more acculturated low-income pregnant Latinas. This did occur. As far as the author knows, this is the first study to find that less acculturated low-income pregnant Latinas, compared to more acculturated low-income pregnant Latinas, report significantly higher breastfeeding self-efficacy.

The findings from this study suggests that to address the problem of lower breastfeeding rates among low-income more acculturated Latinas practitioners need to design interventions that enhance the breastfeeding self-efficacy of more acculturated low-income Latinas. By doing so, practitioners may improve the breastfeeding rates of more acculturated low-income Latinas.

Self-efficacy can be improved by: 1) performance accomplishments; 2) vicarious experiences; 3) encouragement; and d) physiological responses to the behavior [24]. According to Noel Weiss, Basset, Cragg (2006) [33], factors that can enhance breastfeeding self-efficacy include: sustaining prior successful breastfeeding experience; seeing other women who are similar to you successfully breastfeeding; receiving encouragement from others to breastfeed; and associating breastfeeding with positive emotions that result in positive physiological responses, such as feeling calm or relaxed.

Accordingly, a less acculturated low-income Latina, who grew up in a country where breastfeeding is the norm, is more likely to have seen other women breastfeed successfully, received encouragement from their peers and family to breastfeed; and viewed breastfeeding as something positive. On the other

hand, a low-income Latina, who is more acculturated to the United States culture where formula feeding is the norm, is more like to have the opposite experience and subsequently have lower breastfeeding self-efficacy.

Some limitation of this study include that this study was conducted among Latinas living in Los Angeles County and may not be generalizable to all Latinas in the U.S. Also, the researchers did not ask participants to report their country of origin and therefore results are not applicable to any particular subgroup of Latinas.

CONCLUSIONS

This study fills the gap in the literature with respect to the link between breastfeeding self-efficacy and acculturation among low-income Latinas. There is strong evidence that demonstrates that less acculturated Latinas breastfeeding rates are significantly higher than more acculturated Latinas. There is also strong evidence of a positive association between breastfeeding self-efficacy and longer exclusive and any breastfeeding duration rates. This study found that less acculturated pregnant low-income Latinas, compared more acculturated pregnant low-income Latinas had significantly higher levels of breastfeeding self-efficacy.

Since breastfeeding is linked with tremendous benefits to the infant and breastfeeding mother and since more acculturated low-income Latinas have particularly low breastfeeding rates, it is especially important to develop effective breastfeeding interventions targeting this at risk population.

Evidence suggests that breastfeeding self-efficacy is one of the strongest modifiable factors linked with high breastfeeding rates. Moreover, prenatal interventions designed to increase breastfeeding self-efficacy have been found to effectively do so. Taken together, it appears that one strategy practitioners and researcher may consider to increase breastfeeding rates among more acculturated low-income Latinas is to design a culturally appropriate prenatal breastfeeding intervention aimed at improving breastfeeding self-efficacy.

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