Community Resource Utilization, Psychosocial Health, and Sociodemographic Factors Associated with Diet and Physical Activity among Low-Income Obese Latino Immigrants

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ABSTRACT

Low-socioeconomic-status (SES) Latinos are disproportionately represented among the 78 million obese Americans. Tailored behavioral weight-loss interventions show promise, but there is limited adaptation to lower-SES Latino immigrants. This study provides guidance for tailoring obesity-reduction strategies for this population by evaluating food security, educational community resource utilization, education level, depression, sex, and length of US residence as predictors of diet and physical activity. The cross-sectional study used baseline data collected in July 2009 through September 2010 for a weight-loss trial among lower-SES obese (body mass index 30 to 55) Latino immigrants who were enrolled at a community health clinic (n=207). Physical activity was measured using 7-day pedometer recording. Dietary intake was measured using an interviewer-administered food frequency questionnaire. Factors assessed by questionnaire included education community resource use (nutrition and physical activity classes), education level, US residence (years), food security, and depressive symptoms. Data were analyzed using multivariate-adjusted linear regression models. More than one third of participants were sedentary (<5,000 steps/day), and 41% had low fruit and vegetable intake (<5 servings/day). In multivariate-adjusted models, educational community resource use, male sex, less education, fewer depressive symptoms, and shorter US residence time were associated with more physical activity (all, $P \leq 0.05$). Educational community resource use was positively associated with fruit and vegetable intake ($P=0.05$). Male sex was associated with more sweet-beverage intake ($P=0.02$) and fast-food intake ($P=0.04$). Fewer depressive symptoms were associated with lower sweet-beverage intake ($P=0.05$). In conclusion, obesity-reduction strategies among low-SES Latino immigrants might effectively emphasize educational community resource use and interventions tailored for psychosocial and sociodemographic characteristics.
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MORE THAN 36% OF US ADULTS ARE OBESE, AND obesity is more prevalent among Latinos, with 39% of Latinos considered obese.[1] Obesity is associated with cardiovascular disease[2] and cancer.[3] Most US adults fail to meet national dietary and physical activity recommendations to achieve normal body weight,[4-7] and Latinos meet these recommendations less often than whites.[8] Tailored behavioral weight-loss interventions using social cognitive and social-ecological theories for behavioral intervention show promise for reducing obesity, but few have been adapted for low-income Latino immigrant populations.[9] Better understanding of demographic, psychosocial, unhealthy neighborhood-level environmental factors (eg, fast-food restaurant density and few safe places to exercise), and healthy community resources (eg, nutrition and physical activity classes) associated with dietary habits and physical activity is important for tailoring weight-loss interventions. However, there is limited research that simultaneously examines these factors among lower-socioeconomic-status (SES) Latino immigrants who are at the greatest risk for obesity-related disease.

Among Latino immigrants, obesity risk has long been associated with longer US residence, potentially because of unfavorable effects of acculturation on health behavior, including more energy-dense foods and sedentary activities.[10-12] However, inconsistent evidence[11] suggests that the role of acculturation is confounded by multiple sociodemographic and psychosocial factors, which were insufficiently controlled for in many published studies.[10,12] For example, higher obesity prevalence is also associated with lower education attainment,[13] food insecurity,[14]

and depression.[15] Designing obesity-reduction interventions requires current research that accounts for the unique factors associated with diet and physical activity in low-SES Latino immigrant subpopulations.[16]

A growing body of recent research also highlights associations of obesity with unhealthy neighborhood-level environmental factors, including high density of fast-food restaurants and few safe places to exercise.[17-20] Residents of communities with more unhealthy environmental factors have higher rates of obesity, unhealthy dietary habits, and physical inactivity; however, most research lacks individual-level information about these correlations.[17-23] Yet, in response to evidence about neighborhood-level health disparities, federal and local public health initiatives have encouraged communities to improve resources that support healthy diet and physical activity. Neighborhoods increasingly invest public health funds to provide educational community resources, such as physical activity and nutrition classes.[24,25] To date, no study has simultaneously examined the relationship between individual-level use of affordable educational community resources, sociodemographic and psychosocial factors, and diet and physical activity among low-SES Latino immigrants living in neighborhoods with unhealthy environmental factors (eg, high fast-food restaurant density and few safe places to exercise).

To provide contextual information on determinants of diet and physical activity that account for the role of educational community resources and a spectrum of demographic and psychosocial factors, we conducted a study among a low-SES Latino immigrant population. Based on factors identified in a literature review, we hypothesized that more physical activity and better diet would be associated with more food security, higher education level, fewer depressive symptoms, utilization of educational community resources, and shorter length of US residence. Our study sought to provide up-to-date culturally relevant evidence to inform obesity-reduction strategies and fill gaps in knowledge about the role of community resources, depression, and acculturation among low-SES Latino immigrants.

METHODS

Sample Design and Participants

The cross-sectional study sample represents baseline data collected from July 2009 through September 2010 for a weight-loss trial conducted in July 2009 through October 2012 at a community health clinic. Participants (n=207) were obese (body mass index 30 to 55), Spanish-speaking, adult health-center members with at least one cardiovascular disease risk factor. Detailed study methods are described elsewhere.[26]

Study Setting

The setting was an urban San Mateo County (California) neighborhood with lower-SES community characteristics, including high fast-food restaurant density and limited safe places for exercise. In addition, the neighborhood has received funding for health initiatives promoting healthy diet and physical activity through educational community resources (described in "Behavior Determinants").[27]

Conceptual Framework

The conceptual framework was derived from a social-ecological model, which posits that health behavior (eg, physical activity and diet) is determined by interaction among multiple levels of influence, including intra- and interpersonal levels and environmental levels (organization, community, and policy).[28,29] Determinants for this model included sex, education, food security, and depressive symptoms (personal level), and utilization of educational community resources (environmental level).

Physical Activity and Diet

Physical activity was assessed by 7 days of pedometer recordings to estimate steps per day. Measures of diet included fruit and vegetable servings (number of servings per day), fast-food meals (number of meals per week), and sugary beverage servings (number of servings of soda, fruit juices, and other sugar-sweetened beverages) estimated using a validated interviewer-administered Block Food Frequency Questionnaire.[30]

Behavioral Determinants

Personal-level measures included education level (0, 1 to 8 years, 9 to 11 years, 12 years [high school equivalent], and more than 12 years), sex, length of US residence (years), food security, and depressive symptoms. Food security was estimated using the US Household Food Security Survey Module: Six-Item Short Form (high, marginal, low, and very low food security), in which lower food security is associated with missing or skipping meals.[31] Depressive symptoms were assessed with the Center for Epidemiologic Studies Depression Scale (version Iowa 11X3, 1993) with a range of 1 to 19 points, where a score of 9 or higher indicates potential depression.[32]

Environment-level measures included frequency of using low-cost or free educational community resources for physical activity and nutrition classes during the past 30 days. Educational community resources were provided at a neighborhood community center, YMCA, Parks and Recreation Community Services, community-based diabetes clinic, adult health clinic, and an elementary school. Resource selection was informed by a community needs assessment.

Additional descriptive variables included "currently receiving food assistance" from the Supplemental Nutrition Assistance Program; Special Supplemental Nutrition Program for Women, Infants, and Children; and food banks (yes/no for each); native language; primary language spoken at home; current age; age at immigration to United States; annual household income ($<$\$10,000, \$10,000 to \$14,999, \$15,000 to \$19,999, \$20,000 to \$24,999, \$25,000 to \$34,999, \$35,000 to \$49,999, and $\geq$\$50,000), work hours (per week), and most frequent work-related activity (sitting/standing, walking, walking quickly/constantly moving, heavy labor).

Statistical Analysis

Percentages and means were used to describe sample characteristics. We hypothesized a priori that favorable dietary habits (more fruit and vegetable servings, fewer fast-food

Table 1. Sociodemographic, psychosocial, and behavioral characteristics among low-income, obese, adult, Latino immigrants

Categorical variable	All (n=207)	Male (n=48)	Female (n=159)
	←——n (%)——→		
Sex	207 (100)	48 (100)	159 (100)
Education			
<12 y education	157 (75.8)	31 (64.6)	126 (79.2)
12+ y	50 (24.2)	17 (35.4)	33 (20.8)
Annual household income			
<$15,000	100 (48.6)	21 (43.8)	79 (50.0)
$15,000-$19,999	50 (24.3)	8 (16.7)	42 (26.6)
$20,000-$24,999	22 (10.7)	5 (10.4)	17 (10.8)
>$25,000	34 (16.5)	14 (29.2)	20 (12.7)
Spanish native language	203 (98.1)	48 (100)	155 (97.5)
Spanish primary language at home	194 (93.7)	43 (89.6)	151 (95.0)
Food security			
Very low	26 (12.6)	6 (12.5)	20 (12.6)
Low	80 (38.7)	13 (27.1)	67 (42.1)
Marginal	22 (10.6)	4 (8.3)	18 (11.3)
High	79 (38.2)	25 (52.1)	54 (34.0)
Free and subsidized food assistance			
SNAP[a] and WIC[b]	12 (5.8)	2 (4.2)	10 (6.3)
SNAP without WIC	13 (6.3)	0 (0)	13 (8.2)
WIC without SNAP	17 (8.2)	5 (10.4)	12 (7.6)
Food bank with SNAP or WIC	10 (4.8)	1 (2.1)	9 (5.7)
Food bank without SNAP or WIC	11 (5.3)	0 (0)	11 (5.3)
Depressive symptoms			
Depressed[c]	76 (36.7)	11 (22.9)	65 (40.9)
Type of activity at work[d]			
Heavy labor/physically demanding	1 (1.5)	0 (0)	1 (2.3)
Walking quickly/ constantly moving	6 (9.1)	3 (13.6)	3 (6.8)
Walking	48 (72.7)	15 (68.2)	33 (75.0)
Sitting or standing	11 (16.7)	4 (18.1)	7 (15.9)
Physical activity			
Sedentary (<5,000 steps/d)	77 (37.2)	12 (25.0)	65 (40.9)
Continuous variable	←—mean±standard deviation —→		
Current age (y)	47.5±11.1	46.1±11.4	48.0±11.0
Age (y) when arrived in US	31.1±12.1	28.6±12.4	31.8±11.9
Length of US residence (y)	16.6±9.6	17.5±10.6	16.3±9.3
Employment (h/wk)[d]	26.2±14.2	35.7±12.7	21.4±12.5
Steps (number/day in thousands)	6.3±3.1	7.4±3.6	6.0±2.9
Fruit and vegetable (servings/d)	6.3±3.3	6.0±3.6	6.4±3.2
Sweet beverage (servings/wk)	0.6±0.9	0.9±1.0	0.6±0.8
Fast-food meals (number/wk)	0.6±1.2	1.1±2.0	0.5±0.8

[a]SNAP=Supplemental Nutrition Assistance Program.
[b]WIC=Special Supplemental Nutrition Program for Women, Infants, and Children.
[c]Depressive symptom score ≥9.
[d]Among those employed.

meals, and fewer sugary beverages) would be positively associated with utilization of educational community resources, higher education level, more food security, fewer depressive symptoms, and shorter length of US residence. Similarly, we hypothesized that more physical activity would be positively associated with utilization of educational community resources, higher education level, fewer depressive symptoms, and shorter length of US residence.

Bivariate linear regression models were used to describe diet and physical activity as a function of each determinant for the entire sample and stratified by sex. Multivariate-adjusted linear regression was used to model dietary outcomes and physical activity as functions of behavioral determinants for the entire sample and stratified by sex with concurrent adjustment for behavioral determinants. Because depressive symptoms and education level differed by sex, a Wald test of interaction was performed to assess for statistically significant interaction or effect modification by sex and depressive symptoms and by sex and education level. Regression models for steps per day included a multiplicative interaction term for sex and education level. Models for steps per day did not include food security. Steps per day were logarithmically transformed to normalize the distribution. Subjects with missing data were excluded from regression analysis. Statistical tests were

Table 2. Use of local community resources for physical activity and nutrition-education classes among low-income, obese, adult, Latino immigrants

	All		Male		Female	
Resource type	**n**	**%**	**n**	**%**	**n**	**%**
	used in past 30 days					
Physical activity education (any)	24	11.6	5	10.4	19	11.9
Community center	10	4.8	1	2.1	9	5.7
Parks and recreation community services	7	3.4	2	4.2	5	3.1
YMCA	3	1.4	0	0	3	1.9
Adult health clinic	2	1.0	1	2.1	1	0.6
Community-based diabetes clinic	1	0.5	0	0	1	0.6
Community education center	1	0.5	0	0	1	0.6
Other	11	5.3	2	4.2	9	5.7
Nutrition education (any)	32	15.5	10	20.8	22	13.8
Adult health clinic	22	10.6	8	16.7	14	8.8
Community center	6	2.9	1	2.1	5	3.1
Parks and recreation community services	2	1.0	0	0	2	1.3
Community-based diabetes clinic	2	1.0	1	2.1	1	0.6
School-based community education center	1	0.5	0	0	1	0.6
	frequency of use					
Physical activity education						
1 to 4 times each month	13	6.3	5	10.4	8	5.0
2 to 3 times each week	3	1.5	0	0	3	1.9
4 or more times each week	8	3.8	0	0	8	5.0
Nutrition education						
1 to 4 times each month	29	14.0	9	18.6	20	12.5
2 to 3 times each week	2	1.0	1	2.1	1	0.6
4 or more times each week	1	0.4	0	0	1	0.6

two-tailed (α=.05) and conducted with Stata Version 11 (StataCorp LP).

RESULTS AND DISCUSSION

Sample Characteristics

Participants were predominantly middle-aged with less than a high school education. Mean length of US residence was 17±10 years. More than half of participants had low or very low food security, and 26% currently received federal or food bank assistance. More than one third of participants had a Centers for Epidemiologic Studies–Depression scale score of ≥9, indicating possible depression, and female participants reported more depressive symptoms than male participants (Table 1). Overall, community resources for nutrition classes were used more than physical activity classes, but frequency of use was higher for physical activity classes (Table 2).

On average, male participants attained 7,400±3,600 steps per day and females attained 6,000±2,900. Thirty-seven percent of participants had a sedentary lifestyle (<5,000 steps/day). Forty-one percent had low fruit and vegetable intake (fewer than 5 servings/day). Mean fast-food intake was 0.6±1.2 meals/week and sugary beverage intake was 0.9±0.9 servings/week.

Associations with Behavioral Determinants

Multivariate-adjusted models showed that participants who used an educational community resource had 21% more steps per day compared with those who did not use one (P=0.05). Each additional depressive symptom was associated with 2% fewer steps per day (P=0.03). Male participants walked 40% more steps per day compared with female participants (P<0.01). The factors associated with physical activity differed by sex. Among men, each additional level of educational attainment was associated with 18% fewer steps per day (P=0.01). Among women, those who used educational community resources logged 25% more steps compared with those who did not use community resources (P=0.05), and each additional year of US residence was associated with 1% fewer steps per day (P=0.03; Table 3).

Multivariate-adjusted models showed that utilizing a community resource for nutrition education was associated with 1.2 more daily fruit and vegetable servings and that each additional depressive symptom was associated with 0.02 more sugary beverage servings for the entire sample (P=0.05). Female sex was associated with 0.6 fewer fast-food servings (P=0.05) and 0.4 fewer weekly sugary beverage servings (P=0.02) in multivariate-adjusted regression models. Among male participants, each additional year of US residence was associated with 0.02 fewer sugary beverage servings (P=0.02). Among females, utilizing an educational community resource was associated with 1.7 more fruit and vegetable servings (P=0.03) and 0.3 fewer sugary beverage servings (P=0.01).

Interpretation

Although intensive behavioral interventions have been effective for weight loss, few have been tailored for low-SES Latino immigrant populations. Research on behavioral determinants in these populations lacks adequate control for confounding variables. In addition, communities are increasingly investing public health funds to provide diet and physical activity resources, but published literature on environmental determinants lacks information on individual-level use of these environmental resources.[9,33-36] To inform up-to-date, culturally appropriate obesity-reduction strategies for subpopulations, we investigated demographic, psychosocial, and environmental determinants of physical activity and diet. The study population was low-SES obese adult Latino immigrants living in a neighborhood with unhealthy environmental factors. They had high rates of demographic and psychosocial factors associated with obesity. In multivariate-adjusted regression analysis, we found male sex, utilization of community resources for physical activity classes, less education, fewer depressive symptoms, and shorter US residence were independently associated with more physical activity. Female sex, utilization of community resources for nutrition classes, and fewer depressive symptoms were independently associated with healthier diet.

Increasingly, public health strategies to address the obesity epidemic have focused on changing local environments to provide resources that promote healthy diet and physical activity, especially in communities with unhealthy environmental factors. There has been little research of the association between use of educational community resources and diet and physical activity levels in low-SES Latino populations. We found that community resources that provide nutrition and physical activity education are associated with better diet and more physical activity, which indicates affordable educational community resources can be an asset for obesity-reduction strategies. However, the low utilization of these resources suggests the need for better resource promotion among this study population to overcome existing barriers.

Our study sample reported eating few fast-food meals (0.6/week) despite living in a neighborhood with a high density of fast-food restaurants. Our finding is similar to previous studies that also found low-SES Latinos reported lower fast-food intake than other California subpopulations statewide and within Los Angeles.[37,38] This suggests that strategies to reduce fast-food meals might be less important in this subpopulation compared with other Californian subpopulations.

This study analyzed the association of length of residence with health behaviors to investigate the role of acculturation. We found no association between length of US residence and dietary habits. There are several possible reasons for a lack of association. The globalization of the Western diet might have diminished the effect of acculturation on diet compared with earlier studies. In addition, earlier studies might have inadequately controlled for confounding factors. We found that longer US residence was associated with less physical activity only among females. This sex difference might be a result of acculturation of sedentary activities or the small sample size among males.

Similar to past studies, we found a negative association between depressive symptoms and health behavior.[15,39,40] In addition, like past studies that included low-income Latino immigrant populations, we found low utilization of federal food assistance programs.[41,42] Although more than half of this sample had “low” or “very low” food security compared with only 15% of US households during 2008 through 2010,[43] only 20% of the sample received Supplemental Nutrition Assistance Program or Special Supplemental Nutrition Program for Women, Infants, and Children benefits. The high level of depressive symptoms and low utilization of food assistance suggests that obesity-reduction strategies for this population should be tailored with social services for mental health and food assistance.

This study has several strengths. It evaluated associations of predictive factors with health behaviors using individual-level data adjusted for potential confounders that are lacking in much of the published literature. The findings provide direction for interventionists to tailor obesity-reduction strategies. Pedometer recordings provided an objective outcome measure in regression models of physical activity. The food frequency questionnaire was subject to limitations of dietary assessment tools, including measurement error, but regression analysis of continuous variables helps evaluate associations with differences in absolute values.[44] Although the analysis accounted for multiple factors, true associations, especially sex-specific associations, might be nonsignificant because of small male sample size. Given the small sample size, overall results for the entire study sample adjusted for sex are more robust than sex-specific results. Sex-specific findings should be cautiously interpreted and used for informing larger studies. In addition, the cross-sectional study design does not identify whether an exposure (behavioral determinant) preceded an outcome (steps per day and dietary habits) studied in this analysis. Finally, this study is of low-SES urban adult Latino immigrants and generalizations should not be made to the overall Latino population.

CONCLUSIONS

Low-SES Latino immigrants are disproportionately represented among the 78 million obese US adults. Our study evaluated multiple obesity-associated factors to evaluate behavioral determinants for diet and physical activity to inform obesity-reduction strategies tailored for low-SES urban Latino immigrants. Our findings suggest that obesity-reduction strategies for this population might effectively emphasize use of local educational community resources and interventions tailored to acculturation level and psychosocial health needs.

Table 3. Bivariate and multivariate regression estimates of behavioral determinants on physical activity and dietary habits among low-income, obese, adult, Latino immigrants[a]

	All (n=207)			Male (n=48)			Female (n=159)		
Determinant variable	**β coefficient**	***SE*[a]**	***P* value**	**β coefficient**	**SE**	***P* value**	**β coefficient**	**SE**	***P* value**
	←——— *log (steps per day)* ———								
Bivariate model									
Sex	−.20*	0.08*	0.01*						
Education level	−.02	0.03	0.59	−.17*	0.06*	0.01*	.03	0.03	0.42
Depressive symptoms	−.02*	0.01*	0.01*	−.02	0.01	0.11	−.01	0.01	0.09
Community resource	.22*	0.11*	0.05*	.02	0.12	0.85	.28*	0.14*	0.04*
US residence (y)	−.01*	0.00*	0.03*	.00	0.01	0.43	−.01*	0.00*	0.02*
Multivariate model[b]									
Sex	−.40*	0.10*	<0.01*						
Education level	−.36*	0.13*	<0.01*	−.18*	0.06*	<0.01*	.01	0.03	0.67
Depressive symptoms	−.02*	0.01*	0.03*	−.02	0.01	0.07	−.01	0.01	0.12
Community resource	.21*	0.11*	0.05*	.12	0.13	0.36	.25*	0.13*	0.05*
US residence (y)	−.01*	0.00*	0.03*	.00	0.01	0.73	−.01*	0.00*	0.03*
Sex and education	.19*	0.07*	<0.01*						
	←——— *fruits and vegetables (servings/d)* ———								
Bivariate model									
Sex	.39	0.58	0.51						
Education level	−.05	0.20	0.80	−.01	0.41	0.99	−.04	0.22	0.87
Depressive symptoms	−.07	0.05	0.16	−.20	0.10	0.05	−.05	0.06	0.38
Community resource	1.39*	0.62*	0.03*	.50	1.02	0.63	1.82*	0.76*	0.02*
Food security	−.16	0.12	0.21	−.17	0.29	0.56	−.17	0.14	0.22
US residence (y)	−.01	0.02	0.63	.05	0.05	0.26	−.03	0.03	0.18
Multivariate model[b]									
Sex	.61	0.59	0.30						
Education level	−.08	0.20	0.69	−.07	0.43	0.87	−.17	0.24	0.47
Depressive symptoms	−.05	0.05	0.34	−.21	0.11	0.07	−.01	0.06	0.87
Community resource	1.24*	0.63*	0.05*	.83	1.15	0.47	1.68*	0.75*	0.03*
Food security	−.12	0.14	0.40	.92	0.33	0.80	−.17	0.15	0.27
US residence (y)	−.01	0.02	0.58	.05	0.05	0.37	−.04	0.03	0.16
	←——— *fast-food meals (servings/wk)* ———								
Bivariate model									
Sex	−.57*	0.29*	0.05*						
Education level	.06	0.09	0.47	−.11	0.25	0.65	.08	0.08	0.27
Depressive symptoms	.01	0.02	0.73	.04	0.08	0.63	.01	0.02	0.45
Community resource	.23	0.29	0.43	1.03	0.84	0.22	−.18	0.13	0.17
Food security	.00	0.04	0.98	.09	0.16	0.58	−.01	0.04	0.76
US residence (y)	.00	0.01	0.89	−.01	0.03	0.72	.00	0.01	0.50
Multivariate model[b]									
Sex	−.60*	0.31*	0.05*						
Education level	.02	0.09	0.80	−.08	0.24	0.75	.06	0.07	0.39

(*continued on next page*)

Table 3. Bivariate and multivariate regression estimates of behavioral determinants on physical activity and dietary habits among low-income, obese, adult, Latino immigrants[a] (*continued*)

	All (n=207)			Male (n=48)			Female (n=159)		
Determinant variable	**β coefficient**	***SE*[a]**	***P* value**	**β coefficient**	**SE**	***P* value**	**β coefficient**	**SE**	***P* value**
	←——— *fast-food meals (servings/wk)* ———								
Depressive symptoms	.00	0.02	0.56	.00	0.07	0.95	.00	0.01	0.77
Community resource	.23	0.28	0.42	1.16	0.80	0.15	−.14	0.14	0.30
Food security	.00	0.05	0.95	.14	0.17	0.40	−.02	0.03	0.56
US residence (y)	.00	0.01	0.92	.00	0.03	0.90	.01	0.01	0.39
	←——— *sweetened beverages (servings/week)* ———								
Bivariate model									
Sex	−.29*	0.15*	0.05*						
Education level	.03	0.05	0.63	−.01	0.12	0.96	.02	0.06	0.80
Depressive symptoms	.02*	0.01*	0.04*	.07*	0.03*	0.02*	.02	0.01	0.09
Community resource	−.10	0.16	0.54	.41	0.40	0.32	−.36*	0.11*	<0.01*
Food security	.04	0.03	0.29	.06	0.07	0.42	.04	0.04	0.29
US residence (y)	.00	0.01	0.39	−.03	0.01	0.01	.00	0.01	0.63
Multivariate model[b]									
Sex	−.37*	0.15*	0.02*						
Education level	.02	0.05	0.70	.04	0.13	0.74	.04	0.05	0.50
Depressive symptoms	.02*	0.01*	0.05*	.06	0.03	0.06	.01	0.01	0.34
Community resource	−.07	0.15	0.65	.34	0.38	0.38	−.30*	0.11*	0.01*
Food security	.02	0.03	0.54	.01	0.08	0.90	.02	0.03	0.51
US residence (y)	.00	0.01	0.48	−.02*	0.01*	0.02*	.00	0.01	0.50

[a]SE=standard error.

[b]Concurrently adjusted for all listed variables, including a term for the statistical interaction of sex and education level, where listed.

*Findings statistically significant at $P \leq 0.05$.

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STATEMENT OF POTENTIAL CONFLICT OF INTEREST

R. S. Stafford reports a past consulting relationship with Mylan Pharmaceuticals. During the past 5 years, R. S. Stafford reports past honoraria from Bayer, and past research grant funding through Stanford University from Procter and Gamble, Bayer, Merck and Company, SmithKlineGlaxo, Toyo Shinyaku, and Wako Chemical USA. No potential conflict of interest was reported by the remaining authors.

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