



Original article

## Self-harm Among Hispanic Adolescents: Investigating the Role of Culture-Related Stressors



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### A B S T R A C T

**Purpose:** Suicide is the third leading cause of death among adolescents. Research shows Hispanic adolescents report disproportionate rates of both suicidal ideation and attempts. The purpose of the present study was twofold. First, the present study aimed to document the presence of suicidal ideation and self-harm behavior in a large heterogeneous sample of Hispanic adolescents. Second, this study sought to identify specific and unique culturally relevant stressors that were associated with the higher self-reported suicidal thoughts and self-harm among Hispanic males and females separately.

**Methods:** Data were collected on 1,651 Hispanic adolescents who completed the Hispanic Stress Inventory–Adolescent Version.

**Results:** Results of both rates and culture-related stressors that associated with the high rates of suicidal ideation are presented. Of the eight subscales measured in the Hispanic Stress Inventory–Adolescent, four subscales were predictive of either suicidal ideation or self-harm. For males, Acculturation Gap Stress was associated with suicidal thoughts and Discrimination Stress was associated with both suicidal thoughts and self-harm behavior. For females, Family Drug Stress was associated with suicidal thoughts. Acculturation Gap Stress, Family Drug Stress, and Immigration Stress were all significantly associated with self-harm behaviors.

**Conclusions:** Findings are discussed as they inform future culturally competent prevention interventions and future research studies.

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### IMPLICATIONS AND CONTRIBUTION

This research addresses a significant public health disparity involving high rates of suicidal ideation and attempts among Latino/a adolescents. Findings specified psychosocial stress factors that constitute the basis for increased risk for suicidal ideation and self-harm among Latino/a adolescents. Results inform clinical assessment, treatment, and directions for future research.

According to Miniño and Murphy [2], suicide is the third leading cause of death among adolescents. Epidemiological research by Nock [3] indicates that 12.1% of adolescents reported suicidal ideation, 4.0% reported having a plan, and 4.1% reported attempting suicide in their lifetime. This same research shows

that there is a relatively rapid increase in the rates of suicide ideation, plans, and attempts between the ages of 12 and 17 years.

In a recent Center for Disease Control and Prevention report, Hispanic adolescents report disparate rates of suicidal ideation and attempts when compared with their non-Hispanic peers [4]. In addition, Hispanic adolescents reported higher rates of both suicidal ideation (16.7%) and suicide attempts (10.2%) when compared with both their white and African-American peers [4]. Further, the same report finds that Hispanic adolescent females (hereafter Latinas) may be driving this disparity. According to the recent U.S. Census [5] report, given that the population of U.S.

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Latinos is predicted to double by 2050, understanding the unique factors that may contribute to suicide disparities among Hispanic adolescents is of increasing interest to researchers and practitioners alike [6,7].

Bronfenbrenner [8,9] developed an ecological model to understand an individual's concerns from a number of complex systems: the microsystem (e.g., school, family), mesosystem, exosystem (e.g., parental employment), and macrosystem (e.g., cultural norms). Other research studies have implemented this ecological model to further understand suicidal ideation and suicidal behavior among adolescents [10–12]. Findings from these studies have linked adolescent suicidal behavior to the various ecological systems. In an effort to understand the unique experience of Latino adolescents, Zayas [13] provided a comprehensive conceptual model for researchers to consider in exploring suicidal behavior. This model includes microsystem variables (e.g., family, parent-adolescent interaction, and psychosocial development and functioning), which are influenced by macrosystem variables (e.g., immigration, socioeconomic and economic hardship, and/or trauma). It was proposed that both microsystem and macrosystem variables negatively impact psychological functioning. This, in turn, was theorized to weaken coping abilities and result in an increased risk of a suicide attempt.

A number of studies have contributed to the use of this conceptual model. As early as 1996, Hovey and King [14] examined the relationship between acculturative stress, depression, and suicidal ideation and found that adolescents who reported high levels of acculturative stress also reported high levels of depressive symptoms and suicidal ideation. More recent studies have also explored the impact of immigration-related, acculturation-related, and discrimination-related stressors on mental health outcomes [15–19]. The social environment that Latino adolescents grow up in may also contribute to suicidality. A number of studies have found that Latino adolescents are the target of anti-immigrant and anti-Latino attitudes and negative public references toward their ethnic identity [1,15]. The literature details descriptions of the often traumatic immigration processes which could include life-threatening circumstances and being forced to leave family members behind in their country of origin [20] with possible impacts on suicidal behavior [21]. Mena et al. [22] found that parent-child separations resulting from immigration have been linked to depression, particularly in Latinas.

Recognizing a need to better measure cultural stress and its influence on negative mental health outcomes, several validated stress instruments have been developed, including the Hispanic Stress Inventory (HSI) and Hispanic Stress Inventory-Adolescent (HSI-A) [1,23,24]. In the national HSI-A studies, eight unique stress domains for Hispanic youth were identified, including acculturative stress, discrimination stress, family separation, and cultural conflict using the HSI-A Version [1]. Higher levels of stress across the eight domains were related to heightened rates of internalizing (e.g., depression, anxiety) and externalizing (e.g., conduct problems) behaviors [1]. The relationship between these cultural stress domains and suicidality, however, has not been explored. Thus, the purpose of the present study was to (1) document the presence of suicidal ideation and self-harm behavior among Hispanic adolescents in a large four site, representative sample; (2) determine gender differences in these symptoms; and (3) investigate the utility of the HSI-A Version in identifying specific stressors that can predict self-harm in this high-risk population. Finally, this study also

sought to link specific and unique culture-related stressors that are associated with the high self-reported suicidal ideation and self-harm among Hispanic males and females separately. The HSI-A measures stress factors that cut across a number of the ecological model systems. The analysis presented here aimed to determine if these independent factors were more or less related to the behavioral outcomes of interest. As these factors have previously been found to operate independently, we did not test for specific interactions between the stress factors, but rather, we entered the factors logically into gender-specific regressions based on the ecological model. Results have implications for clinical assessment and culturally tailored clinical interventions.

## Methods

Data were collected on 1,651 Hispanic adolescents aged 10–20 years. From this sample,  $n = 1,254$  participants completed all survey protocols and were included in this analysis. For the inferential analysis (regression models), we removed 15 outliers that stated an age of 10, 11, or 20 years. Among the 1,254 youth in the sample, 1,037 were in the nonclinical group and 217 were in the clinical group. The recruitment of the national sample of nonclinical adolescents has been described elsewhere [1]. Nonclinical youth were surveyed in a random classroom sampling design in four urban cities, each with a large and diverse ethnic, racial, and immigrant composition (Los Angeles, Miami, El Paso, and Boston). By including nonclinical youth in the sample, we sought to include data from youth who may be experiencing psychological distress but who otherwise may not seek or be referred for treatment. This is particularly important in studies involving Hispanic/Latinos given low access to health services and high stigma against seeking mental health services.

Youth receiving clinical behavioral health services were drawn from the Los Angeles, Miami, and El Paso sites. Purposive sampling to obtain a diverse clinical group from both school-based counseling centers, as well as community mental health and substance abuse treatment facilities. All youth in the clinical sample had a DSM-4 diagnosis to be eligible for the study. Adolescents in the clinic sample were being treated for a number of conditions ranging from major depression (10.3%), generalized anxiety disorder (17%), opioid abuse (2.1%), substance use disorders including alcohol abuse (12.6%), attention deficit hyperactivity (20.2%), oppositional defiant disorder (7.1%), anxiety disorder Not Otherwise Specified (NOS) (2.7%), depressive disorder NOS (4.7%), language or other learning disorder (3.2%), and missing diagnoses (3%).

## Measures

The primary independent variable of interest in the present study was cultural stress, often referred to as “acculturation” stress. Cultural stress was measured using the HSI-A Version [1]. The HSI-A includes 71 items that measure exposure to life-event stressors related to minority status among Hispanics adolescents in the United States. If a participant reported experiencing the stressor, he/she was asked to appraise the severity of the stressor using a 5-point Likert scale: 1 = not at all worried/tense; 2 = a little worried/tense; 3 = moderately worried/tense; 4 = very worried/tense; 5 = extremely worried/tense. In circumstances where the participant reported they had not experienced the stressor, the appraisal scores were coded to 1 = not at all worried/tense.

The HSI-A was validated using factor analysis for both the Spanish and English version of the measure (see Cervantes et al. [24] for more information about psychometric properties of the HSI-A). Eight unique domains of cultural stress (e.g., subscales) were identified, including family economic stress (12 items), cultural/educational stress (14 items), acculturation-gap stress (12 items), immigration stress (7 items), discrimination stress (6 items), family immigration stress (7 items), community/gang-related stress (8 items), and family- and drug-related stress (5 items). Higher stress appraisal scores reflected greater intensity of the life-stress experiences. The validity of the HSI-A scales was previously established with immigrant and U.S.-born Hispanic adolescents in the United States [1]. The total HSI-A scale demonstrated strong reliability,  $\alpha = .94$ , and the domains of stress ranged from  $\alpha = .64$  to  $.85$ .

The dependent variable was depression as measured by the Children's Depression Inventory 2 (CDI2) [25]. The CDI2 was selected as a measure of depression because of its previous use with Hispanic populations [26,27]. The CDI2 consists of 27 items that assess negative mood, interpersonal problems, ineffectiveness, anhedonia, and negative self-esteem. For each item, participants are asked to select the statement that best describes their mood. In the present study, the total score for CDI2 was used. In addition to yielding a total CDI2 depression score and sub scores related to negative mood, negative self-esteem, ineffectiveness, and interpersonal problems, the CDI2 also includes an assessment of self-harm and suicidal ideation. These two latter components of the CDI2 were examined separately in this study, as well as total CDI2 and subscale scores. This study was approved by the Institutional Review Board of Behavioral Assessment, Incorporated.

### Analysis

The analyses were completed using SPSS 19.0 (IBM Corp., Armonk, NY). Frequency distributions chi square and difference of means *t* tests were performed to compare gender differences and key variables related to the independent variables (HSI subscales) and dependent variables (CDI scores, suicidal ideation, and self-harm). The analyses exploring the relationship between HSI subscales and self-harm and suicidal ideation were conducted in two stages. First, a series of bivariate logistic regressions were run to determine significant associations ( $p < .05$ ) between all study variables. Independent variables found to be significant were retained in the full linear regression model. Due to differences between males and females and theoretical considerations, all regression analyses were stratified by gender. Age was first added to the model as a control. Then, we applied an adapted ecological theoretical approach [10–12] adding HSI-A domains in subsequent steps, beginning with internalized processes (acculturation), moving toward external processes (family economic, drug, and immigration), followed by external community experiences (discrimination and immigration stress), and finally community structures (community gang and educational systems).

## Results

### Descriptive findings

The mean age of the sample was 14.9 (standard deviation = 1.8), with a range of 10–20 years. The sample was nearly evenly split

between males ( $n = 574$ ; 46%) and females ( $n = 674$ ; 54%). Thirty-three percent of the youth identified themselves as white, 20.6% as other, 8.6% as mixed, 3.4% as Native American/American Indian, and 2.7% as black.

Table 1 presents differences between males and females on key study variables. Females were significantly more likely to report suicidal thoughts ( $\chi^2 = 4.517$ ;  $p < .05$ ). Females also reported higher scores on CDI subscales, including negative mood ( $t(984) = -3.08$ ;  $p < .01$ ) and anhedonia ( $t(984) = -3.01$ ;  $p < .01$ ), although no significant differences existed on the CDI total score. No significant differences emerged between boys and girls on measures of self-harm.

In addition to examining the presence of suicidal ideation and self-harm in the sample, an examination of HSI-A stress appraisals was conducted. For the total HSI-A stress appraisal score, there were significant differences between boys and girls, with girls reporting greater stress ( $t(1,246) = -3.12$ ;  $p < .01$ ). Gender differences also emerged in several of the eight HSI-A stress appraisal subscale scores. Females reported higher rates of Acculturation Gap Stress ( $t(1,200) = -7.19$ ;  $p < .001$ ), Family Immigration Stress ( $t(1,246) = -2.41$ ;  $p < .05$ ), Family Drug Stress ( $t(1,238) = -3.64$ ;  $p < .001$ ).

### Regression findings

Bivariate regressions were conducted (available on request) and found significant relationships between all study variables. Tables 2–5 present the findings from the linear regression model of HSI domains impact on self-harm and suicidal thoughts as stratified by gender.

There was a significant relationship ( $p < .001$ ) between Acculturation Gap Stress and self-harm for both males and females. For males, this relationship disappears once Discrimination Stress is added to the model. In the final model, which includes all eight HSI domains, only Discrimination Stress was significantly associated ( $p < .01$ ) with self-harm behavior in males. For females, Acculturation Gap Stress, Family Drug Stress, and Immigration Stress were all significantly associated ( $p < .05$ ) with self-harm behaviors.

When exploring the relationship between HSI-A domains and suicidal thoughts for females, Acculturation Gap Stress emerged as being significantly associated with suicidal thoughts ( $p < .01$ ). However, once Family Drug Stress which was significant in the final model ( $p < .01$ ) was accounted for, this relationship disappeared. For males, after all stress domains were included, only Discrimination Stress was associated ( $p < .05$ ) with suicidal thoughts.

## Discussion

The purpose of this study was twofold. First, this study sought to investigate the presence of suicidal ideation and self-harm behavior among Hispanic males and females. Results from this study showed that Hispanic females self-reported higher rates of suicidal ideation compared with Hispanic males. This is in line with literature that has consistently shown females to report higher rates of nonlethal suicidal ideation compared with males [3,4]. Other researchers, such as Zayas [7], have highlighted alarming rates of self-harm among Hispanic adolescents, particularly Hispanic females. Although less common among males, the rates of self-harm were comparable with those of females. Thus, in the present study, it was important to investigate self-harm rates for both Hispanic males and females. The

**Table 1**  
Difference between males and females on study variables

Variable (total N)	Male				Female				t test	Chi <sup>2</sup>	p value
	N	%	Mean	Standard deviation	N	%	Mean	Standard deviation			
Self-harm	28	5.63			53	8.59				3.568	.059
Suicidal thoughts	44	9.98			82	14.44				4.517	.034
HSI-A domains (n = 1,248)											
Family Economic Stress			1.25	.569			1.302	.558		1.69	.091
Culture and Educational Stress			1.11	.338			1.096	.249		.98	.326
Acculturation Gap Stress			1.25	.412			1.456	.592		7.19	<.001
Immigration-Related Stress			1.18	.500			1.186	.506		.22	.823
Discrimination Stress			1.15	.461			1.175	.425		.92	.360
Family Immigration Stress			1.18	.465			1.251	.551		2.41	.016
Community/Gang Stress			1.23	.459			1.237	.445		.17	.867
Family and Drug Stress			1.21	.424			1.309	.540		3.64	<.001
HSI-A total			1.20	.326			1.252	.314		3.12	.002

HSI-A = Hispanic Stress Inventory–Adolescent.

increasing number of Hispanic adolescents in this country together with the alarmingly high rates of suicidal ideation, particularly among Latinas, makes the understanding and prevention of self-harm behavior among this high-risk group, an urgent national priority.

Second, this study sought to examine whether specific stressors measured by the HSI-A. Previous studies have been limited by the lack of culturally valid psychometric measures. In the present study, using a newly developed, culturally validated stress measure, the HSI-A was demonstrated that total HSI-A and subscale scores were associated with suicidal ideation and/or self-harm behavior. Of the eight subscales measured in the HSI-A, four subscales were predictive of either suicidal ideation or self-harm. For males, Acculturation Gap Stress was associated with suicidal thoughts and Discrimination Stress was associated with both suicidal thoughts and self-harm behavior. For females, Family Drug Stress was associated with suicidal thoughts. Acculturation Gap Stress, Family Drug Stress, and Immigration Stress were all significantly associated with self-harm behaviors.

### Gender

Consistent with previous literature, the females in our sample reported higher rates of suicidal ideation than did the

males. However, our findings did not indicate higher self-harm behaviors among females compared with males. The investigation of subscales associated with suicide ideation/thoughts in females point to the important role of the family context. More specifically, only the family drug subscale was significantly related to suicide ideation/thoughts. This subscale reflects family dysfunction often related to family member drug use and violence. Analyses focused on self-harm in females showed a more complex picture with three stress subscales showing significant relationships to self-harm. What is most interesting about seeing Immigration-Related Stress, Family Drug Stress, and Acculturation Gap Stress all predicting self-harm is their common focus on family and support system contexts. In addition to Family Drug Stress which is described previously, Acculturation Gap Stress focuses on disruptions and stress primarily relation to parents, whereas the Immigration Stress scale focuses on immigration-related disruptions in family and other support networks such as friends. Taken together our findings are consistent with reports in the literature suggesting that compared with males, females may be more directly and negatively impacted by stress and ruptures in the family and support networks. This set of findings suggests the possible usefulness of family-oriented intervention models designed to addressing suicide ideation and

**Table 2**  
Linear regression model of HSI domains impact on self-harm stratified by gender—male

	Male																	
	Step 1		Step 2		Step 3		Step 4		Step 5		Step 6		Step 7		Step 8		Step 9	
	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE
Age	.207	.114			.180	.120	.154	.123	.153	.123	.167	.125	.158	.124	.158	.124	.158	.124
1			1.338	.348***	1.476	.415***	1.299	.443**	1.307	.448**	.755	.523	.853	.540	.853	.557	.892	.567
2					-.196	.332	-.283	.345	-.256	.412	-.682	.496	-.727	.489	-.727	.496	-.695	.502
3							.497	.404	.491	.407	.471	.425	.485	.430	.485	.433	.480	.432
4									.057	.486			-.119	.532	-.023	.525	-.023	.535
5											1.110	.415**	1.184	.429**	1.184	.430**	1.212	.435**
6													-.315	.367	-.315	.372	-.285	.379
7															0	.508	.006	.506
8																	-.198	.604
Nagelkerke R <sup>2</sup>	.020		.094		.096		.105		.105		.144		.149		.149		.150	
$\Delta R^2$			.074		.002		.009		0		.039		.005		0		.001	

HSI = Hispanic Stress Inventory; SE = standard error.

1 = Acculturation Gap; 2 = Family Economic; 3 = Family Drug; 4 = Family Immigration; 5 = Discrimination; 6 = Immigration; 7 = Community/Gang; 8 = Culture/Education.

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

**Table 3**  
Linear regression model of HSI domains impact on self-harm stratified by gender—females

	Female																		
	Step 1		Step 2		Step 3		Step 4		Step 5		Step 6		Step 7		Step 8		Step 9		
	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE	
Age	-.091	.086	-.148	.091	-.144	.091	-.148	.094	-.147	.094	-.147	.094	-.147	.095	-.145	.095	-1.150	.096	
1			.821	.188***	.891	.221***	.660	.242**	.652	.250**	.564	.263*	.559	.264*	.548	.269*	.569	.274*	
2					-.151	.261	-.182	.272	-.197	.295	-.249	.297	-.270	.291	-.274	.292	-.255	.297	
3							.622	.230**	.619	.230**	.620	.231**	.678	.232**	.663	.242**	.649	.244**	
4									.038	.286	.069	.286	-.122	.316	-.123	.316	-.111	.318	
5											.337	.302	.284	.310	.269	.318	.317	.334	
6													.565	.241*	.567	.241*	.570	.241*	
7															.070	.303	.113	.320	
8																		-.246	.622
Nagelkerke R <sup>2</sup>	.004		.069		.071		.096		.096		.100		.118		.118		.119		
ΔR <sup>2</sup>			.065		.002		.025		0		.004		.018		0		.001		

HSI = Hispanic Stress Inventory; SE = standard error.

1 = Acculturation Gap; 2 = Family Economic; 3 = Family Drug; 4 = Family Immigration; 5 = Discrimination; 6 = Immigration; 7 = Community/Gang; 8 = Culture/Education.

\*p < .05; \*\*p < .01; \*\*\*p < .001.

self-harm particularly in female adolescents/Latinas. Further, within Bronfenbrenner’s Ecological Model, stressors associated with different “systems” appear to impact females quite differently from male. Specifically, family factors (micro-system) appear to be more strongly related to our behavioral outcomes among females when compared with males.

Unlike the picture outlined previously that highlights an emphasis on the central role of the family unit, the analyses focused on male adolescents pointed strongly in the direction of discrimination-related stress. This finding was consistent in predicting suicidal ideation among males. Although Acculturation Gap Stress showed a strong association in early steps in analyses particularly for suicidal ideation but also to a lesser extent for self-harm, it became insignificant in later steps in both analyses, leaving only Discrimination Stress as a strong correlate for self-harm. In understanding the role of Discrimination Stress in adolescent males, it is interesting to note that Discrimination Stress has a strong emphasis on being the target of racism and disrespect, particularly in the student and peer context.

*Acculturation gap stress*

Results from this study confirmed that Acculturation Gap Stress was especially problematic for Hispanic. Acculturation Gap Stress (a microsystem family factor) was predictive of Hispanic female self-harm. Prior research has emphasized the negative impact that acculturation gaps can have on Hispanic adolescent mental health [17,19]. When Hispanic adolescents acculturate at a faster pace than their parents who often attempt to maintain Hispanic values and traditions, the discrepancy can create tension in interpersonal relationships, particularly within the family. Complex acculturation factors such as parent-adolescent gaps can disrupt protective family factors such as effective communication, conflict resolution, parental monitoring, and attachment that help adolescents develop in a healthy way [28].

*Immigration stress*

Results from this study also indicate that immigration stress was predictive of self-harm behavior among Hispanic females.

**Table 4**  
Linear regression model of HSI domains impact on suicidal thoughts stratified by gender—males

	Male																		
	Step 1		Step 2		Step 3		Step 4		Step 5		Step 6		Step 7		Step 8		Step 9		
	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE	
Age	.006	.098	-.020	.102	-.033	.103	-.061	.106	-.061	.106	-.054	.106	-.060	.106	-.062	.107	-.058	.107	
1			1.205	.311***	1.422	.380***	1.226	.408**	1.222	.410**	.862	.460	.983	.479*	.863	.499	.981	.502	
2					-.292	.307	-.356	.317	-.372	.381	-.719	.461	-.744	.450	-.838	.453	-.711	.457	
3							.529	.373	.531	.374	.500	.386	.511	.389	.478	.386	.440	.388	
4									.032	.418	.022	.450	.108	.441	.019	.469	.213	.442	
5											.822	.394*	.872	.395*	.876	.396*	1.000	.401*	
6													-.331	.329	-.276	.337	-.164	.340	
7															.412	.406	.456	.408	
8																		-.771	.655
Nagelkerke R <sup>2</sup>	0		.069		.074		.083		.083		.105		.110		.115		.123		
ΔR <sup>2</sup>			.069		.005		.009		0		.022		.005		.005		.008		

HSI = Hispanic Stress Inventory; SE = standard error.

1 = Acculturation Gap; 2 = Family Economic; 3 = Family Drug; 4 = Family Immigration; 5 = Discrimination; 6 = Immigration; 7 = Community/Gang; 8 = Culture/Education.

\*p < .05; \*\*p < .01; \*\*\*p < .001.

**Table 5**

Linear regression model of HSI domains impact on suicidal thoughts stratified by gender—females

	Female																	
	Step 1		Step 2		Step 3		Step 4		Step 5		Step 6		Step 7		Step 8		Step 9	
	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE
Age	.026	.070	–.011	.073	–.016	.074	–.007	.076	–.013	.077	–.008	.077	–.008	.077	.005	.077	–.004	.078
1			.702	.169***	.616	.196**	.301	.217	.338	.222	.256	.232	.254	.232	.196	.239	.227	.244
2					.187	.206	.188	.214	.263	.238	.211	.243	.213	.245	.195	.247	.234	.253
3							.822	.209***	.837	.210***	.833	.210***	.833	.210***	.761	.218***	.736	.220**
4									–.190	.263	–.159	.265	–.154	.270	–.188	.275	–.164	.275
5											.337	.266	.339	.267	.276	.276	.329	.281
6													–.023	.260	–.016	.258	.006	.258
7															.341	.267	.418	.285
8																	–.399	.525
Nagelkerke R <sup>2</sup> 0				.054		.056		.105		.107		.112		.112		.116		.118
ΔR <sup>2</sup>				.054		.002		.049		.002		.005		0		.004		.002

HSI = Hispanic Stress Inventory; SE = standard error.

1 = Acculturation Gap; 2 = Family Economic; 3 = Family Drug; 4 = Family Immigration; 5 = Discrimination; 6 = Immigration; 7 = Community/Gang; 8 = Culture/Education.

\**p* < .05; \*\**p* < .01; \*\*\**p* < .001.

Prior research indicates that immigration stress plays a significant role in suicidal ideation [21]. Indeed, immigrant adolescents are at greater risk for a number of mental health and school-related concerns [29,30]. Interestingly, the results suggest that immigration stress impacted only females on the target outcomes. This finding is consistent with the work of Mena et al. [22], which showed females to be more clearly impacted by such processes as immigration-related parent-child separations. More specifically, these researchers found that immigration-related separations were associated with depression but only for females. More work is needed to understand the process by which there are gender differences in the impact of immigration stress. Both microsystem and mesosystem appear to be implicated in this analysis.

#### Discrimination stress

Results of the present study found that Discrimination Stress was predictive of Hispanic male suicidal ideation. Prior research has confirmed that racial or ethnic discrimination can create a source of daily stress for Hispanic adolescents [31]. Again, it is unclear why this was predictive among Hispanic males but not Hispanic females. Perhaps, Hispanic males place more value and emphasis on perceptions outside the family context (e.g., community perceptions). When community feedback is negative, Hispanic males may turn to suicidal ideation as a method of coping with these feelings.

#### Family- and drug-related stress

The present study found that Family- and Drug-related Stress was significantly predictive of suicidal ideation for Hispanic females. There is an extensive literature indicating that family risk factors are often implicated in maladaptive adolescent functioning [32,33] including self-harm behavior [34]. As noted previously, there is also literature to suggest that females may be particularly vulnerable to disruptions in family support, communication, attachment, and other protective factors. The most powerful among family risk factors is exposure to drug use behaviors that can increase the risk of adolescent suicidal ideation. Future research should continue to examine gender

differences with respect to predictors of suicidal ideation and self-harm behavior.

#### Clinical implications

The findings of this study revealed significant culture and immigration-related stress factors that were associated with suicide-related behaviors. With suicide standing as the third leading cause of death among adolescents and Hispanics being at greater risk for this type of behavior, it becomes particularly important that we identify the stressors that may be contributing to the problem and that must be included as a focus of treatment. The prevention and treatment of suicide ideation and self-harm behaviors is a complex process that can be made even more complex by unique acculturation, discrimination, and immigration-related factors that have been documented in the Hispanic population. The finding that these unique stressors are associated with suicide ideation and self-harm strongly suggest that the culturally competent counselor must be prepared to explore, understand, and diminish the negative effects of these unique experiences. The findings also suggest that treatment must be attuned to possible gender-specific risk processes and be prepared to address these processes. The study findings highlight the importance of competent screening and assessment of the unique stressors impinging on the lives of Hispanic adolescents and the development and testing of culturally informed treatments that directly target these types of stressors that may negatively impact the mental health of Hispanic adolescents.

#### Strengths and limitations

The use of the HSI-A with a national data set comprised a heterogeneous group of Hispanic adolescent respondents was strength of this study. A limitation of this study was that it used a cross-sectional design and, as such, unable to know the direction of causation. Although it is likely that acculturation-related stressors are impacting adolescents symptoms, there may also be an effect in the other direction, with adolescents who are experiencing distress may be more likely to report acculturation-related stress. It will be important to follow these findings with longitudinal designs that can better investigate the direction of effects.

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