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The Role of Social Support and Acculturative Stress in Health-Related Quality of Life Among Day Laborers in Northern San Diego

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Abstract

There is evidence to suggest that Latino day laborers experience higher levels of acculturative stress than Latinos in employment sectors in the US. Given the stress-buffering role that social support plays in minimizing the negative physical and mental health outcomes of stress, this study examined this relationship in a sample of 70 Latino Day laborers in the northern San Diego area (100% male, mean age = 27.7, SD = 9.1). Results from multivariate regression analyses showed that there was a significant interaction effect between social support and acculturative stress ($P = 0.025$) on physical health, indicating that higher levels of social support buffered the negative effects of acculturative stress on physical health. Acculturative stress and social support were not

associated with mental health status. Overall, these findings suggest that fostering social support may be an essential strategy for promoting health among Latino male day laborers.

Keywords

Latino; Day laborers; Social support; Migrants; Acculturative stress; Undocumented

Introduction

Every day, roughly 117,600 Latino immigrant men of Mexican origin are working as day laborers, centralized mostly in the Southwest Region of the US [1, 2]. *Day labor* is a term to refer to individuals who generally are hired for daily “under the table” miscellaneous labor at street corners or parking lots. Jobs can include construction, landscaping, moving services and farming [3]. Data from the few published studies available describing this population, shows that this workforce is predominantly Latino, with 59% born in Mexico, 28% born in Central America, and 7% born in the US [1]. A 2006 report by the regional task force on the homeless showed that at least, 1,600 homeless farm workers and day laborers were living in San Diego County [4].

Day laborers are a socially marginalized group that experiences multiple sources of stress [3, 5, 6]. Research demonstrates that marginalized immigrant groups, such as day laborers, in the US can experience various levels of stressors that can impact their physical health and mental well-being [6–8]. Recent local examples include public displays of prejudice against day laborers and farm workers by organized anti-Latino immigrant groups at day labor hiring sites [9].

In addition, factors considered to be chronic stressors are specifically experienced by day laborers. These can include living in extreme poverty, adjusting to a new foreign culture, language barriers, unauthorized immigration status, residing in anti-immigrant communities, [5, 6, 10–13]. Researchers have defined the collection of these stressors specific to immigration as *acculturative stress*.

Stress is defined as pressure or strain due to environmental demands, with physical, emotional or psychological risks [10, 14]. Acculturative stress is the accumulation of stressors directly related to the process of acculturation and resettlement from one nation to another [10]. Specific stressors to this type of stress include psychosocial stressors due to socio political vulnerability [15], learning a new language and becoming incorporated into the new environment [11, 16]. Particularly, a recent study shows that unauthorized Latino immigrants in the US have been found to report higher levels of anxiety due to separation from family, adherence to cultural traditions, and language difficulties than documented immigrants. The study also suggests that fear of deportation contributes the most to acculturative stress among Latino immigrants [17].

Specifically, stress in elevated levels can lead to psychological and physical symptoms, decreased quality of life, and serious health risks like cardiovascular disease, depression [11, 18–20] and even some cancers [21]. However, research on the relationship between stress

and various physical and mental health outcomes of Latino day laborers in the Southwest is limited. One study did show that Midwest Mexican immigrant farm workers, a group with similar characteristics, have exhibited high levels of acculturative stress, anxiety, and depression. Importantly, these risk factors were found to be correlated with deficiencies in social support [22].

Social support has been shown to be an important mitigating factor in buffering the negative physical and mental effects of stress [23, 24]. *Social support* is defined as “The information leading the subject to believe that he is cared for and loved, esteemed and a member of a network of a mutual obligation” [25]. Thus far, it is unclear how the role of social support mitigates the detrimental effects of stress on physical and mental health among Latino day laborers, in particular those who reside as “solo males” in the US without their families.

This study hypothesized that the amount of social support that day laborers perceive and/or receive while undergoing the stressful process of acculturation could have a buffering and protective effect [26] on health related quality of life that is reported by this population.

Methods

This San Diego State University Institutional Review Board (IRB)-approved study was conducted with a sample of 70 day laborers of Mexican origin currently residing in the northern San Diego area. According to the most recent data from the US Census Bureau [27] this area has a Caucasian majority of 80%, compared to the 5.6% population of Latinos. Surrounding neighborhoods near the data collection site were visibly affluent, yet the mountainous geography nestles numerous canyons where numerous homeless day laborers reside. Specific information on the demographics of this hidden population is not available; however, living conditions were visibly evident to our research team.

Data were collected between January 1 and July 20 of 2008. Every Sunday, day laborers from northern San Diego observe catholic mass provided by a local parish and organized by a local migrant outreach project. Held in the parking lot of a local business, mass is scheduled to begin at 9:00 a.m. For 4 weeks before the beginning of data collection, our research team was visibly present while building rapport and trust with our participants. As we attended mass, we communicated our intentions to the priest and requested that he introduce us and explain our goals. After a decision was made to begin data collection, our research team made general announcements after each mass. At this time we also communicated to potential participants the prerequisites to participate and the voluntary nature of our study.

Inclusion criteria were (a) age 18 or older, (b) principal employment as day laborer, (c) able to read and write Spanish, (d) of Mexican heritage, and (e) willingness to complete the survey questionnaire. Those with illiteracy problems could not be assisted due to the self-administration of our questionnaire. Most of the attendees are of Mexican origin and work as day laborers in surrounding areas thus fitting our inclusion criteria, with the exception of 7 individuals who lacked sufficient Spanish skills to complete the survey and 3 individuals who were excluded for being underage. The study was described to potential participants,

and because many (if not all) of them were of unauthorized immigrant status, they were reassured that their answers would be kept confidential and that no personal identifiers would be collected. We also guided interested participants to a table that was set up where we had writing material, pens, clipboards and an anonymous ballot-style box where participants submitted the finished questionnaires. An information sheet containing all the elements of the informed consent was given to each participant. Participants received a \$5 cash incentive for their time.

Measures

The *Hispanic stress inventory scale for immigrants* (HSI-I) assesses family/cultural conflict, immigration stress, occupational/ economic stress and parental stress [28]. Coefficient alpha reliability estimates for the subscales were between 0.91 and 0.77 in previous studies [29], coefficient alpha estimates for the total scores of the HSI-I were not found in the literature. The version used for this study was translated and back translated by a certified and native translator, and later compared to the original translated version, (which was not available at the time of survey administration).

Written instructions for this self-administered survey guided each participant to review each item and indicate whether the particular stressor had occurred within the preceding 3 months. If participants responded affirmatively, he then proceeded to rate the degree of stressfulness of that incident on a 5-point Likert-type scale, ranging from 1 (not at all stressful) to 5 (extremely stressful). A total stress frequency score was calculated in each of the 5 stress subscales (occupational/economic, parent, family cultural, marital, immigration) while a total stress appraisal score was calculated by tallying the Likert scale 1 through 5 while adding all “no” responses which are scored “1” with the remaining stress appraisal scores to calculate sub-scale totals. For the HSI-I total stress appraisal scores, all sub-scale scores were added with higher scores indicating higher perceived stress. Coefficient alpha reliability estimates for the total score in the current study were ($\alpha = 0.88$).

The Spanish *interpersonal support evaluation list* (ISEL-12) was used to measure overall perceived (i.e., functional) social support, including three subcategories: perceived availability of a confidante (appraisal support), social group (belonging support), and material aid (tangible support) [26]. This Spanish translated version was originally developed for a Venezuelan sample using foreword and back translation with good psychometric outcome properties [30]. In a different study, it later underwent additional changes for use in a Mexican–American sample of Latinas in California with an internal consistency score estimated at ($\alpha = 0.81$) [31]. For the current study, this survey was modified slightly to be more culturally relevant to the context of day laborers’ lives. Specifically, the question: “if I wanted to go on a trip for a day (for example, to the country or mountains), I would have a hard time finding someone to go with me” was altered due to unessential use of the word “mountain”. The word “beach” was inserted in its place since the local day laborer population sampled lived in canyons in a mountainous area; thus, the use of the word “mountain” would be redundant. The social support items had a 4-point response format [i.e., from 0 (definitely false) to 3 (definitely true)]. In this study, a total social support score was created by summing all 12 items, resulting in a possible range of 0–

36. Coefficient alpha reliability estimates for the total score in the current study were ($\alpha = 0.74$).

The *SF12v2* was used to evaluate perceived general health-related quality of life and functional status [32]. This measure is an abbreviated version of the widely used SF-36. In this 12-item scale, the results are summarized using norm-based scoring of physical health and mental health. The scale has demonstrated good test–retest reliability [32, 33]. The Spanish version of the scale was used under license by QualityMetric®[34]. In order to compare to normative data, raw scores for the *SF12v2* were transformed using scoring instructions from QualityMetric [34]. The scale is divided into two subscales: the physical component summary (PCS) and mental component summary (MCS) both ranging from 0 to 100. Coefficient alpha reliability estimates for this study were estimated at ($\alpha = 0.76$) for the PCS and ($\alpha = 0.71$) for the MCS component.

Analysis

Data analysis was conducted using SPSS 16.0.1 for Mac. Descriptive statistics are reported for all independent and dependent variables (Table 1). Correlational analyses were used to examine the bivariate relationship between the independent (acculturative stress and social support) and dependent (physical and mental health) variables (Table 2). To analyze this study's hypothesis, multivariate linear regression was used to examine whether social support moderates the relationship between acculturative stress and the two outcome measures: mental and physical health (Table 3).

Results

Descriptive Statistics

The mean age of participants was 27.7 (SD = 9.07) with a range of 18–53 years with all male participants. Table 1 represents descriptive statistics of scales and continuous items for the total sample. Also in this table, means and standard deviations of both independent (IV) and dependent variables (DV) were examined in order to ensure that each was normally distributed within acceptable limits. The IV social support fell outside of acceptable ranges for kurtosis (± 2) [35], and was therefore transformed by squaring the total sum of the results for the ISEL-12 scale. Analyses were also run using an untransformed IV and did not change the results.

The mean of the total sum results for all variables except acculturative stress (HSI-I) were compared with available community normative data (see Table 1, Normative data for the HSI-I were not available in the literature). The social support total score ($M = 23.55$, $SD = \pm 5.39$) was lower than available normative data (See Table 1).

Day laborers in the current study also had lower scores for the DV PCS subscale of the *SF12v2* ($M = 48.268$, $SD = \pm 8.08$) than most recent data for the US general population in 1998 ($M = 49.63$, $SD = \pm 9.91$) [31]. The current sample also had lower MCS scores ($M = 44.75$, $SD = \pm 9.07$) than the US general population in 1998 ($M = 50.2$, $SD = \pm 9.75$) [32].

Bivariate correlation results (Table 2) showed a significant inverse relationship between the dependent variables (physical health and mental health), $r = -.391$ ($P = 0.01$). There was a significant inverse relationship of $r = -0.311$ ($P = 0.05$) between acculturative stress and physical health, meaning that higher levels of stress were associated with lower levels of physical health. All other correlations among dependent and independent variables were nonsignificant, however, these variables were not excluded from our multivariate model due to our theoretical expectations.

Results from the multivariate linear regression analysis (Table 3) showed that in the main effects model including both acculturative stress and social support predicting physical and mental health (block 1), a higher acculturative stress significantly predicted a decreased self-reported physical health ($P = 0.023$), after controlling for social support. Social support was a nonsignificant predictor in the main effects model predicting both physical and mental health.

For the second model including main effects (acculturative stress and social support) plus an interaction term (acculturative stress $\times$ social support) (block 2), social support moderated the relationship between acculturative stress and PCS ($P = 0.025$). However, results showed that the interaction term was not significant in predicting mental health (Table 3).

Discussion

To our knowledge, this is the first study to examine acculturative stress, mental and physical health and social support in Latino day laborers. Overall we found that social support, mental health and physical health scores were lower for our sample population than for the available normative data. In addition, similar to other studies [25], we found that stress was related to poorer physical health. However, we found no association with stress and mental health. In addition, we found a significant inverse association between physical and mental health. This finding is opposite to that of the available literature on the relationship between these two variables in a national sample of Latinos [36], where poor physical health tends to correlate with poor mental health status.

However, our study partially supported our hypothesis and supports others studies [19, 20] suggesting that stress can have a negative effect on physical health in day laborers. This study did not find any significant relationships among acculturative stress and social support in predicting mental health. Furthermore, the stress-buffering hypothesis was also supported, implying that social support plays a beneficial role in the process of acculturative stress in day laborers.

Our analysis was limited by the fact that our sample was restricted largely to Mexicans who had the capability of attending mass in a small geographic area of the research site. Also, the HSI-I had a noticeable and considerable amount of stress burden on the participant. Also, the language in which the scale is written and the complexity of the instructions were reported to be confusing in a small test pilot with three individuals of a similar demographic group. These factors probably resulted in the exclusion of 11 HSI-I incomplete surveys. Similarly, 8 participants yielded enough missing data in the SF-12 that forced us to exclude

their results. Furthermore, the complete battery of the three measurement scales with an average time of administration of 25 min, might have made some of the participants anxious, since most arrived and left the site in groups and may have hurried as people started leaving the premises. Additionally, some participants seemed to look at each other to see how far along they were in their questionnaires, suggesting that some might have been unclear about some of the items or felt like they were being left behind. Another limitation is that coping styles and health-related quality of life varies among Mexican immigrants length of stay in the US, a characteristic that was not considered in this study [37]. Importantly, the cross sectional nature of this study and the non-inclusion of unhealthy behavior measures could have explained the inverse relationship found between our physical and mental health outcomes. For example, alcohol abuse is well established as a causal factor of decreased levels in both physical and mental health, while its abuse has been found to be widely associated among day laborer groups [38]. Lastly, this study did not incorporate a control group of non-day labor Mexican subjects or those in other employment sectors.

Notwithstanding the identified limitations, we found that a higher acculturative stress score was significantly associated with a decreased self-reported physical health score among day laborers in northern San Diego. In addition, mental health scores in day laborers were reported lower than the national normal average. Yet social support can have a positive effect on the deleterious effect of acculturative stress in day laborers' reports of their physical health status.

However, research and interventions utilizing social support groups and programs that target day laborers of Mexican origin are not reflected in the existing literature. This is unfortunate since findings in this area can help professionals understand the importance of stress and social support in this population, as well as correctly evaluate etiological factors in Latino clients and populations. Prospective studies should monitor how other day laborers in other informal employment sectors respond to stress and different social support coping styles. Also, health-related quality of life should be observed more closely between Mexican and other Latino day laborers in the context of length of stay in the US, with the inclusion of alcohol as a variable of interest. Our specific research recommendations include:

(a) *Expand health-related research within the day labor population and other Latino groups working in the informal economy.* Recruitment for this population can be done through local and national day labor organization groups as well as immigrant assistance centers. Ideally, through community based participatory research, participants can work together with researchers to identify the obstacles and challenges that are brought forward by acculturative stress. (b) *Propagate and promote research-based programs and policies that support social support as a strategy for risk prevention among day laborers.* As stated above, social support can have a buffering effect against the deleterious effects of acculturative stress. We suggest longitudinal studies that study the buffering effects of different types of social support over specific periods of time. (c) *Formulate migrant health programs that incorporate social support as specific therapeutic strategies.* Through assessment of levels of acculturative stress, treatment and outreach interventions should be specifically and individually tailored to fit the participants' needs. This, together with the understanding of the different types of social support between different groups, research staff should

administer and provide a varied range of therapeutic and recreational services that can assist in reducing the negative effects of acculturative stress.

References

1. Valenzuela, A.; Theodore, N.; Melendez, E.; Gonzalez, A. Center for the Study of Urban Poverty. Los Angeles: University of California; 2006. On the corner: day labor in the United States. http://www.sscnet.ucla.edu/issr/csup/uploaded_files/Natl_DayLabor-On_the_Corner1.pdf. [Accessed 5 May 2009]
2. Valenzuela, A. Working Paper No. 22. San Diego: San Diego: the Center for Comparative Immigration Studies, University of California; 2000. Working on the margins: immigrant day labor characteristics and prospects for employment.
3. Buchanan S. Day labor and occupational health: time to take a closer look. *New Solut J Environ Occup Health Policy*. 2004; 14:253–260.
4. Regional task force on the homeless: regional homeless profile. Report No. 2. 2006 <http://www.rtfhsd.org/>.
5. Flores E, Tschann JM, Dimas JM, Bachan EA, Pasch LA, de Groat CL. Perceived discrimination, perceived stress, and mental and physical health among Mexican-origin adults. *Hisp J Behav Sci*. 2008; 30(4):401–424.
6. Negi JK. Identifying psychosocial stressors of well-being and factors related to substance use among day laborers. *J Immigr Minor Health*. 2010
7. Finch BK, Kolody B, Vega WA. Perceived discrimination and depression among Mexican-origin adults in California. *J Health Soc Behav*. 2000; 41(3):295–313. [PubMed: 11011506]
8. Cuellar, I. Occasional Paper No. 40. Michigan: The Julian Samora Research Institute, Michigan State University; 2002. Mexican-origin migration in the US and mental health consequences.
9. Varsanyi MW. Immigration policing through the backdoor: city ordinances, the “right to the city,” and the exclusion of undocumented day laborers. *Urban Geogr*. 2008; 29(1):29–52.
10. Berry JW, Kim U, Minde T, Mok D. Comparative studies of acculturative stress. *Int Migr Rev*. 1987; 21(3):491–511.
11. Finch BK, Vega WA. Acculturation stress, social support, and self-rated health among Latinos in California. *J Immigr Minor Health*. 2003; 5(3):109–117.
12. Matheny KB. Socio-psychological predictors of acculturative stress among Latino adults. *J Ment Health Couns*. 2000; 22(4):306–317.
13. Thomas TN. Acculturative stress in the adjustment of immigrant families. *J Soc Distress Homeless*. 1995; 4(2):131–142.
14. McEwen B, Sapolsky R. Stress and your health. *J Clin Endocrinol Metab*. 2006; 91(2)
15. Cervantes RC, Padilla AM, de Snyder NS. The Hispanic stress inventory: a culturally relevant approach to psychosocial assessment. *Psychol Assess*. 1991; 3(3):438–447.
16. Smart JF, Smart DW. Acculturative stress of Hispanics: loss and challenge. *J Couns Dev*. 1995; 73(4):390–396.
17. Arbona C, Olvera N, Rodriguez N, Hagan J, Linares A, Wiesner M. Acculturative stress among documented and undocumented Latino immigrants in the United States. *Hisp J Behav Sci*. 2010; 32(3):362–384.
18. Berry, JW. Acculturation and health: theory and research. In: Kazarian, SS.; Evans, DR., editors. *Cultural clinical psychology: theory, research and practice*. New York: Oxford University Press; 1997. p. 39-57.
19. Gil AG, Vega WA, Dimas JM. Acculturative stress and personal adjustment among Hispanic adolescent boys. *J Community Psychol*. 1994; 22(1):43–54.
20. Lunney M. Stress overload: a new diagnosis. *Int J Nurs Terminol Classif*. 2006; 17(4):165–175. [PubMed: 17117946]
21. Cohen S, Janicki-Deverts D, Miller GE. Psycholog stress dis *JAMA*. 2007; 298(14):1685–1687.
22. Hovey JD. Acculturative stress, depression, and suicidal ideation in Mexican immigrants. *J Cultur Divers Ethnic Minor Psychol*. 2000; 6(2):134–151.

23. Nandi A, Galea S, Lopez G, Nandi V, Strongarone S, Ompad DC. Access to and use of health services among undocumented Mexican immigrants in a U.S. urban area. *Am J Public Health*. 2008; 98(11):2011–2020. [PubMed: 18172155]
24. Arcury TA, Quandt SA. Delivery of health services to migrant and seasonal farm workers. *Annu Rev Public Health*. 2007; 28(1):345–363. [PubMed: 17291182]
25. Cobb S. Presidential address-1976. Social support as a moderator of life stress. *Psychosom Med*. 1976; 38(5):300–314. [PubMed: 981490]
26. Cohen, S.; McKay, G. Social support, stress and the buffering hypothesis: a theoretical analysis. In: Baum, A.; Taylor, SE.; Singer, JE., editors. *Handbook of psychology and health*. Hillsdale: NJ: 1984. p. 253-267.
27. U.S. Census Bureau. [Accessed on May 2009] 2006. <http://quickfacts.census.gov/qfd/states/06/0666000.html>.
28. Cavazos-Rehg PA, Zayas LH, Walker MS, Fisher EB. Evaluating an abbreviated version of the Hispanic stress inventory for immigrants. *Hisp J Behav Sci*. 2006; 28(4):498–515.
29. Thoman LV, Surís A. Acculturation and acculturative stress as predictors of psychological distress and quality-of-life functioning in Hispanic psychiatric patients. *Hisp J Behav Sci*. 2004; 26(3): 293–311.
30. Bastardo YM, Kimberlin CL. Relationship between quality of life, social support and disease-related factors in HIV-infected persons in Venezuela. *AIDS Care*. 2000; 12(5):673–684. [PubMed: 11218552]
31. Gallo L, Espinosa K, Ferent V, Urbina J, Talavera G. Education, psychosocial resources, and metabolic syndrome variables in Latinas. *Ann Behav Med*. 2007; 34(1):14–25. [PubMed: 17688393]
32. Ware J, Kosinski M, Keller SD. A 12-item short-form health survey: construction of scales and preliminary tests of reliability and validity. *Med Care*. 1996; 34(3):220–233. [PubMed: 8628042]
33. Gandek B, Ware JE, Aaronson NK, Apolone G, Bjorner JB, Brazier JE. Cross-validation of item selection and scoring for the SF-12 health survey in nine countries: results from the IQOLA project. *Int Qual life assess JCE*. 1998; 51(11):1171–1178.
34. Ware, JE.; Kosinski, M.; Turner-Bowker, DM.; Gndek, B. How to score version 2 of the SF-12® health survey (with a supplement documenting version 1). Lincoln, RI: QualityMetric Incorporated; 2002.
35. Tabachnick, B.; Fidell, L. *Using Multivariate Statistics*. 4th ed.. Boston: Allyn and Bacon; 2001.
36. Ortega AN, Feldman JM, Canino G, Steinman K, Alegría M. Co-occurrence of mental and physical illness in U.S. Latinos. *Soc Psychiatry Psychiatr Epidemiol*. 2006; 41(12):927–934. [PubMed: 17013767]
37. Cavazos-Rehg PA, Zayas LH, Spitznagel EL. Legal status, emotional well-being and subjective health status of Latino immigrants. *J Natl Med Assoc*. 2007; 99(10):1126–1131. [PubMed: 17987916]
38. Worby PA, Organista KC. Alcohol use and problem drinking among male Mexican and Central American immigrant laborers. *Hisp J Behav Sci*. 2007; 29(4):413–455.
39. Cohen S. Basic psychometrics for the ISEL 12 item scale. 2008 May. <http://www.psy.cmu.edu/~scohen/Psychometrics%20for%20the%20ISEL%2012%20item%20scale.doc>.

Table 1

Descriptive statistics

Measure	Population normal average	M (SD) N = 70	Range of scores	Possible range	Chronbach alpha
HIS-I sum score	–	51.06 (17.33) n = 62	25–98	25–125	0.88
ISEL-12 sum score	28.8 (5.7) ^a	23.54 (5.39) n = 70	2–36	0–36	0.74
SF12 PCS physical health	49.63 (9.91) ^b	48.26 (8.08) n = 59	22.86–66.97	0–100	0.76
SF12 MCS mental health	50.2 (9.75) ^b	44.75 (9.07) n = 59	23.43–66.71	0–100	0.71

^aReference Cohen [39]^bReference Ware et al. [34]

Table 2

Bivariate correlation among independent and dependant variables

	Physical health (PCS)	Mental health (MCS)	HSI-I Acculturative stress	Social support Transformed score
Physical health	1	–	–	–
Mental health	–0.391**	1	–	–
Acculturative stress	–0.311*	–0.001	1	–
Social support	–0.068	0.212	–0.092	1

* $P < 0.05$;** $P < 0.01$

Table 3

Multivariate linear regression

Variable	β	P value	R ²	F	P value
<i>MCS</i>					
Block 1—main effects			0.078	1.998	0.14
Social support transformed	0.28	0.05			
HIS-I (Hispanic stress inventory sum score)	0.03	0.80			
Block 2—main plus interaction effect			0.08	1.327	0.27
Social support transformed	0.16	0.71			
HIS-I (Hispanic stress inventory sum score)	-0.05	0.88			
Interaction	0.14	0.79			
<i>PCS</i>					
Block 1—main effects			0.10	2.83	0.07
Social support transformed	-0.08	0.54			
HIS-I (Hispanic stress inventory sum score)	-0.32	0.02*			
Block 2—main plus interaction effect			0.18	3.41	0.02*
Social support transformed	0.75	0.08			
HIS-I (Hispanic stress inventory sum score)	0.32	0.34			
Interaction	-1.05	0.04*			

* *P* 0.05;

** *P* 0.01