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**Factors Related to Depression Among
Latina Immigrant Mothers**

by

Dawn Browder, Kimberly Greder
and Sedahlia Jasper Crase

**Research Report No. 50
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Julian Samora Research Institute

Michigan State University
219 S. Harrison Rd., Room 93
East Lansing, MI 48824-4586

Phone: (517) 432-1317

Fax: (517) 432-2221

E-mail: jsamorai@msu.edu

Web: jsri.msu.edu

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Abstract

As the Latino population across the United States has rapidly grown, so has the prevalence of poverty and food insecurity, both of which compromise mental health. This study interviewed 103 Latina immigrant mothers living in rural communities in four states annually over three years to identify individual and family level factors that influenced maternal depression. Findings revealed that mothers who consistently had low depression scores had a higher participation rate in the National School Lunch Program and were more food secure than mothers who consistently had high depression scores. Mothers who consistently had low depression scores more commonly reported supportive relationships with their spouses or partners and families of origin, less financial stress, and performed fewer roles than mothers who consistently had high depression scores. Implications related to screening for depressive symptoms, strengthening strained Latino immigrant couple relationships, and implementing policies to ensure livable wages and access to health care are identified in this paper.

About the Authors

Dawn Browden, Ph.D. is an assistant professor of Early Childhood Education and Family and Consumer Sciences at Eastern New Mexico University. Her research and teaching focuses on early childhood educational environments, family relations, and parenting education.

Kimberly Greder, Ph.D., CFLE* is an assistant professor of Family and Consumer Sciences and Early Childhood Education at Eastern New Mexico University. Her research and teaching focuses on parent/child and family relations and parenting education.

Sedahlia Jasper Crase, Ph.D., CFLE, University Professor Emeritus, served as a professor of Human Development and Family Studies at Iowa State University and conducted research and teaching related to parenting and family relations.

*Corresponding author

East Lansing, Michigan



Julian Samora Research Institute
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Dennis Hampton Jr., Layout Designer

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Factors Related to Depression Among Latina Immigrant Mothers

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Factors Related to Depression Among Latina Immigrant Mothers

BACKGROUND

Latinos comprise 16.3 percent (50.5 million) of the total U.S. population, and account for more than half of the total growth of the U.S. population in the last decade (Humes, Jones, and Ramirez, 2011), and halting, and in some cases reversing, the gradual population decline in pockets of rural America (Kandel and Cromatie, 2004). However, as the Latino population has grown, so have their rates of poverty (21.5% in 2000; 26.6% in 2010) (DeNavas-Walt C, Proctor BD, and Smith, 2011) and food insecurity (21.8% in 2000; 26.2% in 2010) (Nord, Andrews and Carlson, 2011; Coleman-Jensen, Nord and Carlson, 2010), both of which compromise mental health (Slopen, Fitzmaurice, Williams, and Gilman, 2010). Despite these statistics, little attention has been focused on the mental health of Latinos, including the prevalence of depression.

Over one third (38%) of Latinas in the U.S. experience depressive symptoms (Huang, Wong, Ronzio, and Yu, 2007). However, for Latino immigrants who develop depression, the sources of depression and the barriers to care are complex as they commonly face unique challenges (e.g., discrimination, isolation, learning a new language, lack of health insurance, low educational attainment) that put them at risk for depression (Cutrona, Wallace, and Wesner, 2006; Hall and Farkas, 2008; Lazear, Pires, Isaacs, Chaulk, and Huang, 2008). Few Latinos access mental health services (Lazear, et al., 2008), and when they do, it is typically as a second or last resort (Martínez and Guarnaccia, 2007; Bermudez, Kirkpatrick, Hecker, and Torres-Robles, 2010; Cabassa and Zayas, 2007) they most often turn to family members or informal sources (e.g., clergy, cultural healer).

Familism, a social pattern in which there is a strong orientation towards the family, including holding values that emphasize support, interdependence and obligations (Garcia-Preto, 1996; Rivera, 2007; Riffe, Turner, and Rojas-Guyler, 2008) has been identified as an important buffer for positive mental health (Pabon, 1998; Rodríguez, Mira, Paez, and Myers, 2007). However, for recent Latino immigrants, support from extended family is often jeopardized as they typically enter the U.S. without their immediate or extended family members (Elder, Broyles, Brennan, Zúñiga, and

Nader, 2007; Riffe, et al., 2008).

Using a concurrent triangulation mixed methods design (Creswell and Zhang, 2009; Creswell and Plano, 2007), this study examined the prevalence of and factors related to depressive symptomology among Latina immigrant mothers in rural communities in four states. Information gained from this study can inform efforts to prevent and address depression among rural Latina immigrant mothers.

CONCEPTUAL FRAMEWORK

Ecological theory was applied to this study to identify individual and family level factors (Bronfenbrenner and Morris, 1998) that influenced depressive symptomology among Latina immigrant mothers. These factors are reciprocal and interrelated, thus, elements at each level influence each other. For example, characteristics of family members (e.g., mother's, Center for Epidemiologic Studies Depression Scale (CES-D) score) and the family as a unit (e.g., food security) affect family functioning.

A key focus of this study was to identify commonalities and differences between rural low income Latina immigrant mothers who experience consistently low levels of depressive symptoms and mothers who experience consistently high levels of depressive symptoms over a three year period.

METHODS

Study Design and Participants

This study drew its sample (N=103) from the multi-state research project, Rural Families Speak (RFS) (Bauer and Katras, 2007). Purposive sampling (Patton, 1990) was used to identify Latina immigrant mothers who were age 18 or older, had at least one child age 12 or younger, resided in a household with an annual income at or below 200% of the federal poverty line, and who lived in selected rural communities in four states (CA, MI, OR, IA). The study was approved by the associated universities' Institutional Review Boards. Bilingual, bicultural women were hired and trained to interview mothers annually over a three year period (2004-2007).

Through annual two-hour semi-structured in-home interviews, mothers were asked a series of questions focused on their health and economic well-being, as well as the health and well-being of their children and partners/spouses. Mothers were asked to expand on supports and barriers they experienced and how these supports and barriers influenced their daily functioning.

Measures

The CES-D, a 20-item, 4-point Likert scale self-report measure that has sound psychometric properties when used with Latino immigrant populations (Radloff, 1977), was used to assess depressive symptoms. Scores for the measure can range from 0 to 60 and a cut point of 16 has been suggested as an indicator of high depressive symptomology (Grzywacz, Hovey, Seligman, Arcury, and Quandt, 2006). Food insecurity, defined as limited or uncertain availability of nutritionally adequate and safe foods or limited or uncertain ability to acquire acceptable foods in socially acceptable ways (Anderson, 1990), was measured using the 18-item U.S. Household Core Food Security Module (Bickel, Nord, Price, Hamilton, and Cook, 2000). A household's food security score (range of 0-10) was based on the number of affirmative responses (Bickel, et al., 2000). Examples of socio-demographic variables included in the study were whether a mother was interviewed in English or Spanish, mothers' educational level, number of roles mothers performed (e.g., student, employee), and monthly household income.

Analysis

Concurrent triangulation (Creswell and Zhang, 2009; Creswell and Plano, 2007), a process in which concurrent, but separate quantitative and qualitative data are collected and analyzed, was used in this study. The separate results of each data set were brought together

into one overall interpretation.

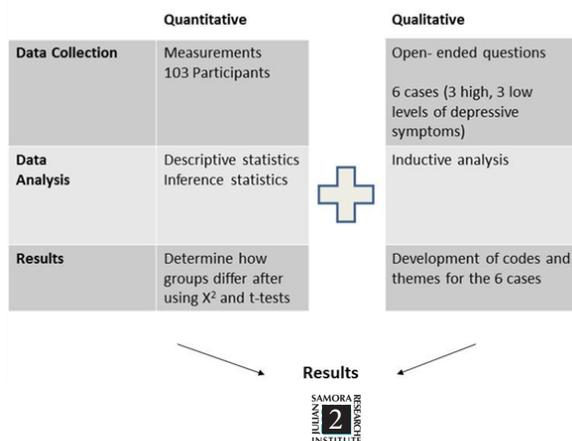
Descriptive statistics described mothers' demographic characteristics. Chi-square and difference of mean tests (t-tests) (inference statistics) were used to test for associations between socio-demographic variables and mothers' CES-D scores.

Transcripts from three mothers who consistently had the lowest CES-D scores and from three mothers who consistently had the highest CES-D scores over the three year study period were analyzed to identify commonalities and differences. Transcripts were read multiple times to identify constructs and emerging themes using the process of constant comparative analysis (Glaser and Strauss, 1967). Constructs were assigned a descriptive label (also known as a "code") and memos detailing the meaning of the code were recorded. Coding continued until no new codes were identified. Codes were compared and contrasted to form categories and subcategories (Strauss and Corbin, 1998) based on their common properties. Analytical notes regarding comparing and contrasting the categories were reviewed to identify overarching themes. An audit trail was recorded in a journal to ensure codes and categories remained clear and consistent with what mothers in each group reported.

RESULTS

At the start of the study, mothers (N=103) ranged in age from 18 to 48 years (M=31.5). Between 2 and 11 (M=5.6) people living in each household, and 1 to 7 (M=2.8) of the people were children. The majority of the mothers were married or cohabitated with a male partner (N=91; 88%). Less than half (N=41; 40%) of the mothers had earned a high school diploma or a G.E.D. The average household monthly gross income was \$1,794.

Figure 1. Concurrent Triangulation Mixed Methods Design



				CES-D Score		
				Low (score <16) (N = 56)	High (score ≥16) (N = 47)	
Variable					<i>M</i> (SD)	
Mothers' age					31.29 (6.22)	31.80 (6.51)
Number of children in household					3.12 (1.51)	2.42 (1.19)
Total number of family members in household					5.93 (1.78)	5.23 (1.87)
Monthly household income					\$1764.35 (642.20)	\$1828.7 (839.30)
				N (%)		
Mothers' marital status						
	Single			6 (10.7%)	6 (12.8%)	
	Married/Cohabiting			50 (89.3%)	41 (87.2%)	
Language interview conducted						
	English			22 (39.3%)	21 (44.7%)	
	Spanish			34 (60.7%)	26 (55.3%)	
Mothers' educational level						
	Less than high school diploma or G.E.D.			34 (60.7%)	26 (55.3%)	
	High school diploma or higher			21 (37.5%)	20 (42.6%)	
Roles mothers performed						
	Parent			56 (100%)	47 (100%)	
	Employee			28 (50%)	24 (51.1)	
	Student			1 (1.8%)	4 (8.5%)	
Note: Data collected during year 1 baseline interviews						

Frequencies of study variables, as well as chi-square and difference of means tests in relation to mothers' (N=103) CES-D scores are displayed in Table 2 below. Chi-square analysis revealed the means of the food security scores and participation in the National School Lunch Program (NSLP) of mothers who had low CES-D scores differed significantly from the means of mothers who had high CES-D scores, thus, suggesting that these variables may not be independent from mothers' CES-D scores. There was not a statistically significant difference based on mothers' participation in WIC (Supplemental Nutrition Program for Women, Infants and Children) or SNAP (Supplemental Nutrition Assistance Program).

Table 2. Descriptive statistics: frequencies, chi square and difference of means tests of mothers by low and high CES-D score (N=103)

Variable	CES-D Score		Chi Square
	Low (score <16) (N=56)	High (score ≥16) (N=47)	
	<i>M (SD)</i>		
CES-D score	7.88 (3.97)	23.10 (7.17)	103**
Mothers' age	31.29 (6.22)	31.80 (6.51)	25.841
Number of children in household	3.12 (1.51)	2.42 (1.19)	11.903
Number of family members in household	5.93 (1.78)	5.23 (1.87)	11.011
Monthly household income	\$1764.35 (642.20)	\$1828.71 (839.30)	94.132
Food insecurity score	2.89 (3.32)	3.74 (3.98)	25.34*
	<i>N (%)</i>		<i>Chi Square</i>
Married/Cohabiting	50 (89.3%)	41 (87.2%)	0.104
Interviewed in English	22 (39.3%)	21 (44.7%)	0.306
Less than high school diploma or G.E.D.	34 (60.7%)	26 (55.3%)	0.291
Mothers performed ≥ 2 roles	29 (51.8%)	28 (59.6%)	0.73
Supplemental Nutrition Assistance Program (SNAP)	10 (19%)	8 (19%)	0.01
Special Supplemental Nutrition Program for Women, Infants and Children (WIC)	36 (64%)	27 (57%)	0.5
National School Lunch Program (NSLP)	47 (84%)	31 (67%)	3.84*
Note: Data collected during year 1 baseline interviews			
* $p \leq .05$, ** $p \leq .01$			

Table 3 below show the demographics and descriptive statistics for the three mothers who consistently had the highest and for the three mothers who consistently had the lowest CES-D scores over the three year study period. Mothers who consistently had the lowest CES-D scores were on average slightly younger, had higher monthly household incomes, were students, and had a slightly lower food insecurity mean.

Table 3. Demographic and descriptive statistics of mothers who consistently had the highest CES-D scores and the lowest CES-D scores over the three year study period (N = 6)

				Mothers by Lowest and Highest CES-D scores	
				Lowest CES-D scores (N = 3)	Highest CES-D scores (N = 3)
Variable				<i>M (SD)</i>	
CES-D score				3 (3.61)	27.33 (11.93)
Mothers' age				27 (5.57)	29 (7.21)
Number of children in household				2 (1.00)	2 (1.00)
Total number of family members in household				5.33 (1.15)	5 (2.00)
Monthly household income				\$2318 (907)	\$1895 (879)
				N (%)	N (%)
Mothers' marital status					
	Single			0 (0%)	1 (33.3%)
	Married/Cohabiting			3 (100%)	2 (66.7%)
Language interview conducted					
	English			2 (66.7%)	3 (100%)
	Spanish			1 (33.3%)	0 (0%)
Mothers' educational level					
	Less than high school diploma or G.E.D.			1 (33.3%)	0 (0%)
	High school diploma or higher			2 (66.7%)	3 (100%)
Roles mothers performed					
	Parent			3 (100%)	3 (100%)
	Employee			1 (33.3%)	2 (66.7%)
	Student			0 (0%)	2 (66.7%)
Food Insecurity score				3 (3.00)	3.33 (5.77)
Federal Nutrition Assistance Program Participation				N (%)	
Supplemental Nutrition Assistance Program (SNAP)				0 (0%)	1 (33%)
Special Supplemental Nutrition Program for Women, Infants and Children (WIC)				3 (100%)	3 (100%)
National School Lunch Program (NSLP)				2 (67%)	3 (100%)
Note: Data collected during year 1 baseline interviews					

Familial Support

Family of Origin. Mothers who consistently had the lowest CES-D scores grew up in families that did not change residences and in which parents were viewed as sources of strength and support. For example, Clarita reported, “[*What I remember about my childhood is] the love and care my parents gave me. And the bonding between the family.*” In addition, Ynez shared, “[*My family helps me out a lot. Usually my sisters or my mom will take him (son) to the doctor for me...we help each other any way we can.*” In contrast, mothers who consistently had the highest CES-D scores reported being detached from their families of origin and they were a source of stress. One mother, Estela, shared, “[*It was very hard. We [her sisters] were moving a lot from different places...I hardly got to see, like, my parents.*” Estela’s family’s health and other personal issues added stress to her life:

I’ve been taking care of their bills, the things that they can’t do....my dad doesn’t speak English that well and he doesn’t even read....My mom right now has renal failure....my dad has been getting worse, he’s throwing up blood. He is an alcoholic and he smokes. My brother has been gone to jail and has been out for a year and half longer than he usually is, but he is not stable right now either....So, I’m like the most responsible right now and everyone is putting pressure on me.

Spouse. Mothers who consistently had the lowest CES-D scores described their relationship with their husbands as positive. Clarita stated, “[*We have a good relationship. A lot of love, trust, support...we’re willing to help each other out.*” Ynez stated, “[*My husband] he helps in every way...he helps me raise and discipline [my son]. Financially [he helps our family]. He’s also loving. He’s a father figure for him [my son].*” Mothers who consistently had the highest CES-D scores reported low levels of support from husbands. Estela shared:

Instead of support, he relies on me.... Sometimes I don’t feel like dealing with anything...he just asks me “Make sure they do their homework, tell them to do it.” I’m like, “You’re the dad, too, you know.” And he’s more like, “I have to go do an errand. I need to wax the car.” Whatever excuse he wants to find to be out of the house. That way he doesn’t feel responsible for it.

Multiple Roles

Mothers were commonly employed or going to school. However, mothers who consistently had the lowest CES-D scores typically only performed one ad-

ditional role at a time (employee or student) compared to mothers who consistently had the highest CES-D scores. Mothers who consistently had the highest CES-D scores also experienced catastrophic events such as car accidents and disability.

Clarita, a mother who consistently had one of the lowest CES-D scores, was going to school throughout the study. During the last year of the study (wave 3) she had graduated from college and began work as a substitute teacher. Ynez took a year off from school during the second year of the study when she gave birth to her second child. In contrast, Estela, a mother who consistently had one of the highest CES-D scores, was employed throughout the study period, and went back to school during year 2 of the study. Her job was very stressful and she changed jobs during the study. During wave 3 she was in a car accident that left her disabled, became unemployed and quit school. Maryann was a student and an employee throughout most of the study. However, by wave 3 she was unemployed and no longer a student due to health issues and an automobile accident that totaled her car.

Financial Strain

Mothers who consistently had the lowest CES-D scores reported improved family economic situations over the course of the study, but continued to juggle resources to pay off debt (e.g., credit card balance, automobile loan), purchase food, clothing, and medical care. In contrast, mothers who consistently had the highest CES-D scores reported that their family economic situations became worse by wave 3. Estela reported that her family spent less on food in order to pay the other bills, “[*No money for food. We take care of the payments on the house and, the car, the utilities. And, maybe medication for the girls. And then we cut down on the food.*”

DISCUSSION

While the demographic characteristics of mothers (N=103) who had high and mothers who had low CES-D scores at the baseline interview were not statistically significantly different, differences in their participation in the NSLP and food security score were significant. Mothers who consistently had low CES-D scores had a higher participation rate in the NSLP and were more food secure than mothers who consistently had high CES-D scores. Thus, perhaps greater par-

ticipation in the NSLP was related to increased food security, which in turn resulted in lower CES-D scores for mothers. Or, it could be that mothers who participated in the NSLP had older children which potentially could be related to fewer depressive symptoms. Additionally, mothers who consistently had low CES-D scores more commonly reported supportive relationships with their families of origin and spouses, less financial stress, and performed fewer roles than mothers who consistently had high CES-D scores. Several studies have shown a relationship between the quality of the spousal relationship to maternal depressive symptoms (Mamun, Clavarino, Najman, Williams, O'Callaghan, and Bor, 2009; McCue, Briggs-Gowan, Storfer-Isser, and Carter, 2007) and that multiple roles are related to elevated depressive symptoms (Jagannathan J, Camasso MJ, Sambamoorthi, 2010; Ronzio and Mitchell, 2010). Additionally, familism research suggests that maintaining a sense of connection to one's family is important for health and well-being, and the fact that mothers who consistently had the highest CES-D scores felt disconnected to their family of origin and spouses may have significantly affected their mental health (Pabon, 1998; Rodriguez, Mira, Paez, and Myers, 2007). These individual and family level factors (i.e., fewer roles, supportive familial relationships, improved family economic situation) may have served as buffers from difficult circumstances they experienced (e.g., low income, low education level, immigrant status), thus safeguarding their mental health. However, mothers who consistently had high CES-D scores reported facing major negative life events during the study (i.e., car accidents, disability) and were not equipped with the range of buffers as mothers who had low CES-D scores. Thus, while the mothers in this study had similar socio-demographics and lived in the same communities, their lives were very different. Patterns of consistently poor family relationships and family instability, increased economic strain (e.g., job loss, increased housing expenses), and major negative life events in households that lacked financial cushions and emotional support could be critical factors related to whether or not mothers had high or low CES-D scores.

Limitations

Mothers who participated in the study were purposively recruited through organizations that worked directly with families who had low incomes. Therefore, mothers who were not connected to community organi-

zations were not represented in this study. Additionally, even though the interview protocol contained specific probing questions to help mothers accurately identify their income, mothers may have made errors in reporting their incomes. The findings from this study are only transferable to mothers who experience similar contexts and are not representative of rural Latina immigrant mothers with low incomes and young children across the U.S. despite these limitations, findings from this study help to further understand factors that may contribute to elevated depressive symptoms among rural low-income Latina immigrant mothers. Findings from this study suggest that poor familial relationships, multiple maternal roles, increased economic strain, and catastrophic life events are related to mothers having high levels of depressive symptoms.

IMPLICATIONS

Health care professionals, assistance programs, faith organizations, and educational outreach programs should be encouraged to screen Latina mothers for depressive symptoms. Mothers who are assessed as having high depressive symptoms could be referred to culturally appropriate community resources that specifically address preventing and coping with depression. Additionally, outreach efforts could be implemented to strengthen strained Latino couple relationships. Continued policy efforts to increase the employment opportunities for immigrants that provide livable wages and access to health care could strengthen the financial well-being and physical and mental health of immigrant families.

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