Stressors and Coping Mechanisms Associated with Perceived Stress in Latinos

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Objective: To evaluate the relationship between causes of perceived stress and the coping mechanisms used by Latino adults with perceived stress.

Design, Setting, Participants: This cross-sectional survey was conducted on a convenience sample of 200 Latino adults (aged ≥18 years). They were recruited from clinics, migrant camps, community events, and churches located in Charleston, S.C. This survey included questions regarding causes of perceived stress, perceived stress (Perceived Stress Scale 10), coping mechanisms (Brief COPE), and depression (Perceived Health Questionnaire 9).

Measures: High perceived stress (PSS ≥15) was the primary outcome measure. Coping mechanisms and stressors were secondary outcomes.

Results: Most (92%) of the sample was born outside the United States, and 66% reported high perceived stress. Stressors associated with high perceived stress included discrimination (P=.0010), lack of insurance (P=.0193), health problems (P=.0058), and lack of money (P=.0015). The most frequently utilized coping mechanisms were self-distraction (54.77%), active coping (69.85%), positive reframing (56.78%), planning (63.82%), acceptance (57.87%), and religion (57.79%). Latinos with higher perceived stress were more likely to report discrimination (OR: 3.401; 95%CI 1.285–9.004) and health problems (OR: 2.782; 95%CI 1.088–7.111) as stressors, and to use denial as a coping mechanism (OR: 2.904; 95%CI 1.280–6.589).

Conclusion: An increased prevalence of perceived stress among the Latinos evaluated in this study was associated with using denial as a coping mechanism, and encountering discrimination and health problems as sources of perceived stress. Most individuals responded to stressors by utilizing a variety of both adaptive and maladaptive coping mechanisms. (*Ethn Dis*. 2015;25[1]:78–82)

Key Words: Latino, Perceived Stress, Coping, Discrimination, Denial, Health Problems

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Introduction

Perceived stress is a construct that takes into account that the impact of a stressful event is affected by the cognitively mediated emotional response an individual has to that event.[1] It reflects that it is not just exposure to the event, but also how it is perceived by the individual that causes stress. Perceived stress can impact health directly by causing symptoms such as depression, anxiety, irritability, fatigue, headache, indigestion, chest tightness, dizziness, sexual dysfunction, and menstrual disorders. Additionally, perceived stress can negatively affect health-related behaviors, resulting in people making unhealthy eating decisions, using substances such as alcohol, cigarettes, and drugs, having poor sleep and being more sedentary. This leads to perceived stress being associated with increased risks of poor health outcomes.[2–5]

Underserved populations such as Latinos may be at an increased risk for perceived stress due to increased exposure to unique stressors such as racism, discrimination, immigration, isolation, and acculturation. In addition to these particular stressors, Latinos are also often exposed to stressors common to the general population, such as low SES, income inequalities, and increased job stress with low control.[5–8] This leaves Latinos especially vulnerable to the impact of perceived stress both due to increased exposure and less access to resources to deal with its effects.

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Coping mechanisms are defined as deliberate, conscious efforts to control and adapt to stressors, and can be influenced by a variety of factors.[9–12] However, little research has been done detailing the effect of coping mechanisms on perceived stress among Latinos. A study from 2005 found that individuals born in Mexico were more likely to use positive reframing, religion and denial as coping mechanisms, but less likely to use self-distraction and substance abuse when compared to non-Hispanic Whites.[8] It also showed an association between several coping styles and perceived stress, but did not have participants identify stressors in their lives.

Although the Latino population may have unique circumstances leading to a vulnerability to perceived stress and depression, there is less known about the use of coping mechanisms in this population. It is important to better understand these stressors as well as the use of coping mechanisms, in order to implement a culturally sensitive and appropriate model of care that promotes both mental and physical health. Thus, the aim of our study was to evaluate the association of stress-related factors and the coping mechanisms used by Latino adults on perceived stress.

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METHODS

Participants

A sample of 200 Latino adults aged ≥18 years were recruited from clinics, migrant camps, community events, and churches located in Charleston, South Carolina. Interested participants provided verbal consent to the surveyor, and were given the option to complete the survey in either English or Spanish, based on their preference. Most of the survey questions were acquired from already published Spanish surveys, but some questions and instructions were translated into Spanish by a qualified translator certified by the American Translator's Association. The individual conducting the survey was fluent in both English and Spanish. This study was approved as exempt research by the Medical University of South Carolina Institutional Review Board.

Survey

A survey was developed using components of previously validated questionnaires that were available in both English and Spanish.[1,13–19] General questions about demographics and health, along with background information specific to the Latino community were discussed. Other sections of the survey included the following subjects: perceived stress, causes of perceived stress, coping mechanisms, and depression.

Demographics and Health

Using questions from the National Health and Nutrition Examination Survey (NHANES), demographic information and general health status was assessed.[13] Demographics included sex, place of birth, language read/spoken, number of years in the United States, education, marital status, and whether or not the individual had children. Due to some recruitment occurring in migrant camps, migrant worker status was asked. Respondents were also asked about the state of their own health, where they received care most often, height and weight, smoking and alcohol use, and whether they had a personal history of hypertension, heart attack, stroke, high cholesterol, or diabetes.

Coping Mechanisms

The English and Spanish translated versions of the Brief COPE were used to assess coping mechanisms.[15,16] There are twelve categories of coping mechanisms assessed in the Brief COPE: self-distraction, active coping, denial, substance use, use of emotional support, behavioral disengagement, venting, positive reframing, planning, humor, acceptance, and religion. One question from each category was used in the current survey. Cronbach's alpha was used to verify the statistical validity of this abbreviated translated version of the Brief COPE, and produced a value of .79, which is above the threshold that is considered acceptable for reliability ($\alpha = .70$).[20] Respondents were considered to use a particular coping mechanism if they marked a question as "I did this a medium amount" or "I did this a lot". Based on previous literature, the coping mechanisms were divided into two categories: adaptive and maladaptive coping.[21] Adaptive coping includes active coping, planning, positive reframing, humor, religion, and support. Maladaptive coping groups together self-distraction, denial, venting, substance use, behavioral disengagement, and acceptance.

Perceived Stress

The Perceived Stress Scale 10 (PSS-10), which is available in English and Spanish, is a ten-item scale that is used to classify the amount of perceived stress a person experiences.[1,14] It is scored by summing the responses for an overall PSS-10 score. However, the questions reflecting positive emotions or reactions are scored in reverse order, since a higher PSS-10 score is associated with a higher level of perceived stress. For this study, a score of ≥15 was categorized as high perceived stress.

Depression

The Perceived Health Questionnaire (PHQ-9) is a nine-item questionnaire that evaluates the frequency that individuals experience problems that are indicative of depression. The PHQ-9 is divided into categories that increase with severity.[17,18] Consistent with previous literature, the following categories were used in this study: minimal depression (0–4), mild depression (5–9), moderate to severe depression (10+). The English, Spanish, and many other translations of the PHQ-9 screener are available online from Pfizer, Inc.[18,19]

Causes of Perceived Stress

Participants were also questioned about the causes of perceived stress or concerns in their life. To assess this, participants chose one of the ten stressors listed as a primary cause of perceived stress, and then selected any additional stressors that they may have had. Additionally there was an other category where individuals could write in their own response. The potential list of stressors included the following categories: lack of friends and family/isolation, discrimination, language barriers, immigration status/deportation, family conflict, exposure to violence, lack of insurance, health problems, lack of money, and lack of transportation.

Statistical analysis

Responses to the survey were entered into Microsoft Excel, and imported into SAS 9.2 (SAS Institute Inc., Cary, NC) for data analysis. Multiple bivariate analyses and chi-square tests were computed to examine the relationship between perceived stress and demographic characteristics, depression scores, causes of perceived stress, and coping mechanisms. Logistic regressions predicting perceived stress and adjusting for coping mechanisms and causes of perceived stress were performed. All logistic regressions were also adjusted for age and sex as potential confounders.

Table 1. Demographics, *N*=200

Demographics	%	Perceived Stress Scale (PSS-10) ≥15 *n* (%)	*P*
Sex			.0018
Male	38.0	40 (52.63)	
Female	62.0	92 (74.19)	
Place of birth			.1794
US-born	8.0	13 (81.25)	
Non US-born	92.0	119 (64.67)	
Language read/spoken			.7433
Only Spanish	36.5	50 (68.49)	
Spanish better than English	39.0	49 (62.82)	
English proficient	24.5	33 (67.35)	
Years in the United States			.3492
<10 years	42.5	53 (62.35)	
≥10 years	57.5	79 (68.70)	
Migrant worker?			.4287
Yes	19.0	23 (60.53)	
No	81.0	109 (67.28)	
Education			.6343
<HS degree	56.5	73 (64.60)	
≥HS degree	43.5	59 (67.82)	
Marital status			.1193
Married/living with partner	70.35	86 (61.43)	
Widowed/divorced/separated	10.05	16 (80.00)	
Never married	19.60	29 (74.36)	
Have kids?			.4800
Yes	22.0	101 (64.74)	
No	78.0	31 (70.45)	
PHQ-9			< .0001
Minimal depression (0–4)	47.0	42 (44.68)	
Mild depression (5–9)	31.5	50 (79.37)	
Moderate/severe depression (≥10)	21.5	40 (93.02)	

RESULTS

Of the 200 Latino respondents, most (92%) were born outside the United States. Of the non US-born population, 77% were born in Mexico, and 23% were born elsewhere. The average age of participants was 33.5 years (mean ± SD: 33.5 ± 9.9). A large proportion of participants were women who had been living in the United States for >10 years. Additional demographic information is listed in Table 1. Of the total sample, 66.0% reported high perceived stress.

Table 2 illustrates the prevalence of each stressor for the total sample, and additionally shows the prevalence for participants who were considered to have a high perceived stress level (PSS-10 ≥15). Of the ten stressors listed, the stressors associated with increased perceived stress were discrimination, lack of insurance, health problems, and lack of money. When asked about ways in which they dealt with a difficult situation during the past year, most participants chose multiple coping mechanisms, with an average of 5.03 ± 2.76 per participant.

As seen in Table 3, coping mechanisms that participants most frequently utilized were self-distraction, active coping, positive reframing, planning, acceptance, and religion. When the coping mechanisms were compared to perceived stress level, denial was the only coping mechanism that was associated with increased perceived stress.

In logistic regressions controlling for age and sex, respondents with higher perceived stress (PSS ≥ 15) were more likely to report discrimination (OR: 3.401; 95%CI 1.285–9.004) and health problems (OR: 2.782; 95%CI 1.088–7.111) as stressors. When evaluating coping mechanisms, participants with higher perceived stress were much more likely to use denial as a coping mechanism (OR: 2.904; 95% CI 1.280–6.589). In both regressions, women were more likely to report perceived stress.

DISCUSSION

Two-thirds of the sample reported high perceived stress, with several stressors associated with higher perceived stress. This suggests some stressors, although prevalent, may not lead to as much perceived stress, such as language barriers and immigration status, whereas others, although less prevalent, are more likely to be associated with perceived stress, such as discrimination and health problems. Health overall appears to be a significant concern, as both having health problems and not having insurance were associated with higher perceived stress in unadjusted analyses. In adjusted analyses, discrimination and health problems remained significant, further emphasizing their importance. As perceived stress has previously been associated with a variety of health issues, we were not able to determine whether increased perceived stress led to health problems or vice versa. Similarly, in this sample perceived stress was associated with increased likelihood of depressive symptoms, but causality cannot be inferred. Further studies evaluating the types of stressors that increased risk for perceived stress and health problems associated with these stressors may help further identify individuals that could most benefit from interventions to decrease perceived stress, as well as inform the type of interventions that may be most useful.

Overall, individual respondents employed a variety of coping mechanisms,

Table 2. Association of various stressors with perceived stress, *N*=200

Cause of Perceived Stress	%	Perceived Stress Scale (PSS-10) ≥15 *n* (%)	P
Lack of friends and family/isolation			.0899
Yes	37.5	55 (73.33)	
No	62.5	77 (61.60)	
Discrimination			.0010
Yes	26.0	44 (84.62)	
No	74.0	88 (59.46)	
Language barriers			.6241
Yes	48.0	65 (67.71)	
No	52.0	67 (64.42)	
Immigration status/deportation			.3259
Yes	46.0	64 (69.57)	
No	54.0	68 (62.96)	
Family conflict			.3411
Yes	21.5	31 (72.09)	
No	78.5	101 (64.33)	
Exposure to violence			.8215
Yes	12.5	17 (68.00)	
No	87.5	115 (65.71)	
Lack of insurance			.0193
Yes	28.0	44 (78.57)	
No	72.0	88 (61.11)	
Health problems			.0058
Yes	25.0	41 (82.00)	
No	75.0	91 (60.67)	
Lack of money			.0015
Yes	46.5	72 (77.42)	
No	53.5	60 (56.07)	
Lack of transportation			.1967
Yes	23.0	34 (73.91)	
No	77.0	98 (63.64)	

Table 3. Association of coping mechanisms with perceived stress, *N*=200[a]

Coping Mechanism	%	Perceived Stress Scale (PSS-10) <15 *n* (%)	Perceived Stress Scale (PSS-10) ≥ 15 *n* (%)	*P*
Self-distraction	54.77	37 (55.2)	72 (54.6)	.9276
Denial	31.66	13 (19.4)	50 (37.9)	.0081
Use of emotional support	35.86	19 (28.4)	52 (39.7)	.1155
Behavioral disengagement	13.20	5 (7.5)	21 (16.2)	.0877
Active coping	69.85	46 (68.7)	93 (70.5)	.7940
Substance use	1.50	1 (1.5)	2 (1.5)	1.0000
Positive reframing	56.78	39 (58.2)	74 (56.1)	.7725
Planning	63.82	42 (62.7)	85 (64.4)	.8128
Humor	28.79	24 (35.8)	33 (25.2)	.1180
Acceptance	57.87	39 (59.1)	75 (57.3)	.8051
Venting	34.85	17 (25.8)	52 (39.4)	.0577
Religion	57.79	38 (56.7)	77 (58.3)	.8272
Maladaptive coping	81.50	53 (77.9)	110 (83.3)	.3522
Adaptive coping	90.95	60 (89.6)	121 (91.7)	.6231

[a] Percentages are for respondents who scored this coping mechanism as ''uses a medium amount to a lot of the time''

Perceived stress was associated with increased likelihood of depressive symptoms, but causality cannot be inferred

with most using both adaptive and maladaptive methods. This reinforces that coping is an active, fluid process, although it is unclear what determines when and how individual coping mechanisms are used. Almost one third of respondents reported denial as one of their coping mechanisms, and its use was associated with higher perceived stress. Further research to better evaluate this association, identifying patterns of use associated with increased perceived stress, as well as factors that influence the use of this specific coping mechanism, may help decrease perceived stress and its health consequences.

There are a variety of limitations to our study. Data is based on self-report instead of direct observation of behavior or health assessment. The use of validated survey questions and assurance that no identifying data was recorded, as well as having all data collected by a single bilingual interviewer was used to minimize bias inherent in this method of data collection. As this is a cross-sectional study, this study describes associations but cannot ascertain the temporal relationship between the factors assessed. Finally, results may not be generalizable to Latinos in other geographic areas or with significantly different demographic characteristics. However, performing the survey in an area where there is a small Latino population, as done in this study, may help highlight issues that may not be seen in areas with larger Latino populations, which may have more resources and social support available for Latinos.

In conclusion, perceived stress was common among the Latinos evaluated in this study. Factors such as the type of

stressors they were exposed to, specifically discrimination and health problems, as well as the use of denial as a coping mechanism were associated with increased prevalence of perceived stress.

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AUTHOR CONTRIBUTIONS

Design and concept of study: Perez, Diaz
Acquisition of data: Perez
Data analysis and interpretation: Perez, Gavin, Diaz
Manuscript draft: Perez, Gavin, Diaz
Statistical expertise: Gavin, Diaz
Administrative: Perez, Gavin, Diaz