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## Development of the Stress of Immigration Survey (SOIS): a Field Test among Mexican Immigrant Women

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### Abstract

The Stress of Immigration Survey (SOIS) is a screening tool used to assess immigration-related stress. The mixed methods approach included concept development, pretesting, field-testing, and psychometric evaluation in a sample of 131 low-income women of Mexican descent. The 21-item SOIS screens for stress related to language; immigrant status; work issues; yearning for family and home country; and cultural dissonance. Mean scores ranged from 3.6 to 4.4 (1-5 scale, higher is more stress). Cronbach's alphas  $>.80$  for all sub-scales. The SOIS may be a useful screening tool for detecting high levels of immigration-related stress in low-income Mexican immigrant women.

### Keywords

Immigration stress; Mexican immigrant women; stress

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In 2012, the United States (US) was home to almost 41 million immigrants (13% of the total US population), most of whom were of Mexican origin;<sup>1</sup> over 20 million were females, and more than one-quarter (26%) of those who were female, were of Mexican origin.<sup>2,3</sup> Thus, Mexican immigrant women constitute a significant and growing proportion of the US population. A 2008 Pew Hispanic Center survey reported that half of all adult Latinos agree

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Conflicts of Interest

The authors declare no conflict of interest.

that the situation for Latinos living in this country is worse than it was in the past, citing anti-immigrant sentiment as the biggest cause.<sup>4</sup> The survey found that a majority of Latinos worry about deportation either for themselves, family members or close friends. In addition, perceived housing and job discrimination were major concerns. Prevailing immigration issues and anti-immigration policies are contributing to a myriad of psychosocial problems for immigrant Latinos and their families.<sup>5</sup> Accordingly, a literature review on the associations between current polarization due to US immigration reform efforts and psychological stress and trauma called for further studies to identify risk factors among vulnerable Latino immigrants.<sup>6</sup>

A number of factors contribute to chronic elevated stress levels among Latina immigrant women, often referred to as immigration-related stress. Immigrant Latina women in the U.S. are more likely than non-Latina white women to live in poverty, have less formal education, and have limited or no health insurance.<sup>7,8</sup> Immigrant Latinas face additional stressors related to language barriers, family separation, employment uncertainties, poverty, discrimination, societal prejudices, and xenophobia stemming from national anti-immigrant sentiments.<sup>5,9</sup> Compared to US citizens who were fluent in English, immigrants reported poorer self-rated health, which was largely explained by stressors associated with language barriers and immigration.<sup>10</sup>

Among Latina immigrants, chronic immigration-related stress has been associated with greater psychological distress and depressive symptoms.<sup>11</sup> Several risk factors contribute to these mental health disparities. Fleeing poverty or civil unrest and abuses in their home countries,<sup>12</sup> many report prolonged psychological distress and trauma associated with relocation and separation from their families.<sup>13-15</sup> Immigration-related stressors can lead to declines in family cohesion, especially among undocumented Latinas.<sup>16,17</sup> Separation from their children places Latina immigrants at particularly high risk of depression.<sup>18</sup> In addition, less acculturated, low income immigrant Latina women are at high risk of being victims of intimate partner violence (IPV), which, in turn is associated with post-traumatic stress disorder and major depression.<sup>19,20</sup>

The experiences of Mexican immigrants are unique and differ from immigrants originating in Spain or South America in several ways. Due to Mexico's contiguous proximity to the US, Mexican immigrants more often enter the US without proper immigration documentation; in 2004, 57% of all unauthorized migrants were born in Mexico.<sup>6</sup> A review article on the mental health of undocumented Mexican immigrants identified the following factors, which elevate their risk of stress, depression and poor mental health: failure to succeed in the country of origin; dangerous border crossings; limited resources; restricted mobility; marginalization/isolation; blame/stigmatization; guilt/shame; vulnerability/exploitability.<sup>21</sup> Compared to documented Latina immigrants, undocumented Latina immigrants reported greater distress due to separation from family, challenges to traditional family values, poverty and language difficulties.<sup>22,23</sup> With heightened immigration enforcement in recent years,<sup>12</sup> fear of deportation is particularly strong, even among those with legal documentation in the US.<sup>7,24,25</sup> Finally, immigrants from South America demonstrated occupational and income attainment similar to Cubans, whereas those of Mexicans and Central Americans were substantially lower.<sup>23</sup>

Compared to their Latino male counterparts, immigrant Latinas report higher psychological distress and worse physical health.<sup>26</sup> Even when they return to Mexico, Mexican women who immigrated to the U.S. continue to be at higher risk of depressive symptoms and anxiety than Mexican women without a migration experience.<sup>27</sup> Immigrant Latina women experience greater stressful change associated with family and personal issues during migration than their male counterparts.<sup>28</sup> These higher levels of distress could be associated with traditional gender roles in which Latinas assume a subordinate role to Latino men such that their psychosocial needs often go unvoiced and undetected.

Due to their relatively higher levels of chronic immigration stress, the unique nature of their immigration experiences, their psychosocial health disparities, and their lower socioeconomic status, a valid screening tool for immigration-related stress among low-income Mexican immigrant women is warranted. Although several immigration-related stress measures are available, few have been designed with the unique needs of Mexican immigrants in mind.<sup>29</sup> To be appropriate, measures need to focus on stressors related to the immigration experience rather than on stressors related to being a minority in the U.S. and measures need to address the stress associated with the current US anti-immigrant climate.

In considering existing measures, we found several that were in part relevant to our population group of Mexican immigrants. Three were designed to assess specific stressors or demands related to being an immigrant, including: the *Demands of Immigration Scale (DOIS)*,<sup>30</sup> the *Barcelona Immigration Stress (BIS) Scale*,<sup>31</sup> and the *Border Community Immigration Stress (BCIS) Scale*.<sup>32</sup> However, these measures were designed to assess immigration stress experienced by individuals in contexts that differ from those associated with the pre and post migration experience of lower income Mexicans who immigrate to the U.S. For example, the DOIS focuses on European and former Soviet Union immigrants living in the U.S. who had legal refugee status and relatively high levels of education. The BIS was designed to assess stress among Latino immigrants living in Spain and the Canary Islands where Spanish is the official language. The BCIS was designed to measure immigration stress among Mexican immigrants living in a specific region along the US Mexico border and may not completely capture or be relevant to stressors experienced by Mexican immigrant women living in other U.S. regions away from border areas. For example, items in the BCIS relating to stress due to possible encounters with “coyotes and polleros” (guides and human smugglers) and or immigration authorities may not be as relevant to Mexican immigrant women living in areas farther removed from the U.S.-Mexican border. Furthermore, the BCIS has not been validated in other non-border Mexican immigrant populations. Thus, the aim of this study was to develop the *Stress of Immigration Survey (SOIS)* using mixed methods and assess its psychometric properties through a field test among a sample of adult Mexican immigrant women living in Northern California.

## METHODS

### Conceptual Framework

Our aim was to capture the multi-dimensional aspects of immigration experienced particularly by low-income Mexican immigrant women who do not live in border towns. We used four sources to develop the conceptual framework and the draft survey for the SOIS:

the literature related to stress among US Latino immigrants, relevant components of existing immigration stress measures,<sup>30-32</sup> our prior research with Latina transnational mothers, i.e., women who migrate leaving their children back in their home countries and mother from afar,<sup>33</sup> and our clinical experience with low-income Latinos, in particular with Mexican women.<sup>34</sup>

Stress is a cognitive appraisal defined as a situation in which external demands exceed the adaptive resources of the individual.<sup>35,36</sup> Immigration stress refers to psychological strain or distress responses to immigration-related challenges that people encounter as they adapt to life in a new country.<sup>7</sup> Immigration stress is a multi-dimensional construct consisting of functionally related behaviors, attitudes, processes and experiences.<sup>37,38</sup> It can be acute (e.g., a response to a relatively intense life event such as a dangerous clandestine migratory process) or chronic (e.g., ongoing stress related to documentation status). Thus, immigration stress encompasses difficulties adjusting to the new country, family separation, language barriers, poverty, and perceptions of ethnic and racial discrimination.<sup>31,39</sup>

Based on the literature and existing Latino immigrant stress measures, our framework contained initially concepts of language, immigration status, employment, family and culture, and life in the US. The concepts of language, work, family and life in the US were drawn from the literature and from the work of Aroian, et al. (1998) and Carvajal et al. (2013). The concepts of immigration status and discrimination emerged from the literature and from the work of Carvajal et al. (2013). While some domains overlap between the BCIS and the SOIS (language, discrimination at work, immigration status, and limited contact with family), the names of domains and specific items used to assess these domains in the SOIS were modified based on the results of qualitative interviews with Mexican immigrant women living in Northern California. These interviews explored sources of immigration stress, as well as cognitive testing of wording used by participants to describe these domains. Based on these qualitative interviews, the framework was modified to include five concepts (described next) and item wording reflected content described by women during the interviews.

Our conceptual framework of immigration stress includes five broad subscales: 1) limited English proficiency; 2) lack of legal immigrant status; 3) disadvantages in the work place; 4) yearning for family and home country; and 5) cultural dissonance with the US. Definitions for the five subscales are provided in Table 1. The SOIS was designed as a brief screening tool that can be used to assess immigration-related stress in low-income, immigrant women of Mexican descent.

## Survey Development

A draft survey containing 29 items was developed in which each of the 5 subscales was represented by several items. The questionnaire was developed in English and then translated into Spanish by three bilingual investigators from Chile, Mexico and Cuba. The initial 29-item survey was pretested with 14 Spanish-speaking Mexican immigrant women using cognitive pretest interview methods.<sup>40,41</sup> Cognitive interviews were conducted face-to-face in Spanish using scripted and spontaneous probing of items and phrases and concurrent think aloud techniques (respondents verbalize their thought processes as they are

answering the items). Participants received a \$40 gift card for their time and effort. Pretest interview participants were recruited through San Francisco Bay Area community-based organizations with the assistance of promotoras (community health workers). Participants were recruited from a low-income, predominately Mexican community in Northern California. Inclusion criteria for participants in the cognitive interviews were: 1) self-reported Latina immigrant female from Mexico, 2) age 18 and older, 3) living in the US one year or longer.

Respondents' comments were aggregated by item and reviewed by the research team, which had extensive experience developing self-report surveys in diverse populations.<sup>42,43</sup> The team discussed the comments and reached consensus on whether to drop, modify or retain the original item. Initially, the response format consisted of a 5-point scale (1= no stress, 2= a little stress, 3= moderate stress, 4=a lot of stress, 5= severe stress) with instructions to circle the number under the word that best describes the level of immigration stress they experienced in the past three months (time frame adopted in other immigration stress measures such as the DOI and the BCIS). Nearly all pretest respondents were confused by having to circle numbers associated with labels, which required extensive explanation and guidance. Thus, we changed the response format to a modified visual analogue scale that used a 1 to 5 numbered scale of histograms with labels describing stress intensity (0= not applicable, 1= no stress, 2= a little stress, 3= moderate stress, 4=a lot of stress, 5= severe stress) adapted from Lorig and colleagues<sup>44</sup> and shown in the appendix. In addition, the stem was repeated for every item, e.g., "In the past three months, how much stress or worry have you experienced...". Although redundant, repeating the stem was necessary to keep participants focused on quantifying their level of stress. Seven items were found to be redundant and were revised. Each item was reworded to be consistent with similar existing items. Based on pretest results, a revised SOIS emerged with 22 items and 5 subscales, to be administered in the field test (Appendix).

### Field Test Sample

For the field test, a sample of Mexican immigrant women was recruited through flyers posted in community organizations serving predominantly low-income Mexican women, supplemented with snowball sampling methods. Eligibility criteria for the field test were the same as for cognitive interview pre-testing and designed to identify by self-report women who were: 1) low-income; 2) Latina immigrant from Mexico, 3) age 18 and older, and 4) living in the US one year or longer.

Interviews were conducted between winter 2012 and spring 2013 by the PI and two trained promotoras; they were conducted in local restaurants, coffee shops and in participants' homes according to their preference. Participants completed a 15-item demographic questionnaire, the 22-item SOIS and the 14-item Perceived Stress Scale (PSS) questionnaire.<sup>35</sup> The method of administration was personal interview in which the interviewer provided a brief description of the questionnaire and answered any questions as the participants completed the survey. Participants received a \$25 gift card for their time and effort. A random sample of 20 participants was re-interviewed in person by the PI and the trained promotoras at the participant's home approximately two weeks later (17 days after

the first administration, on average) to examine test-retest reliability. Written informed consent to participate was obtained and study procedures were approved by the University of California San Francisco Committee on Human Research.

## Data Analysis

The hypothesized five-factor measurement model was defined by clustering the 22 SOIS items within the five sub-subscales of the conceptual framework. A confirmatory factor analysis (CFA) of the hypothesized measurement model was fit via maximum likelihood using LISREL 8.72.<sup>45</sup> Model goodness of fit was assessed by examining Satorra-Bentler scaled chi-square goodness-of-fit test statistics,<sup>46,47</sup> the root mean square error of approximation (RMSEA),<sup>48,49</sup> the comparative fit index (CFI),<sup>46</sup> and the standardized root-mean-square residual (SRMR). Generally, significant chi-square tests indicate lack of “exact fit.” Pairwise combinations of RMSEA values below 0.06, CFI values above 0.95, and SRMR values below 0.08 suggest approximate model fit.<sup>50</sup> Empirical model modifications were guided by LISREL's modification indices. Finally, we tested a CFA model where the five SOIS factors defined a single, second-order factor. For CFA modeling, multiple imputation was used to accommodate missing SOIS item values (6.3% all data points).

Participant SOIS scale scores for each factor were created as the mean of corresponding non-missing items: possible scale scores ranged from 1 to 5 with higher scores indicating more stress. Descriptive analyses of the survey data assessed the mean, standard deviation and range for each item in the SOIS. Internal consistency reliability of SOIS scales was assessed with Cronbach's alpha. Two-week test-retest reliability was examined by estimating correlations between administrations for each person completing the second assessment. To examine convergent validity, we examined correlations between each of the SOIS scales and a 7-item modified version of Cohen's Perceived Stress Scale (PSS)<sup>35</sup> consisting of only the negatively worded items in the PSS (upset because of something unexpected, unable to control important things, felt nervous and stressed, felt that could not cope with all the things you had to do, being mad and feeling out of control, thinking about unfinished things, and difficulties were piling up so that could not overcome them). Consistent with results from another study conducted in Latinas,<sup>51</sup> the validity of the full 14-item PSS was not supported in our sample. Only the modified PSS with the negatively worded items had excellent psychometric properties (item-scale correlations corrected for overlap ranging from 0.50 to 0.67; Cronbach's alpha of 0.82), therefore, this was the version used in the present study.

## RESULTS

For the field test, 138 potential participants were identified. Of the 138 women approached by the PI and promotoras, two were ineligible because they were not immigrants. Five declined to participate; three expressed how they did not like answering questions related to immigration and two simply declined to partake in the study. The final analytic sample for the SOIS field test consisted of 131 Spanish-speaking community dwelling low-income Mexican immigrant women. Twenty participants completed the SOIS a second time. The survey required less than 15 minutes to administer.

Mean age of women was 35 years (SD=11.0); range = 18 to 75 years) and mean number of years living in the US was 9.2 years (SD=4.2; range = 1 to 35 years). The majority of the sample was married, had children, was undocumented, and unemployed, had less than a high school education, spoke primarily Spanish, and had no health insurance (Table 2).

The initial confirmatory analysis of the hypothesized measurement model suggested good approximate model fit:  $\chi^2_{SB} (199) = 314.75, p < .001, RMSEA = 0.067, CFI = 0.983, SRMR = 0.082$ . Modification indices suggested that one item assigned to Factor 4 (*Yearning for family and home country*) in the hypothesized model was also strongly related to Factor 5 (*Cultural dissonance with the US*): “How much stress or worry have you experienced because you feel that you cannot enjoy your cultural traditions here the way that you could in your country?” A revised model suggested the item had nearly equivalent standardized factor loadings on the two factors (0.48 and 0.45, respectively):  $\chi^2_{SB} (198) = 291.60, p < .001, RMSEA = 0.060, CFI = 0.986, SRMR = 0.066$ . A subsequently revised first-order model dropped that item, resulting in a modified 21-item SOIS instrument:  $\chi^2_{SB} (179) = 260.08, p < .001, RMSEA = 0.059, CFI = 0.987, SRMR = 0.067$ . Finally, the second-order model of the 21-item SOIS instrument also demonstrated good approximate model fit:  $\chi^2_{SB} (184) = 271.61, p < .001, RMSEA = 0.061, CFI = 0.986, SRMR = 0.071$ . Furthermore, the fit of the second-order model did not significantly differ from that of the 21-item first-order model, providing additional support for the second-order factor structure,  $\Delta\chi^2_{SB} (5) = 8.92, p = .112$ .<sup>52</sup> Standardized factor loadings from the second-order model are presented in Table 3.

To calculate scale scores for each of the five first-order factors, we averaged items within each scale with responses from 1 (no stress) to 5 (severe stress) (item groupings are shown in Table 3). The scale scores thus ranged from 1-5 with higher scores indicating more stress. No items required reversing prior to averaging. The creation of an SOIS Total Score was calculated by averaging all 21 items. In addition, the five items with the strongest loading on each of the five first-order factors were aggregated to create a 5-item SOIS Short Form measure. The complete 21-Item Stress of Immigration Survey (SOIS) can be found in the appendix, and items included in the Short Form are indicated in Table 3 and the appendix.

Correlations between scale scores ranged from a low of  $r = 0.32$  for the association between *yearning for family* and *limited English proficiency*, to  $r = 0.75$  for *lack of legal immigrant status* and *disadvantages in the workplace*. Mean (SD) scores on the five SOIS scales ranged from 3.61 (1.07) for *cultural dissonance with the US* to 4.40 (1.03) for *yearning for family and home country* indicating that stress levels were fairly high (1= no stress, 5 = severe stress). (Table 4) Cronbach's alphas for all five scales exceeded 0.80, indicating excellent internal consistency reliability. The two-week test-retest reliability of the five scale scores, tested with 20 participants, ranged from 0.92 to 0.97 demonstrating good consistency.<sup>53</sup> The correlations between each of the scales and the modified Perceived Stress Scale were all significant and positive as hypothesized, ranging from  $r = 0.20$  to  $r = 0.40$ , supporting the convergent validity of the SOIS scales.

The 5-item SOIS Short Form was positively correlated with the total score SOIS ( $r = 0.96$ ) and with each of the SOI scales, with correlations ranging from  $r = 0.68$  to  $r = 0.86$ .



## DISCUSSION

The SOIS is a new, brief, easy-to-administer screening tool designed to assess stress among low-income, immigrant women of Mexican descent living in the US. In the field test conducted among adult Mexican immigrant women, the SOIS demonstrated excellent psychometric properties, providing confirmatory evidence that the instrument measures the hypothesized constructs conceptualized as five distinct sources of immigrant stress: limited English proficiency, lack of legal immigrant status, disadvantages in the workplace, yearning for family and home country, and *cultural dissonance with the US*. Findings suggest that the SOIS successfully captures constructs useful to clinicians and investigators interested in measuring stress levels among Mexican immigrant women and the unique factors that contribute to their elevated levels of stress.<sup>14</sup>

Similar to our study, others have documented the relatively high levels of immigrant stress and the associations of these stressors with poorer physical and mental health of Latino immigrants.<sup>7,32,54</sup> Latina immigrants who are experiencing high levels of stress and depressive symptoms may present in primary care settings with a variety of problems and complaints that are not always articulated in ways that are clear to clinical providers, e.g., somatization of distress.<sup>55,56</sup>

The SOIS can assist clinicians and other health care providers with recognition of specific stressors related to their experience as an immigrant. By applying the SOIS, we can gain an improved understanding of the ways in which psychological stress is experienced and understood in the specific cultural context of immigrant Latinas in the US.<sup>57</sup> Administering the SOIS could facilitate a dialog between clinicians or mental health professionals and Latina immigrants about their immigration experiences and enable the optimal provision of mental health services to address these factors.<sup>58</sup>

Although others have identified similar domains of immigrant stress, this study seeks to draw attention to these issues, document their persistence, and develop a relevant screening tool that clinicians and social service providers might use to identify women at increased risk of poor psychosocial outcomes. Time constrained primary care visits, especially in the context of language barriers, may require longer visits, making our screening tool relevant.<sup>59</sup> Screening for specific stressors related to immigration can promote patient-provider communication about these risk factors and improve the cultural appropriateness and quality of health care.<sup>60-62</sup> By applying the SOIS, we can gain an improved understanding of the ways in which psychological stress is experienced and understood in the specific cultural context of low-income Mexican immigrant women in the US.<sup>57</sup>

Further validation studies of the SOIS are warranted, including the Short Form version. Although we included only Mexican origin immigrant women, the measure may be appropriate for other Latino national origin groups or Latino men. Our work makes a substantial contribution because accurate assessment of stressors in Latino immigrant groups can identify the nature of needed interventions to help preserve their health and avoid long-term effects of cumulative immigration stress.<sup>12</sup> This new measure facilitates our ability to

study the health effects of immigration stress and to develop appropriate interventions for Mexican women living in the US, the largest female immigrant group in this country.

## Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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**Table 1**

## Conceptual Framework of the Stress of Immigration Survey (SOIS)

<b>Domain (# of items)</b>	<b>Definition</b>
Limited English proficiency (3)	Stress due to limited English proficiency and its adverse effects on employment opportunities and ability to do things for the family and enjoy life in the US
Lack of legal immigrant status (5)	Stress due to lack of legal immigration status and associated: fear of deportation; limited employment opportunities; inability to obtain a drivers' license and health insurance, travel outside the US to visit family, and meet the material needs of the family.
Disadvantages in the work place (4)	Stress due to inability to compete with Americans in the workplace; secure a job with benefits including, health insurance, time off when needed, sick days, vacation, and advancement opportunities.
Yearning for family and home country (3)	Stress due to missing family and friends in home country; feeling sad and emotional when thinking about life in home country; inability to enjoy cultural traditions of home country.
Cultural dissonance with the US (7)	Stress due to difficulty with learning how to do things in the US; facing new situations and circumstances in the US; raising children in the US; family conflict due to cultural differences in the US; discrimination and treatment as a second class citizen; Americans thinking you don't belong in their country; and feeling this is not your country.

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**Table 2**

Socio-demographic characteristic of Mexican Immigrant Women Participating in SOIS Field test, Northern California, N=131

Characteristic	N (%)
Age	
Under 25	15 (11)
25- 39 years old	83 (63)
40- 59 years old	28 (21)
60 and older	5 (4)
Number of years in the US	
1-4	4 (3)
5-9	86 (66)
10-19	35 (27)
20 or more	4 (3)
Marital Status: married	88 (67)
Has children	120 (92)
Immigration status: unauthorized	101 (77)
Level of education	
Less than high school	99 (76)
Completed high school	15 (11)
Some college	9 (7)
Completed college or higher	4 (3)
Country where attended school	
Mexico	110 (84)
US	2 (2)
Both Mexico and US	15 (11)
Primary language spoken at home	
Spanish	123 (94)
Both English & Spanish	6 (5)
Employed	
Yes	43 (33)
No	82 (63)
Health Insurance	
Yes	45 (34)
No	86 (66)
Number of people living at home	
2-4	65 (50)
5-8	60 (46)
More than 8	5 (4)

**Table 3**

Standardized Factor Loadings from the Second-Order SOIS Factor Model

Items	First-Order Factors				
	Factor 1: Limited English proficiency	Factor 2: Lack of legal immigrant status	Factor 3: Disadvantages in the workplace	Factor 4: Yearning for family & home country	Factor 5: Cultural dissonance with the US
1. You do not speak English well enough to get a good job and to do important things for yourself and your family	0.79				
2. You cannot communicate in English well enough to enjoy life in this country (SF)	0.91				
3. You feel that speaking and understanding English is very difficult	0.81				
4. You or your family might be deported		0.59			
5. You cannot get a driver's license since you do not have the right documents		0.74			
6. Documentation problems keep you from getting the things you need for you and your family (SF)		0.77			
7. Documentation problems keep you from getting the health care that you need for you and your family		0.76			
8. Documentation problems make it difficult for you to visit your country		0.69			
9. You don't have a job with benefits like health insurance			0.83		
10. You don't have a job where you can take time off when you need it (sick days or vacation) (SF)			0.88		
11. You are not able to advance or get a promotion in your job			0.81		
12. You cannot compete with Americans in your work place			0.80		
13. You miss your family and friends back in your home country				0.87	
14. You feel emotional and sentimental when thinking of your life back in your country (SF)				0.99	
15. How hard it is to learn how to do things here in the US (such as signing up your child for school or registering your car)					0.76
16. You feel it is hard to face new situations and circumstances here in the US (such as renting an apartment)					0.75
17. You feel it is hard to raise children in the US					0.79
18. You feel that cultural differences in the US are causing conflicts within your family					0.74
19. You feel people discriminate against you and you are treated as a second-class citizen					0.78
20. You feel Americans think that you don't really belong in their country (SF)					0.86
21. You feel this is not your country although you live here					0.82
Loadings of First-Order Factors on Second-Order Factor	0.67	0.93	0.93	0.67	0.79



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The following item was dropped: "How much stress or worry have you experienced because you feel that you cannot enjoy your cultural traditions here the way that you could in your country?". It was originally assigned to Factor 4 in the conceptual model. Empirical results suggested standardized cross-loadings of nearly equivalent magnitude on Factors 4 & 5 (0.48 and 0.45, respectively). SF indicates that the item is part of the 5-item short form.

Stem for all items: "In the past three months, how much stress or worry have you experienced because (of)..."; response options were 1= no stress, 2= a little stress, 3= moderate stress, 4= a lot of stress and 5= severe stress.

**Table 4**

SOIS Descriptive Statistics, Internal Consistency, Two-week Test-retest Reliability, Item-scale Correlations, and Correlations with Modified Perceived Stress Scale

Scales (# of items) <sup>1</sup>	Mean (SD)	Observed range	Internal consistency reliability: Cronbach's $\alpha$	2-week test-retest reliability <sup>2</sup>	Range of item-scale correlations	Correlations with modified Perceived Stress Scale
Limited English proficiency (3)	3.78 (1.11)	1-5	0.88	0.96	0.72 - 0.83	0.25**
Lack of legal immigrant status (5)	4.12 (1.03)	1-5	0.81	0.94	0.51 - 0.64	0.18*
Disadvantages in the workplace (4)	3.79 (1.26)	1-5	0.90	0.92	0.74 - 0.84	0.30**
Yearning for family & home country (2)	4.40 (1.03)	1-5	0.93	0.97	0.87	0.19**
Cultural dissonance with the US (7)	3.61 (1.08)	1-5	0.92	0.94	0.70 - 0.81	0.40**
Summary (total) score (21)	3.87 (0.92)	1-5	0.94	0.97	0.43 - 0.76	0.35**
Short Form (5)	3.96 (0.98)	1-5	0.79	0.94	0.46 - 0.68	0.36**

<sup>1</sup> Possible range is 1-5 with a higher score indicating more stress.

<sup>2</sup> Tested in a random subsample of 20 women.

\*  $p < 0.05$

\*\*  $p < 0.01$