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Fatigue Among Spanish and English Speaking Latinos

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Abstract

The present study investigated sociodemographic differences, fatigue severity, and the occurrence of prolonged or chronic fatigue reported by Spanish speaking and English speaking Latinos. The sample included 2,102 English speaking Latinos and 1,348 Spanish speaking Latinos interviewed as part of an epidemiological study of persons with chronic fatigue syndrome in the Chicago area. Results indicated that English speaking Latinos scored higher on measure of fatigue than Spanish speaking Latinos. Further, language status continued to be a predictor of fatigue level even when controlling for other sociodemographic differences found between the groups. Findings suggest that language spoken in Latino populations is important in predicting fatigue, and point to the potential importance of cultural factors such as acculturation or acculturative stresses.

Keywords

fatigue; chronic fatigue; Latinos; language

The prevalence of fatigue in ethnically diverse populations has been infrequently studied. Most prevalence studies have focused on hospital settings or on populations drawn from physicians' offices or other health care settings. Consequently, persons of lower socioeconomic status (SES) and of diverse ethnicities are excluded because they tend to have less access to health resources and thus less likely to be sampled in these settings (Richman, Flaherty, & Rospenda, 1994). In particular, few fatigue epidemiological studies have examined ethnic differences in rates of fatigue (Song, Jason, & Taylor, 1999; Jason, Jordan et al., 1999). Of the few studies that have examined rates of fatigue in diverse ethnic groups, one study (Cathebras et al., 1995) conducted in a primary care setting found that French speaking Canadians reported more fatigue than English speaking Canadians. In another study examining ethnicity and fatigue among individuals attending a university health center, Buchwald et al. (1996) found no ethnic group differences in fatigue when comparing White and "nonwhite" (i.e., African American, Asian American, American Indian, and Latino) students.

Researchers have also examined rates of fatigue among multi-ethnic samples drawn from the larger community. These studies have the advantage of not requiring that a person have access to health care in order to be included in the study, and therefore would be more representative of the community at large. Nisenbaum et al. (1998), in a random digit-dialing telephone survey conducted with 1,510 individuals, examined the prevalence of fatigue and the additional presence of symptoms typically experienced in chronic fatigue syndrome (CFS), a specific medical condition characterized by chronic, disabling fatigue that cannot be explained by other medical or psychiatric disorders. They found that the types of CFS-like symptoms reported did not vary by race or ethnicity. Steele et al. (1998) conducted an

epidemiological study of chronic fatigue among a representative sample of adults in the San Francisco area using a telephone screening survey. These researchers report higher levels of CFS-like illness among African-Americans and Native Americans. Finally, in a randomly selected community-based population, Song, Jason, and Taylor (1999) found that the mean fatigue severity scores were significantly higher for African Americans and Latinos when compared to Caucasians. In the same community sample, Jason et al. (1999) found that Latinos have significantly higher prevalence rates of CFS when compared to Caucasians and African Americans.

These studies suggest that US minority groups may report higher levels of fatigue than Caucasians, and may be at higher risk for developing chronic fatigue and CFS. However, differences in levels of fatigue among the various ethnic groups may due to several methodological considerations, including differences in the ethnic groups sampled and differences in survey methods (i.e. telephone screening versus medical examination and interview). For example, the differences reported in Song, Jason, & Taylor (1999) and Jason et al. (1999) between Latinos and other ethnic groups in overall fatigue severity and CFS prevalence may have due to the fact that instruments were administered in Spanish and English, which did not occur in the other community-based or primary care based studies. Administering the measures in Spanish and English would allow for inclusion of a larger proportion of the Latino population. Further, these findings suggest that Latinos may be at particular risk for developing fatigue and CFS, which highlight the need to further investigate the occurrence of fatigue in Latino samples.

There are several explanations for why certain minority groups may have higher rates of fatigue. Ethnic minorities may experience a greater burden or stress, which may in turn cause changes in preventative health behaviors and illness coping behaviors that may lead to further negative health effects (Schulz et al., 2000). Among Latinos, marital status is another factor that may affect fatigue (Amaro, Russo, & Johnson, 1987). Divorced and separated Hispanic women having young children expressed considerable levels of stress (Amaro, Russo, & Johnson, 1987). Further, Hispanic females are at greater risk for experiencing distress than their male counterparts because of the multiple role conflicts of wife, mother and professional, sex role norms and expectations and gender stereotypes (Salgado de Snyder, Cervantes & Padilla, 1990). Moreover, SES has been identified as a possible stress factor that may partially explain the difference in general health status among ethnic groups (Schultz et al., 2000). Observed differences in overall health may also be influenced by exposure to hazardous occupations and inadequate health care (Perez-Stable, Marin & Van Oss-Marin, 1994; Ruiz, 1995).

Another source of stress for Latinos in the United States of America may be acculturative stress. Acculturation can be viewed as the interchange that occurs when two different cultures come into contact (Unger, Boley Cruz, Rohrbach et al., 2000). Additionally, acculturation is a multidimensional concept that includes historical familial identification, contacts with the country of origin, the ability to read and write in the native language, association with friends, and food selection (Unger, Boley Cruz, Rohrbach et al., 2000). One of the major components of acculturation is language usage, which accounts for a substantial proportion of the variance in many acculturation studies (Epstein, Botvin, Dusenbury, & Diaz, 1996). A study by Griffith and Villavicencio (1985) reported that more acculturated English speaking Mexican Americans reported larger support networks to deal with personal distress than less acculturated Mexican Americans. People who speak primarily Spanish may be more subject to an additional stress burden, and this may negatively impact their health and their experience of fatigue.

In summary, it is important to examine rates of fatigue among Latinos because this group appears to be at high risk for developing both fatigue and chronic fatigue syndrome, and little research to date has attempted to delineate potential explanations for this discrepancy. Despite some intriguing findings suggesting that Latinos may be at higher risk for developing fatigue, this topic continues to be understudied. In addition, to date, no one has examined the association between language status and fatigue, and few studies have examined fatigue within a Spanish speaking US Latino population. Finally, the research in this area has tended to focus differences between ethnic groups. Few studies have examined within-group differences, which may allow for the identification of variables that might explain between-group differences in rates of fatigue.

This investigation will examine the influence of language status (English vs. Spanish speaking) on the severity of fatigue for Latinos. It is expected that age, gender, marital status, dependent children, work status, level of education and SES may vary between English speaking and Spanish speaking Latinos. Further, it is expected Spanish speaking Latinos will have higher rates of fatigue and higher prevalence of prolonged or chronic fatigue because they may be subject to more acculturative stresses, and because they may be more likely to fall into lower SES backgrounds.

Method

The data is derived from a larger community-based study examining the prevalence of chronic fatigue syndrome (CFS) in an ethnically and socioeconomically diverse urban sample (for more details see Jason, Jordan et al., 1999). This larger study of CFS was carried out in three stages. Stage 1 entailed a cross-sectional screening telephone survey of a random sample of 28,673 households. Stage 2 involved a structured psychiatric interview for those respondents from Stage 1 who screen positive for CFS-like illness (i.e., 6 or more months of fatigue and at least four minor symptoms based on the Fukuda et al., 1994, CFS criteria) and a random sample of individuals who screen negative. Stage 3 involved a medical exam and structured history taking for the same CFS-like and control groups. In the present study, only data from Stage 1 will be presented.

Procedure

Procedures described in Jason et al. (1999) were used to select one adult from each household. Birth dates for each adult were gathered, and the person with the most recent birth date was interviewed. A random sample of adults (18 years or older) was screened between September 1995 and May 1997; and individuals who were deemed to potentially have CFS were invited to participate in additional phases of the research study from 1996 to 1998. All study data collection and coding was completed in 1998. The sample was stratified to represent several neighborhoods in Chicago, which were 10 to 15 minutes from the site of the medical examinations. In all, eight Chicago community areas were sampled, including low SES areas such as West Garfield Park, middle-class areas such as Bridgeport and Armour Park, gentrified areas such as the near West Side, and high SES area such as the Loop and the near North Side.

The phone numbers were obtained from Survey Sample Incorporated. This company generated random telephone numbers using valid Chicago prefixes. Thus, both listed and unlisted numbers were included as well as business and nonworking numbers. The Public Opinion Laboratory at Northern Illinois University has collected data comparing telephoning and personal interviewing for low-income respondents in Chicago. Almost all of the low-income respondents have access to telephones (W. McCready, personal communication, December 9, 1993).

Procedures adopted by W. McCready (personal communication, October 27, 1992) were used to increase response rates. For example, to decrease the number of people who might immediately hang up, respondents were told that the interviewer was from a university and that no products were being sold. This information was relayed to interviewees at the beginning of the interview. Telephone calls were made on Monday through Friday, from 9:00 a.m. to 8:00 p.m., and on Saturday and Sunday from 10:00 a.m. to 8:00 p.m. Participation rates tended to be highest on evenings and weekends, but interviewers carried the times they called each number. Getting through the large number of answering machines posed another problem that was handled by trying to reach participants at different times. If the interviewer continued to reach an answering machine, a message was left on the eighth call giving the standard introduction and requesting that the person call the survey group to be interviewed.

Ineligible individuals were those too ill to be interviewed or those not speaking English or Spanish. The response rate was calculated by dividing the number of completed interviews by the number of eligible adults with whom contact was attempted, either successfully or unsuccessfully. Non-respondents were those calls in which an answering machine was reached or the household or person refused to be interviewed.

Interviewer Selection and Training

Twenty interviewers with past survey research experience were recruited. The interviewers were an ethnically diverse group, including Caucasian, African American, Asian and Latino male and female interviewers. Training of these individuals took place in three phases. In Phase 1, all interviewers were familiarized with the survey questionnaire, phone logs, random phone number lists, and survey procedures. This orientation ensured that all interviewers understood the technical terms and medical concepts included in the survey well enough to explain the terms to those interviewed. Phase 2 of the training involved an intensive role-playing session in which each interviewer participated in mock interviews, received feedback concerning his or her performance, and then role-played other interviews with criticism and suggestions in mind. The final training phase involved individual supervision of each interviewer during their first 10 interviews with immediate feedback provided. In addition, 10% of subsequent calls were monitored. Weekly meetings were held in which all interviewers discussed their progress and problem solved any difficulties that arose.

Several Spanish-speaking interviewers were recruited, and Latino respondents were offered the option of doing the interview in Spanish. A Latino clinical psychologist translated all instruments for the project into Spanish, and the translated measures were then reviewed and tested by a team of Spanish speaking research assistants and consultants who verified the accuracy and validity of these measures. When an interviewer reached a person who preferred to be interviewed in Spanish or who were unable to communicate in English and appeared to speak Spanish, the person was re-contacted later by Spanish speaking interviewers. Individuals who did not speak English or Spanish were excluded, but in those cases, the interviewers always tried to contact an English speaking person in the household to serve as a translator.

Response Rate

Of 78,175 attempted telephone numbers, 47,914 (61 percent) were non-residential/non-working (i.e. business, fax, no answer, non-working), 1,588 (2 percent) were ineligible (i.e. those too ill to be interviewed or those not speaking Spanish or English), and 28,673 (37 percent) were residential/working. Among the residential/working numbers, 18,675 households were contacted for a 65.1 percent completion rate. This is a conservative number

as it includes households where an answering machine was reached. If we only include those residential/working numbers in which we reached an eligible household ($n=24,953$; in other words we do not count answering machines), the completion rate would be 74.8 percent. Either of these completion rates is extremely high, particularly when comparable surveys are examined (e.g. the published completion rate for the Metropolitan Chicago Annual Survey is 60 percent; Jan Dunham, personal communication, 20 February 1998).

Sample

Using the procedure described above, 18,675 persons complete the CFS screening interview. Of the 18,675 adults interviewed, 9,717 were Caucasian, 3,692 were African American, 3,450 were Latino, and 1,614 were of other ethnic origins. There were 202 individuals who did not provide information regarding their ethnic identification. The current sample included only those people who were identified as Latino. This sample included 1,944 women and 1,506 men. The mean age for the Latino group was 35.82. During the initial screening process, Latinos who completed the interview in Spanish were classified as predominately Spanish speaking. Latinos who completed the interview in English were classified as predominantly English Speaking. The sample of participants examined in the current investigation included 2,102 English speaking Latinos and 1,348 Spanish speaking Latinos.

Measures

The CFS Screening Questionnaire (Jason, Ropacki, Santoro, Richman Heatherly et al., 1997)—This questionnaire assessed sociodemographic characteristics and provided information for preliminary classification into screen positive (CFS-like) versus screen negative groups. Sociodemographic information included gender, age, ethnicity, occupation, education, marital status, parental status, work status, homemaker and student. The revised scoring rules for the Hollingshead's Index of Social Status (Hollingshead, 1975), developed and validated by Wasser, (1991), were used to classify socioeconomic status (SES). This screening instrument has been found to have adequate reliability and validity. Fatigue related characteristics include prolonged fatigue (i.e. the presence of one month or more of fatigue) or chronic fatigue (i.e. the presence of fatigue for greater than six months) (Jason, Ropacki, et al., 1997).

The Fatigue Scale (Chalder et al., 1993)—This scale was used to assess fatigue severity. This scale was originally used in a hospital-based case control study (Wessely & Powell, 1989) and was further refined by Chalder et al. (1993). Despite its brevity, the scale was found to be reliable and valid, and it had good face validity and reasonable discriminant validity. The Fatigue Scale consists of 11 items, and includes items such as "Do you have problems with tiredness?", "Do you feel weak?" and "Do you have difficulty concentrating?" with responses rated on a four-option continuum. Total fatigue severity scale scores range from 0 to 33, with higher scores signifying more fatigue. The fatigue scale also consists of two subscales: mental fatigue and physical fatigue. The mental fatigue subscale measures mental fatigue symptoms such as difficulty concentrating, thinking clearly, and memory difficulties. The physical fatigue subscale measures physical fatigue symptoms as feeling more tired than usual, feeling sleep or drowsy, having less energy, and having less strength than usual. Principal components analyses provided good evidence for the distinction between these two subscales (Chalder et al., 1993).

Statistical Analyses

First, sociodemographic and fatigue-related symptom differences were examined between the English speaking and the Spanish speaking Latino groups. Separate T-tests were

performed using language status group as the independent variable and age, the Chalder mental fatigue scale score, the Chalder physical fatigue scale scores, the total Chalder fatigue scale score, and SES as the dependent variables. Chi-square analysis was used to examine the association between the two language status groups and the sociodemographic variables of gender, marital status, parental status, homemaker status, student status, educational level, occupational level, the presence of prolonged fatigue, and the presence of chronic fatigue. Finally, the variables that were significantly different between the English and Spanish speaking groups on previous analyses and the language status variable were entered into a linear regression equation as independent variables and the Chalder physical fatigue scale score as the dependent variable.

Results

First, sociodemographic differences were examined between the Spanish speaking Latino and English speaking Latino groups. The results of these analyses are summarized in Table 1. Significant differences were found when looking at the variables of age, marital status, parental status, homemaker, student, educational level, occupational level, and SES. In general, the results indicated that Spanish speaking Latinos were more likely to be older, to be married, to have children, to be a homemaker, had a lower educational level, lower occupational level, an overall lower SES level, and were less likely to be students.

When examining fatigue-related symptoms, significant differences were found on the overall Chalder fatigue scale score, the Chalder physical fatigue subscale, the presence of prolonged fatigue only and the presence of chronic fatigue. The English speaking Latinos were more likely to have higher overall fatigue scale scores and scored higher on the physical fatigue subscale. Further, they were more likely to have either prolonged or chronic fatigue when compared to the Spanish speaking Latinos.

Finally, a linear regression analysis was performed with the physical fatigue scale score as the dependent variable. The physical fatigue scale was entered as the dependent variable instead of the overall fatigue scale score because the difference in overall fatigue severity appeared to be due specifically to significant differences between the two groups on the physical fatigue subscale. The independent variables of age, SES, marital status, parental status, homemaker status, student status, and language group classification were included as predictor variables because they had been found in the previous analyses to significantly differentiate the groups. The variables of occupational status and educational level were not included in this analysis because these two variables were combined to create the Hollingshead Index of Socioeconomic Status, and thus would be expected to be highly correlated with the SES variable. The results of this analysis are presented in table 2. In this regression analysis, age, parental status, homemaker status, and language status were found to significantly predict fatigue severity. Latinos who were older, who were not homemakers, had no children, and who were English speaking had higher levels of fatigue.

Discussion

In the current investigation, an epidemiological study of people with chronic fatigue syndrome was used to explore the relationship between language status, sociodemographic variables, fatigue severity, and the presence of prolonged and chronic fatigue. As hypothesized, the present investigation found that there were multiple sociodemographic differences between the English and Spanish speaking Latino groups. In addition, there was a difference between the English speakers and Spanish speakers in their levels of overall fatigue and on physical fatigue subscale. However, the direction of these findings was opposite to what was hypothesized, as English speakers tended to have higher levels of

overall fatigue, higher physical fatigue subscale scores, and were more likely to report having chronic fatigue, or fatigue lasting more than 6 months. Thus, it appeared that the English speaking group was at higher risk for developing fatigue when compared to the Spanish speaking group.

In terms of sociodemographic differences, Spanish speaking Latinos tended to be older, to be married, have children, and to be of a lower SES, than English speaking Latinos. Previous research has found that the sociodemographic variables of age, SES, and gender are important sociodemographic variable that predicts fatigue levels. For example, Loge et al. (1998) and Song et al. (1999) reported higher fatigue scores for older individuals than younger individuals. Similarly, older participants in the current sample also reported higher levels of fatigue. SES (SES) has also been found to be an important predictor of fatigue, with individuals with higher educational and occupational status reported lower levels of fatigue than those with less education and lower levels of occupational status (Jason, Jordan, et al., 1999). Similarly, in this group of Latinos, SES was found to be a significant predictor of fatigue levels, but that this difference disappeared when other sociodemographic variables of age, homemaker status, parental status, and language status were taken into account. It is possible that these sociodemographic variables may be more important than SES in predicting the occurrence of fatigue. In addition to age, gender has been also shown to affect fatigue (Loge et al., 1998; Song et al., 1999), with women reporting higher levels of overall fatigue (Jason, Jordan et al., 1999) and being at higher risk for experiencing fatigue (Chen, 1986). In the current sample, however, there were no significant differences in fatigue severity between the Latino men and women.

When examining their results on the mental fatigue and physical fatigue subscales which make up the Chalder fatigue severity scale, it was found that the Spanish speaking Latinos experienced higher levels of physical fatigue, and were similar in terms of the mental fatigue subscale score. Thus, the difference in the overall fatigue scale score may have been due to the difference found in the physical fatigue subscale. Further, language status was associated with higher levels of physical fatigue, even when the other sociodemographic differences were taken into account. This suggests that cultural variables may be important, and that the differences between these two groups are not attributable simply to the sociodemographic differences found between the groups.

In particular, these results are consistent with the view that the process of acculturation may affect the level of fatigue that Latinos experience. However, the direction of this association was opposite to the original hypotheses, in that English speakers were at higher risk of severe physical fatigue. This is a paradoxical finding in that previous research examining language status, acculturation, and overall distress has tended to find English speakers have larger social support networks, which are in turn believed to be associated with better overall functioning. It is possible that persons who are English speaking may need to transition frequently between two languages and two cultures, which may ultimately result in more stress from exposure to racism and discrimination, and which in turn may lead to poorer health outcomes. In contrast, Spanish speakers, who may be predominantly immersed in their culture of origin, may in fact experience higher levels of social support and be more likely to ascribe to cultural values that may help mitigate the negative effects of other risk factors on physical health. In this sample, Spanish speakers were more likely to be married and to have children, and the regression analysis found that being a parent significantly predicted lower levels of fatigue. It is possible that the presence of a family may help serve as a protective factor against developing severe fatigue in this group. These findings are consistent with other literature that has found that, as Latinos become more acculturated, they may become more prone toward negative changes in their physical health (Myers & Rodriguez, 2003). Finally, it is also possible that other factors that affect physical fatigue,

including physical activity levels, nutrition, or other health behaviors, may contribute to the differences in fatigue between the English and Spanish speaking groups.

There are several important social policy implications suggested by the results of the current study. Fatigue is a significant health problem, and many individuals in the US population report having either prolonged or chronic fatigue that significantly impairs their functioning. This study suggests that English-speaking Latinos may be at particular risk for developing fatigue, and, while this study suggests that cultural factors may be important, the specific reasons for this are currently unknown. This study suggests that there may be cultural factors within the Latino community that may protect an individual against the development of more severe forms of fatigue. Preventative measures and interventions should focus on helping individuals to stay connected with their culture of origin, which may help a person take advantage of cultural factors that help to protect an individual's health status. Further, chronic fatigue and other extreme forms of unexplained fatigue, such as chronic fatigue syndrome, have been conceptualized as being primarily a problem of Caucasian populations. However, interventions to address fatigue and factors that may contribute to fatigue, such as chronic sleep deprivation, poor nutrition, and poor health practices, should be tailored to the Latino community. Currently very little awareness exists within the Latino community and among health care providers that fatigue is an ongoing problem among Latinos.

Many health care providers continue to incorrectly conceptualize fatigue and chronic fatigue as health problems affecting primarily Caucasian populations. This may lead to poorer identification and treatment of individuals with more severe fatigue, as well as underdiagnosis of chronic fatigue syndrome. Educational programs for medical personnel and health care providers should emphasize the need to assess for the presence of severe, disabling fatigue among their Latino patients. Likewise, educational efforts aimed at the general public should emphasize that Latinos may be at higher risk than other groups for developing more severe and chronic forms of fatigue. Educational materials and interventions should be offered in both Spanish and English, as Spanish-speaking Latinos, while at lower risk for developing fatigue than their Spanish-speaking counterparts, may still be vulnerable to the effects of severe, chronic fatigue. It is also important to note that Spanish-language television, radio, newspapers, and other media outlets not only serve monolingual Spanish speakers but also bilingual Latinos, as these outlets serve as an important sources of information for the entire Latino community. Educational efforts in the Spanish language may reach not only the Spanish-speaking but the English-speaking Latinos as well.

Finally, this study highlights the importance of including Latinos who speak primarily Spanish in research investigating fatigue. The inclusion of ethnic minority groups in physical health research or in clinical trials is a continuing challenge for researchers, especially when one considers that ethnic minority groups may have a disproportionately higher disease risk when compared to Caucasian. Findings derived from purely English-speaking groups, even if they are English speaking Latinos, may not be generalizable to all Latinos. Within the exception of studies conducted by the DePaul research group, no other research group has studied fatigue with Spanish and English speaking Latinos. The inclusion of Spanish speaking Latinos in future research still should help ensure that a representative sample of Latinos, an extremely diverse ethnic group, is obtained. This may be accomplished through the use of Spanish speaking interviewers and through appropriate translation and back-translation of study instruments. While simply translating materials and giving potential participants the choice of completing measures in Spanish should not be expected to solve all of the challenges associated with increasing minority representation in research, it would likely improve compliance rates and help to ensure a more representative Latino sample.

Limitations of the current study include the use of language status as a proxy measure of acculturation status or other cultural factors. Acculturation was not measured directly. Language usage has been found to account for a substantial proportion of the variance in many acculturation studies (Epstein, Botvin, Dusenbury, & Diaz, 1996); therefore, while acculturation was not measured directly, the differences in language status suggests the degree to which individuals adhere to or engage in cultural behaviors or practices. However, while language status is correlated with acculturation level, it cannot be assumed that all individuals in either the Spanish or the English speaking group are at the same level of acculturation, or even that a person's process of acculturation proceeds in a linear fashion (Myers & Rodriguez, 2002). Further, other factors which may have contributed to differences between these two groups, including cultural role expectations, physical activity, or cultural health behaviors and health practices, were not directly measured. Differences between these two groups may not be due simply to how much individuals adhere to cultural practices or beliefs, but may be due to these other cultural factors. However, the current findings do suggest that cultural processes may serve a role as either risk or protective factors in the development of physical health outcomes. A final limitation of the present investigation is that, due to very small sample sizes, it was not possible to compare rates of actual diagnoses of chronic fatigue syndrome between the English and Spanish speaking group, because only 1 of the 9 Latinos ultimately diagnosed with chronic fatigue syndrome as part of the larger prevalence study was Spanish speaking. However, this proportion of English vs. Spanish speaking Latinos diagnosed with CFS is consistent with the current investigation's findings that that severe fatigue, especially severe physical fatigue, may be more problematic for the English speaking group.

These findings highlight the fact that different ethnic groups may have different patterns of risk and/or protective factors for fatigue, and that these factors may be a result of a complex interaction of sociodemographic and sociocultural factors. Future research focusing on cultural and other factors may ultimately help explain the differential rates of fatigue found among the Latino population when compared to other ethnic groups. Finally, interventions, education, and research on fatigue should specifically address the needs of this understudied demographic group.

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Table 1

Comparisons of sociodemographic variables and fatigue variables between the English-speaking and Spanish-speaking Latinos

N=3450	English-speaking latinos (2102)	Spanish-speaking latinos (1348)	df	test statistic	p
Age ^a	33.82	38.94	3424	$t = -10.31$	.000
Gender ^b					
Male	44.3%	42.7%	1	$\chi^2 = .89$	.345
Female	55.7%	57.3%			
Marital Status ^b					
Married	33.9%	54.5%	4	$\chi^2 = 248.52$	.000
Separated	5.8%	9.0%			
Widowed	3.1%	6.6%			
Divorced	11.8%	5.4%			
Never Married	45.4%	24.5%			
Children ^b					
Yes	55.5%	77.6%	1	$\chi^2 = 174.19$	.000
Homemaker ^b					
Yes	31.1%	51.6%	1	$\chi^2 = 145.89$	.000
Student ^b					
Yes	22.4%	8.4%	1	$\chi^2 = 114.21$	.000
Grade/Degree Completed ^b					
Less than H.S.	10.6%	52.5%	5	$\chi^2 = 842.98$	.000
Some H.S.	11.9%	11.2%			
H.S. or G.E.D.	29.6%	23.7%			
Partial College	26.8%	7.6%			

N=3450	English-speaking latinos (2102)	Spanish-speaking latinos (1348)	df	test statistic	p
Standard College	14.4%	4.6%			
Graduate Degree	6.7%	0.5%			
Work Status ^b					
Disability	20.8%	23.2%	5	$\chi^2 = 7.86$	.164
Unemployed	17.7%	26.8%			
Work P/T	12.3%	1.8%			
Work F/T	44.6%	41.1%			
Retired	3.8%	7.1%			
Disability/Retired	0.8%	-			
Occupation ^b					
Farm/Menial	5.5%	14.9%	8	$\chi^2 = 649.87$	.000
Unskilled Worker	14.6%	42.2%			
Semiskilled	13.0%	24.7%			
Skilled Manual	10.5%	8.8%			
Clerical/Sales	18.1%	4.3%			
Semiprofessional	13.8%	2.4%			
Minor professional	14.9%	1.6%			
Lesser professional	5.0%	1.0%			
Higher Executive	4.5%	0.2%			
Chalder ^a	13.02	12.53	3446	$t = 3.70$	.000
Chalder-physical ^a	8.61	8.08	3446	$t = 5.40$	.000
Chalder-mental ^a	4.41	4.45	3446	$t = -.747$	.455

	English-speaking latinos (2102)	Spanish-speaking latinos (1348)	df	test statistic	p
N=3450					
Prolonged Fatigue Only ^b					
Yes	10.5%	13.1%	1	$\chi^2=5.21$	.022
Chronic Fatigue ^b					
Yes	6.5%	4.7%	1	$\chi^2=4.46$	.035
SES ^a	27.02	14.67	2746	$t=27.85$	.000

Table 2

Results of Linear Regression Analysis, with Physical Fatigue Subscale Score as dependent variable

Variable	β (S.E.)	Significance
Age	.05(.00)	.001
Marital Status	-.02(.12)	.182
Parental Status	-.06(.14)	.001
Homemaker Status	-.14(.12)	.000
Student Status	.03(.16)	.104
SES	.00(.01)	.890
Language Status (Spanish vs. English)	-.14(.13)	.000