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Understanding Complex Roles of Family for Latina Health: Evaluating Family Obligation Stress

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Abstract

We developed a measure of family obligation stress and compared its relationship to health and unmet healthcare needs relative to social support among a sample of US-based Latinas. Data come from a randomized controlled trial within four clinics to increase mammography among Latinas (N = 539). The 1-factor measure had acceptable reliability and construct validity. Family obligation stress was associated with worse health and greater unmet healthcare needs. Family obligation stress varied by years in the US and country of origin. Our measure of family obligation stress contributes new venues to family research among Latino populations.

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Keywords

family; Latinas; obligation stress; social support

INTRODUCTION

Understanding the complex roles of family for Latina women's health is important. The central role of the family in Latino culture has generally been conceptualized as protective and positive for women's health[1]. Strong, multi-generational family relationships and cultural norms regarding family are assumed to reflect high levels of social support, and other positive factors[2]. Yet, large, multi-generational families and cultural emphases that prioritize family relationships above one's self may result in high levels of negative family-related factors. There is a need for quantitative research to compare the unique and relative effects of multiple positive and negative family factors on Latina health. The rationale of this study seeks to contribute to this future goal by developing an instrument that can be used to assess family obligation stress more directly and precisely.

Qualitative research has highlighted the unique ways in which family obligation stress manifests for Latino populations and its impacts[3–6]. Quantitative research suggests family obligation stress is tied to worse mental health[7–11], self-rated health[12], and healthcare-seeking behaviors among Latinas[13]. Yet, these findings are hard to interpret, given the type of measurements used. Specifically, studies have used measures among Latinos that: 1) approximate family obligation stress (e.g., household size); 2) do not examine the specific facets of family obligation stress (e.g., open-ended questions); 3) incorporate family obligation with other negative family-related factors (e.g., conflict); are role-specific (e.g., informal caregivers, adolescents contributing to family finances)[7–27]. The lack of direct, precise measurement hinders our ability to compare the unique effects of family obligation stress on health relative to other family-related factors (positive and negative). Further, imprecise measurement affects our ability to compare levels of family obligation stress and its impacts on health across demographic and family characteristics.

The current study contributes to current theory and research on the complex association of family relationships with health by describing the psychometric properties of a new family obligation stress measure for Latinas and examining variation in family obligation stress across demographic and family characteristics. We provide evidence for the validity for this new measure by examining the measurement model using factor analyses and testing the hypothesized relationships with pilot data. Second, we begin to evaluate the measure's validity by comparing how our measure of family obligation stress and another measure of social support are related with 5-item mental health, 1-item self-rated health, and 1-item unmet healthcare needs measures. Second, we describe family obligation stress scores across demographic and family characteristics.

METHODS

Procedures

The study uses data from a randomized controlled trial within four clinics, BLINDED FOR REVIEW, to promote mammography use among non-adherent Latinas living in Western Washington State. Detailed information about the study design and procedures has been published elsewhere [BLINDED]. Briefly, participants were identified through electronic medical records, recruited and screened by staff. Eligibility criteria were: 1) Hispanic ethnicity; 2) age 42–74 years; and 3) receipt of services from one of the four clinic sites within the past 5 years. After consent, participants consented to participate and completed 30–45 minute baseline questionnaires in their preferred language (English, Spanish). Institutional review boards of the participating organizations approved all study content and procedures.

Measures.

Family Obligation Stress Measure.—The Family Obligation Stress Measure was based on the Caregiver Burden Scale[28]. We chose 5 stressors from the 21-item original scale and drafted an additional item related to family demands. Items were selected based on the literature and our previous research with Latinas[3–6,19–22,29]. We then conducted seventeen cognitive interviews using a Spanish translation of the items. Women were recruited from Consejo Counseling & Referral Service (Consejo), a local non-profit organization providing mental health and social services to Latino clients, a substantial proportion of whom also obtain care from the current study's four study sites. All participating women consented to participate. In the interviews, women were asked 2 or 3 specific questions for each item, such as 'what does '[word or phrase from item]' mean to you?' and 'Can you tell me in your own words what the question is asking?.' Women were also asked to provide comments on their cognitive process while answering each question. In this way, staff assessed how easy the questions were to understand and whether they were being interpreted correctly. Cognitive interviews lasted 45 minutes to one hour and were conducted in small offices at Consejo. Interviews were conducted by the project Principal Investigator, a post-doctoral fellow, and project coordinator (all are fluent in Spanish). Staff adapted the questions based on two sets of 4 – 5 interviews. Changes included reducing the response options from 4 to 3 and simplifying the wording for items 5 and 6. All other items were well-understood. All interviews took place between October and November 2010. The six final items are depicted in Table 1. Spanish items are available upon request. Response categories were: 1 = Rarely, 2 = Sometimes, and 3 = Often.

Social support.—We administered a 5-item measure that assesses health-related social support that was originally developed by Communities Count, a survey to assess social and health factors among residents within King County, including Spanish-speaking Latinos[30]. Cronbach's α was 0.77 for this sample. Sample items included "Someone to help you if you were confined to bed" and "Someone to take you to the doctor if you needed it." Response categories ranged from 1 = All the time to 5 = None of the time. Scores were reverse-coded and summed, such that greater summary scores for the social support measure indicated more social support.

Mental health.—To measure mental health across the past four weeks, we administered the Mental Health Inventory-5 (MHI-5), which has been previously used among Spanish-speaking Latino populations[31–33]. Cronbach's α =0.89 was for this sample. Sample items were "How much of the time during the past 4 weeks did you have a lot of energy?" and "How much of the time during the past 4 weeks have you felt calm and peaceful?." Response categories ranged from 1 = All of the time to 5 = None of the time. Scores were standardized by linear transformation to a scale ranging between 0 and 100, with greater scores indicating better mental health.

Self-rated health.—To assess self-rated health across the past four weeks, we used the widely used first item of the SF-12 Health survey[34,35]: "In general, would you say your health is Excellent/Very Good/Good/Fair/Poor." Greater scores indicated better self-rated health.

Unmet healthcare needs.—Women were asked if there was a time in the past year when they needed health care and did not receive it, an item modified from the Hispanic Community Health Study (0 = No, 1 = Yes)[36].

Demographic and family characteristics.—Standard questions were used to assess demographic (age, education, household income, employment, country of origin, years in the US, preferred language) and family characteristics (marital status, household size).

Analysis

All analyses were conducted on the statistical package STATA 13.1. To evaluate the validity of the family obligation stress measure, the total sample (n = 539) was first randomly divided into two split-half samples. The first split-half sample was used to conduct preliminary Exploratory Factor Analysis (EFA; n = 279). The results were then used to inform the construction of a Confirmatory Factor Analysis (CFA) with the second split-half sample (n = 260). This method of randomly splitting a sample for the two types of factor analysis is often used to assess constructs whose structure is relatively unknown or unique[37]. Both exploratory (EFA) and confirmatory factor analyses (CFA) used polychoric correlation coefficients, which are considered robust with ordinal item responses. With the first split-half sample, standard procedures were used to determine the best number of factors, including parallel analysis (PA), scree plots, and EFA eigenvalues. PA is a recommended technique for determining the number of factors to extract[38]. In PA, multiple randomly created expected data sets are generated with the characteristics of the data set to be analyzed (i.e., number of subjects and items). EFAs are then conducted for each random data set and the results are averaged across all replications (1,000 for this study). The number of factors to extract is identified by the number of eigenvalues in the actual data set that exceed the eigenvalues found from the randomly generated data sets. To be retained for the CFA, items had to load at least 0.40 and on only one factor. With the second split-half sample, we conducted CFA to evaluate the adequacy of the proposed factor structure from the first split-half sample. Measures of fit included the root mean square error of approximation (RMSEA), comparative fit index (CFI), and Tucker-Lewis index (TLI). For CFA, the criteria for good (or acceptable) model fit were CFI and TLI values greater than 0.95 (0.90) and

RMSEA values less than 0.05 (0.08). In the event of poor fit, modification indices were used to examine the causes. After achieving a CFA model with acceptable fit, we used the second split-half sample and created scale scores to assess validity and evaluate our second and third research objectives. For all multi-item measures, all of which had at least 5 items, we included scores from individuals who completed at least 80% of items. We continued to evaluate validity with our pilot data through Pearson's and biserial correlations of family obligation stress and social support with mental health, unmet healthcare needs, and self-related health. Finally, we conducted analyses of variance (ANOVA) and Pearson's correlations to examine variation in family obligation stress across demographic and family characteristics on the second split-half sample.

RESULTS

Table 2 depicts study sample characteristics across the two split-half samples. We had low levels of missing data (<5%), except for income (18%). Given this, we used pairwise deletion techniques to maximize the use of available data. There were no significant differences between the two split-half samples regarding the family obligation stress measure or health, demographic and family characteristics.

The results of the factor analysis established validity: Table 1 depicts EFA loadings, means, and standard deviations for the first spilt-half sample. For the first split-half sample, parallel analysis, scree plots, and eigenvalues (2.9, 0.2), suggested a 1-factor solution best fit the data. Items had loadings greater than 0.40. Cronbach's alpha for the first split-half sample was 0.77. Inter-item correlations were significant and ranged between 0.19–0.60. Using the second split-half sample, we next estimated a model with one latent variable and the six items as indicators. Residuals were fixed to zero. This model exhibited poor fit: χ^2= 1379.96, *df* = 9, *p*<.0001; CFI = 0.56, TLI = 0.27, RMSEA = 0.77. Modification indices suggested shared variance among the residuals of two pairs of items ("Because of what I do for my family/relatives"; "I experience stress with my relationship with my family/relatives"; "I rarely have money for myself because of my financial needs of my family/relatives"; "My family/relatives demand too much of me"). When uncoupling these two residual variances, model fit was acceptable: χ^2= 11.65, *df* = 7, *p*=.11; CFI = 0.99, TLI = 0.99, RMSEA = 0.05. Results of this CFA are presented in Table 1. Cronbach's alpha for the second split-half sample was 0.76. All inter-item correlations were statistically significant and ranged between 0.14–0.54.

Next, we continued to assess validity with Pearson's and biserial correlations to compare family obligation stress, social support and health outcomes. Social support and family obligation stress were negatively correlated to one another, $r = -0.30$, $p < .0001$. Women reporting greater family obligation stress reported worse mental health, $r = -0.30$, $p < .0001$ and self-rated health, $r = -0.14$, $p = .03$. Greater family obligation stress was also associated with endorsement of unmet healthcare needs, $r = 0.19$, $p = .003$. Women reporting greater social support conversely reported greater mental health, $r = 0.21$, $p = .001$ and self-rated health when using the SF-1, $r = 0.15$, $p = .02$. Greater support was negatively related to unmet healthcare needs, $r = -0.15$, $p = .02$.

Finally, we conducted ANOVA and Pearson's correlations to examine variation in family obligation stress across demographic and family characteristics (Table 3). Family obligation stress was associated with years in the US ($r = -0.15$, $p = .03$) and country of birth, $F(2, 254) = 4.07$, $p = .02$. Mexico-born Latinas exhibited greater family obligation stress relative to foreign-born Latinas from other countries ($p = .04$). Interestingly, family obligation stress did not vary across family characteristics.

DISCUSSION

The current study offers an important tool for understanding the complex role of family in shaping Latinas' health. We began to evaluate the construct validity of our measure with factor structure and preliminary data regarding its theorized relationships with mental health, self-rated health and unmet healthcare needs. This measure augments a growing body of literature indicating that family obligation is a common stressor among Latinos[15,22,23]. Measure development included cognitive interviews to further adapt and confirm Latinas' perceptions of the items as measuring family obligation stress. Our assessment of validity is promising, in that our measure was positively associated with unmet healthcare needs and inversely associated with health, in contrast to social support. These associations align with other studies that have not used direct quantitative measures of family obligation stress among Latinos[7–27].

We also provide evidence that how much Latinas experience family obligation stress varies by years living in the US and country of origin. Our work suggests that other foreign-born and US-born Latinos experience less family obligation stress than Mexico-born Latinas. Such work aligns with other research showcasing important sub-group differences in healthcare access and use by country of origin[39,40]. Relatedly, Latinas with fewer years in the US also reported greater family obligation stress than women with a longer residence in the US. Other related research has found that although newly arrived immigrants rely on social networks for support, they are also expected to provide support to other relatives that are migrating, including housing, financial support, and employment connections[17], which may foster or exacerbate family obligation stress. Family characteristics (marital status, household size) were not associated with family obligation stress, potentially due to the stronger effects of interpersonal relationship quality than structural components for perceived stress. This hypothesis is supported by other research showing that cultural values and social perception about family are distinct from structural family elements (marital status)[41]. Our finding contrasts other studies focused on caregiver burden[42,43]. Future work should be conducted to assess how family dynamics may vary between Latino caregivers and non-caregivers, including family demands and resulting stress.

LIMITATIONS

The current study had several limitations. First, reliability was measured cross-sectionally. There is a need for longitudinal research to assess test-retest reliability. Second, although this sample of Latinas was not undergoing a specific circumstance of family obligation, they were recruited based on the larger study's objectives, which were to improve mammography use among non-adherent Latinas. As such, our findings may not be generalizable to broader

populations of Latinas. Future research is warranted with a wider range of ages and other demographic characteristics to assess the influence of family obligation stress on health among Latinas. Third, our measure of social support was not specific to family and was focused on support for health problems and needs. The comparison to family obligation stress, which was not focused on health and tailored to family dynamics, may not be an adequate comparison of the relative contributions of general negative and positive aspects of the family environment for health among Latinas. Fourth, we did not administer other measures of family obligation stress to examine convergent validity. Such work is warranted to further demonstrate the validity of our measure. Fifth, we did not use validated, multi-item measures for self-rated health and unmet healthcare need. Thus, our findings may have reflected other variables that are not related to family obligation stress.

CONCLUSIONS

Despite these limitations, the study provides an important contribution to existing literature. Future research will help to further confirm the validity and reliability of this measure. Once fully evaluated, this measure will be helpful for future quantitative research that is able to compare the relative contributions of different factors within the family environment on Latina health. Such work will be important for improving family counseling and other programs targeting specific family determinants of health among Latinas.

Conflicts of Interest and Source of Funding

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References

1. Perez K, Cruess D. The impact of familism on physical and mental health among Hispanics in the United States. Health Psychology Review. 2014;8:95–127. [PubMed: 25053010]
2. Marin G, Marin BV. Research with Hispanic populations. Vol 23: Sage Publications Newbury Park, CA; 1991.
3. Rojas SM, Grzywacz JG, Zapata Roblyer MI, Crain R, Cervantes RC. Stressors among Hispanic adults from immigrant families in the United States: Familismo as a context for ambivalence. Cultural Diversity and Ethnic Minority Psychology. 2016;22:408–416. [PubMed: 26845394]
4. Mendez-Luck CA, Applewhite SR, Lara VE, Toyokawa N. The concept of familism in the lived experiences of Mexican-origin caregivers. Journal of Marriage and Family. 2016;78:813–829. [PubMed: 27594714]
5. Corvin J, Chan I, Tezak A, et al. Caring for individuals with chronic illness and minor depression: Latino perceptions of caregiver burden. Journal of Gerontological Social Work. 2017;60:79–95. [PubMed: 28027015]
6. Torregosa MB, Sada R, Perez I. Dealing with stroke: Perspectives from stroke survivors and stroke caregivers from an underserved Hispanic community. Nursing & Health Sciences. 2018;20:361–369. [PubMed: 29512845]
7. Friedmann M, Buckwalter K. Family caregiver role and burden related to gender and family relationships. Journal of Family Nursing. 2014;20:313–336. [PubMed: 24777069]
8. Gelman C Familismo and its impact on the family caregiving of Latinos with Alzheimer's disease: A complex narrative. Research on Aging. 2014;36:40–71. [PubMed: 25651600]
9. Jolicoeur P, Madden T. The good daughters: Acculturation and caregiving among Mexican-American women. Journal of Aging Studies. 2002;16:107–120.

10. Land H, Guada J. The Latina Caregiver Burden Scale: Assessing the factor structure for rapid clinical assessment. Social Work Research. 2011;35:95–106.
11. Pinquart M, Sorenson S. Ethnic differences in stressors, resources, and psychological outcomes of family caregiving: A meta-analysis. Gerontologist. 2005;45:90–106. [PubMed: 15695420]
12. Wells J, Cagle C. Perceived mood, health, and burden in female Mexican American family cancer givers. Health Care for Women International. 2009;30:629–654. [PubMed: 19492207]
13. Teran L, Baezconde-Garbanati L, Marquez M, Castellanos E, Belkic K. On-time mammography screening with a focus on Latinas with low income: A proposed cultural model. Anticancer Research. 2007;27:4325–4338. [PubMed: 18214040]
14. Martinez W, Polo A, Carter J. Family orientation, language, and anxiety among low-income Latino youth. Journal of Anxiety Disorders. 2012;26:517–525. [PubMed: 22410091]
15. Yahirun J, Perreira K, Fulgni A. Family obligation across contexts: Hispanic youth in North Carolina and South California. Journal of Family Issues. 2013;36:1296–1323.
16. Rivera R, Torres I, Carre F. Role burdens: The impacts of employment and family responsibilities on the health status of Latino women. Journal of Health Care for the Poor and Underserved. 1997;8:99–113. [PubMed: 9019029]
17. Molina K, Alcantara C. Household structure, family ties, and psychological distress among US-born and immigrant Latino women. Journal of Family Psychology. 2013;27:147–158. [PubMed: 23421842]
18. Bradley P, Wells J, Cagle C, Barnes D. Suffering apart and the invisibility of the Mexican American caregiver. 2007; Boston, MA.
19. Cagle C, Wells J, Hollen M, Bradley P. Weaving theory and literature for understanding Mexican American cancer caregiving. Hispanic Healthcare International. 2007;5:149–161.
20. Crist J, McEwen M, Herrera A, Suk-Sun K, Pasvogel A, Hepworth J. Caregiving burden, acculturation, familism, and Mexican American elders' use of home care services. Research and Theory for Nursing Practice 2009;23:165–182. [PubMed: 19769211]
21. Magna S, Ramirez-Garcia J, Hernandez M, Cortez R. Psychological distress among Latino family caregivers of adults with schizophrenia: The roles of burden and stigma. Psychiatric Services. 2007;58:378–384. [PubMed: 17325112]
22. Telzer E, Gonzales N, Fuligni A. Family obligation values and family assistance behaviors: protective and risk factors for Mexican-American adolescents' substance use. Journal of Youth and Adolescence. 2014;43:270–283. [PubMed: 23532598]
23. Wilkinson-Lee A, Zhang Q, Nuno V, Wilhelm M. Adolescent emotional distress: The role of family obligations and school connectedness. 40 2011:221–230.
24. Spees L, Perreira KM, Fuligni A. Family Matters: Promoting the Academic Adaptation of Latino Youth in New and Established Destination. Journal of family issues. 2017;38:457–479. [PubMed: 28316359]
25. Castro A Economic pressure and depressive symptoms among Latino Youth: The role fo control beliefs and family obligation, DePaul University; 2018.
26. Toyokawa N, Toyokawa T. Interaction effect of familism and socioeconomic status on academic outcomes of adolescent children of Latino immigrant families. . Journal of Adolescence. 2019;71:138–149. [PubMed: 30708206]
27. Tsai KM, Gonzales NA, Fuligni AJ. Mexican American Adolescents' Emotional Support to the Family in Response to Parental Stress. Journal of Research on Adolescence. 2016;26:658–672. [PubMed: 28453218]
28. Family Practice Notebook. Caregiver Burden Scale. 2015; fpnotebook.com/Geri/Exam/CrgvrBrdnScl.htm.
29. Ornelas I, Perreira K, Beeber L, Maxwell L. Challenges and Strategies to Maintaining Emotional Health: Qualitative Perspectives of Mexican Immigrant Mothers. . Journal of Family Issues. 2009;30:1556–1575.
30. Communities Count. Communities Count: Social & Health Indicators across King County. 2012; www.communitiescount.org.
31. Berwick D, Murphy J, Goldman P, Ware J, Barsky A, Weinstein M. Performance of a five-item mental health screening test. Medical care. 1991;29:169–176. [PubMed: 1994148]

32. Kelly M, Dunstan F, Lloyd K, Fone D. Evaluating cutpoints for the MHI-5 and MCS using the GHQ-12: a comparison of five different methods. BMC Psychiatry. 2008;8:10. [PubMed: 18284689]
33. Rumpf H, Meyer C, Hapke U, John U. Screening for mental health: validity of the MHI-5 using DSM-IV Axis 1 psychiatric disorders as gold standard. Psychiatry Research. 2001;105:243–253. [PubMed: 11814543]
34. Jenkinson C, Layte R, Jenkinson D, et al. A shorter form health survey: can the SF-12 replicate results from the SF-36 in the longitudinal studies? Journal of Public Health. 1997;19:179–186.
35. Jenkinson C, Layte R. Development and testing of the UK SF-12. Journal of Health Services Research and Policy. 1997;2:14–18. [PubMed: 10180648]
36. Sorlie P, Aviles-Santa L, Wassertheil-Smoller S, et al. Design and implementation of the Hispanic Community Health Study/Study of Latinos. Annals of Epidemiology. 2010;20:629–641. [PubMed: 20609343]
37. Furr R, Bacharach V. Psychometrics: An introduction. Vol 2nd: Sage Publications; 2014.
38. Thompson B, Daniel L. Factor analytic evidence for construct validity of scores: a historical overview and some guidelines. Educational Psychology Measurement. 1996;56:197–208.
39. Weinick RM, Jacobs EA, Stone LC, Ortega AN, Burstin H. Hispanic healthcare disparities: challenging the myth of a monolithic Hispanic population. Medical Care. 2004;42:313–320. [PubMed: 15076807]
40. Bustamante AV, Fang H, Rizzo JA, Ortega AN. Heterogeneity in health insurance coverage among US Latino adults. Journal of General Internal Medicine. 2009;24:561. [PubMed: 19842007]
41. Berkman LF, Glass T. Social integration, social networks, social support, and health In: Berkman LF, Kawachi I, eds. Social Epidemiology. New York: Oxford University Press; 2000:137–173.
42. Kim H, Chang M, Rose K, Kim S. Predictors of caregiver burden in caregivers of individuals with dementia. Journal of Advanced Nursing. 2011;68:847–855.
43. Covinsky K, Newcomer R, Fox P, et al. Patient and caregiver characteristics associated with depression in caregivers of patients with dementia. Journal of General Internal Medicine. 2003;18:1006–1014. [PubMed: 14687259]

Table 1.

Items, factor loadings, means, and standard deviations across two half-samples (n = 539)

	First Half-Sample			Second Half-Sample		
Item[1]	**EFA Loading**	**M**	**(SD)**	**CFA Loading**	**M**	**(SD)**
1. Because of what I do for my family/relatives, I have little time to myself.	0.60	1.84	(0.80)	0.78	1.83	(0.79)
2. I feel overwhelmed by my responsibilities to my family/relatives.	0.84	1.67	(0.77)	0.90	1.64	(0.75)
3. I feel like I should do more to help my family/relatives.	0.49	2.22	(0.78)	0.84	2.17	(0.80)
4. I experience stress with my relationship with my family/relatives.	0.82	1.60	(0.73)	0.78	1.50	(0.69)
5. I rarely have money for myself because of the financial needs of my family/relatives.	0.61	2.20	(0.83)	0.84	2.18	(0.81)
6. My family/relatives demand too much of me.	0.76	1.49	(0.72)	0.85	1.43	(0.72)

[1]Response categories ranged from 1 = Rarely to 3 = Often.

Table 2.

Sample characteristics.

		First Half-Sample	Second Half-Sample	Total	p-value
		% (N)	% (N)	% (N)	
Country of birth					.18
Mexico		79 (219)	84 (216)	81 (435)	
US		3 (7)	3 (8)	15 (3)	
Other		19 (53)	13 (34)	16 (87)	
Married		173 (62)	145 (60)	318 (59)	.45
Prefers Spanish		93 (258)	91 (236)	92 (494)	.82
Education[1]					.48
≤8th grade		62 (165)	59 (148)	60 (313)	
9-HS degree		26 (70)	25 (62)	25 (132)	
≥HS		12 (32)	17 (42)	74 (14)	
Employment					.40
Full-time		29 (81)	26 (68)	28 (149)	
Part-time		16 (45)	21 (53)	18 (98)	
No/Other		55 (152)	53 (137)	54 (289)	
≤$15,000 household income[1]		51 (118)	47 (98)	49 (216)	.23
Uninsured		74 (206)	71 (183)	72 (389)	.37
Lacks regular doctor		62 (179)	63 (164)	63 (336)	.73
Unmet healthcare needs		17 (48)	20 (53)	19 (101)	.37
SF-1[2]: Fair/Poor Health[1]		13 (35)	14 (36)	13 (71)	.56
	Range	**M (SD)**	**M (SD)**	**M (SD)**	
Age	42–74	52.44 (8.53)	51.52 (8.06)	52.00 (8.31)	.20
Years in US	0–62	17.88 (10.11)	17.45 (9.29)	17.67 (9.72)	.64
Household size	1–15	4.49 (1.97)	4.44 (2.09)	4.47 (2.03)	.77
Social support[3]	3–21	17.10 (4.28)	17.35 (3.78)	17.22 (4.04)	.48
MHI-5[4]	0–87.50	35.29 (15.22)	36.91 (15.03)	36.59 (15.12)	.63
SF-12 MHC[5]	27.41–84.40	50.26 (9.70)	49.72 (10.31)	50.00 (10.00)	.54

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		First Half-Sample	Second Half-Sample	Total	p-value
		% (N)	% (N)	% (N)	
SF-12 PHC[6]	16.65–70.38	50.68 (9.82)	49.29 (10.15)	50.00 (10.00)	.11
Family Obligation Stress[7]	3–18	10.96 (3.20)	10.70 (3.09)	10.83 (3.15)	.34

[1] Variable analyzed continuously and presented categorically to facilitate interpretation.

[2] First question of Short Form Health Survey.

[3] Community Counts Survey Social Support measure.

[4] Mental Health Inventory-5 items. Greater scores indicate better mental health.

[5] Short Form Health Survey-12 Mental Health Composite Score.

[6] Short Form Health Survey-12 Physical Health Composite Score.

[7] Sum of family obligation stress measure items.

Table 3.

Variation of family obligation stress across demographic and family characteristics.

	Family Obligation Stress M (SD)	p-value
Country of birth		.02
Mexico	9.47 (2.70)	
US	7.88 (2.10)	
Other	8.29 (2.34)	
Language status		.40
English	8.82 (2.63)	
Spanish	9.32 (2.68)	
Employment		.41
Full-time	9.06 (2.93)	
Part-time	9.70 (2.52)	
No/Other	9.24 (2.59)	
Married		.11
No	9.58 (2.70)	
Yes	9.05 (2.64)	
Age	*	.14
Education	*	.51
Income	*	.57
Years residing in US	*	.03
Household size	*	.37

* Average values are provided for each group within categorical variables (country of birth, language status, employment, marital status), but are not included for continuous variables (age, education, income, years residing in the US, household size)