



## Worse for girls?: Gender differences in discrimination as a predictor of suicidality among Latinx youth

Sylvanna M. Vargas<sup>a,b,1,\*</sup>, Vanessa Calderon<sup>a,b,1</sup>, Christopher R. Beam<sup>a</sup>, Yolanda Cespedes-Knadle<sup>c,d</sup>, Stanley J. Huey Jr.<sup>a,e</sup>

<sup>a</sup> Department of Psychology, University of Southern California, Los Angeles, USA

<sup>b</sup> Department of Preventive Medicine, University of Southern California, Los Angeles, USA

<sup>c</sup> Alliant International University, California School of Professional Psychology, Los Angeles, CA, USA

<sup>d</sup> Northeast Valley Health Corporation, Los Angeles, CA, USA

<sup>e</sup> Department of American Studies and Ethnicity, University of Southern California, Los Angeles, USA

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### ABSTRACT

**Introduction:** Gender and ethnic differences exist in suicidal ideation, plan, and attempt among adolescents in the U.S. However, limited research has used theoretically-informed approaches to integrate how cultural and classic risk factors together account for suicide-related pathways among vulnerable populations. Informed by the interpersonal theory of suicide, the present cross-sectional study examined gender differences in the association between a cultural (i.e., discrimination) and classic (i.e., depressive symptomatology) risk factor, and suicidality among youth of Latin American heritage.

**Methods:** A total of 390 Latinx adolescents (ages 13–18; 50% female) attending a high school in Southern California, U.S.A. completed a series of questionnaires that included measures of depressive symptoms, suicidality (including ideation, past attempts, and likelihood of future behavior), perceived discrimination, and demographics.

**Results:** We found that discrimination was associated with increased suicidality among Latinx adolescents. The discrimination-suicidality association was stronger for girls versus boys, such that girls who experienced greater discrimination demonstrated the highest levels of suicidality. Although depression was also significantly associated with suicidality, the discrimination x gender interaction was found above and beyond the main effect of depressive symptomatology and covariates. Additional analyses revealed significant gender and moderation effects only for suicidal ideation and not for attempts.

**Conclusions:** These findings indicate that the relationship between discrimination and suicidality (particularly ideation) is more pronounced for Latinx girls than boys. This study also highlights the importance of drawing on theory-driven and culturally informed work that incorporates classic and cultural correlates of suicidality among diverse subpopulations.

Suicide rates in the U.S. have been increasing over the past decade ([Kann et al., 2018](#)), and suicide is now the second leading cause

\* Corresponding author. Department of Psychology, University of Southern California, 3620 S. McClintock Ave, SGM 501, Los Angeles, CA, 90089-1061, USA.

E-mail address: [sylvannv@usc.edu](mailto:sylvannv@usc.edu) (S.M. Vargas).

<sup>1</sup> Denotes co-first authors.

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of death among adolescents and emerging adults aged 15–24 (CDC, 2018). Yet, predicting suicide is no better today than it was 50 years ago (Franklin et al., 2017). One potential explanation for the limited progress may be that much of the extant research has drawn on different suicide theories without adequately evaluating their accuracy and whether they apply to different populations (Duarté-Vélez, Jones, & Spirito, 2018). Furthermore, it is likely that different suicide-related pathways exist among diverse subpopulations (Duarté-Vélez & Bernal, 2007; Franklin et al., 2017). However, the suicide literature has been largely informed by European-American culture (Leong & Leach, 2010). Given that rates are increasing among ethnic minority youth (Plemmons et al., 2018), greater attention to understanding suicidality among ethnic subgroups is needed.

### 1. Gender and racial/ethnic differences in suicidality

Rates of suicidal ideation, plan, and attempts among adolescents differ based on gender and ethnicity (Kann et al., 2018). Compared to males, females report higher suicidal ideation (22.1% vs. 11.9%), past suicidal plan (17.1% vs. 9.7%), or previous suicidal attempt (9.3% vs. 5.1%; Kann et al., 2018). When compared to Latino males, adolescent Latinas are twice as likely to report suicidal ideation (22.2% vs. 10.8%), prior suicidal plan (17.2% vs. 9.9%), and suicide attempt during the past year (10.5% vs. 5.8%; Kann et al., 2018). Moreover, prior studies document heightened risk of suicidal ideation, plan, and attempts among Latinas in comparison to White or African American girls (Eaton et al., 2010), although a recent epidemiological study using national data no longer reports significant differences between Latina and White or Black youth (Kann et al., 2018). Nevertheless, it is possible that Latinx girls and boys (i.e., youth of Latin American heritage in the United States) experience distinct pathways to suicidality.

It is unclear why these gender and racial/ethnic differences in suicidality exist. Some studies have shown that examining classic factors that correlate with suicidality may not be sufficient to understanding Latinx's suicidality. Classic correlates of suicidality refer to standard constructs associated with suicidal behaviors, such as hopelessness, depression, or substance use (Chu et al., 2019). For example, one study drawing on the 2007 Youth Risk Behavior Survey found that feeling sad or hopeless, lifetime marijuana or cigarette use, and being in a physical altercation were more strongly associated with suicidal ideation in White versus Latina girls (Eaton et al., 2011). Despite the difference in magnitude, none of the factors differentially predicted suicidal ideation for Latina versus non-Latina youth. This may suggest that examining classic correlates of suicidality is insufficient to understanding Latinx's suicidality. Some initial work has shown that minority stress, such as experiences of interpersonal discrimination, account for variance above and beyond classic correlates of suicidality among diverse young adults (Chu et al., 2019). Examining cultural, in combination with classic, factors may help better understand suicidality pathways among Latinx youth. However, no study we know of has examined whether gender differences exist in how cultural and classic factors contribute to suicidality among Latinxs.

### 2. The interpersonal theory of suicide and discrimination

The interpersonal theory of suicide (ITS; Joiner, 2005) provides a theoretical framework to understand the role of discrimination and potential interplay with gender in suicidality pathways. This theory proposes that two constructs contribute to suicidal desire: thwarted belongingness (TB), or feeling alienated and disconnected from others particularly with regards to a valued group; and perceived burdensomeness (PB), or the belief that one is a burden to others. According to the ITS, suicidal behavior results when there is also acquired capability, which ultimately lowers a person's fear of death or bodily harm and increases the chance that they will engage in suicidal behaviors (Van Orden et al., 2010).

Specific cultural risk factors may fit within this broader existing theoretical framework. For example, although discrimination is not itself one of the key constructs of the ITS, it is conceptually relevant to both PB and TB. Discrimination can be conceptualized as a form of rejection, which directly relates to TB. Experiencing discrimination can also result in feelings of shame (Matheson & Anisman, 2009), which in turn may contribute to feeling like a liability or burden to others (PB). Although one study with Asian international students in the United States shows that TB, PB, discrimination, and suicidal ideation are related to each other (Wang, Wong, & Fu, 2013), no studies have examined these relationships among Latinx youth. Discrimination may be a culturally-unique stressor that contributes to TB or PB and therefore heightened suicidality among Latinx adolescents.

### 3. Gender and racial/ethnic differences in discrimination

Ethnic minorities are more likely to experience discrimination than European-Americans (Kessler, Mickelson, & Williams, 1999), and discrimination is a risk factor for poor mental health outcomes (Pascoe & Smart Richman, 2009). In particular, Latinxs who report discrimination are at higher risk for suicide (Kwon & Han, 2019; Pérez-Rodríguez et al., 2014), and those who experience racism are 2.5 times more likely to have attempted suicide (Gomez, Miranda, & Polanco, 2011). However, most of these studies only include adult and young adult samples (Cheref, Talavera, & Walker, 2019; Gomez et al., 2011) and few have focused on adolescent Latinxs. Yet, a meta-analysis by Schmitt, Branscombe, Postmes, and Garcia (2014) found larger effect sizes for the relationship between perceived discrimination and psychological well-being in children versus adults. Examining the impact of discrimination, among other cultural stressors, on youth may be especially important given that they are likely to have fewer coping strategies based on their developmental trajectory (Duarté-Vélez & Bernal, 2007).

It is also possible that discrimination affects girls and boys differently. There is some evidence that components of the ITS affect suicidality among men and women differently. A meta-analysis of ITS studies showed that the relationship between PB/TB and suicidal ideation is moderated by sex, such that correlations are larger when samples are comprised of fewer males (Chu et al., 2017). Women may perceive greater TB and PB due to placing greater value on close relationships (Van Orden, 2010). By extension, since

discrimination may increase TB and PB, it is possible that discrimination may differentially affect suicidality for Latinx girls and boys.

#### 4. The current study

The first aim of the present study was to evaluate gender differences in the relationship between discrimination and suicidality, specifically suicidal ideation and past behavior, in a sample of Latinx adolescents. Based on existing literature, the directionality of the expected gender differences in the discrimination-suicidality relationship is unclear. On the one hand, girls are more likely to be affected by interpersonal stressors than boys (e.g., [Shih, Eberhart, Hammen, & Brennan, 2006](#)). Therefore, interpersonal discrimination may be inherently more stressful for Latinas and thus put them at greater risk for suicidality. On the other hand, Latino boys are more likely to report experiencing discrimination ([Pérez, Fortuna, & Alegria, 2008](#)), and gender socialization and expectations may deter them from seeking social support as a coping strategy ([Lamis & Lester, 2013](#)). This may suggest that boys have fewer resources to cope with experiences of discrimination, and therefore experiencing discrimination may confer greater risk for suicidality for Latino boys than Latina girls. Given the limited research in this area, we propose two competing hypotheses based on the theoretical arguments described above: 1) the relationship between discrimination and suicidality will be stronger for Latina girls than Latino boys; or 2) the relationship between discrimination and suicidality will be stronger for Latino boys than Latina girls.

The second aim of this study was to examine how classic (i.e., depressive symptoms) and cultural factors (i.e., discrimination) simultaneously contribute to suicidality, specifically suicidal ideation and past behavior. Since prior research has shown that both factors uniquely account for suicidality among diverse youth, we hypothesized that both depressive symptoms and discrimination would independently account for suicidality in our sample.

#### 5. Method

##### 5.1. Participants and procedures

Data were collected from 390 youth of Latin American heritage, who were enrolled in a large metropolitan high school in Southern California, USA. Youth completed assent forms to indicate voluntary participation in study procedures, and parents provided informed consent. Additional details about procedures and measures are described elsewhere ([Cespedes, 2008](#); [Chithambo, Huey, & Cespedes-Knadle, 2014](#)). The current study focused on measures of discrimination, depressive symptomatology, and suicidality.

##### 5.2. Measures

**Demographics.** A demographics questionnaire assessed participants' background information. The current study utilized the following variables: participant age, gender (listed as "female" or "male"), self-identified racial/ethnic background, and place of birth (re-coded as U.S.-born or non-U.S.-born). For participants who were born outside the U.S., we calculated the percentage of their life lived in the U.S. ([Alegria, 2009](#)). Measures of socioeconomic status (SES) included participants' mothers' level of education and total number of people living in the home. Mother's education was dummy coded to represent three categories: 8th grade education or lower (reference group), 9th-12th grade, and some college or higher. Participants reported the total number of people living in the home, including themselves.

**Discrimination.** The Everyday Discrimination Scale (EDS; [Williams, Yu, Jackson, & Anderson, 1997](#)) was utilized to measure participants' experiences with discrimination. The EDS includes nine items asking about perceived daily mistreatment (e.g., "how often do you receive poorer service than other people at restaurants or stores" or "how often are you treated with less courtesy than other people"). Participants used a six-point Likert-type scale ranging from 1 ("never") to 6 ("almost every day") to indicate how often these events occur in their lives. For each participant, we summed responses for the nine items. For the current sample, internal reliability for the scaled items was .99. In all analyses, discrimination was grand-mean centered.

**Suicidality.** An abbreviated version of the Suicidal Behaviors Questionnaire for Children was utilized to assess suicidality (SBQ-C; [Cotton & Range, 1993](#)). The SBQ-C was adapted from the SBQ-14 ([Linehan & Nielsen, 1981](#)) for use among youth and has been found to be reliable and valid among clinical and non-clinical populations ([Cotton, Petersen, & Range, 1995](#)). The items comprising the scale have previously been validated as a single factor ([Cole, 1988](#)). The SBQ-C includes four items inquiring about suicidal ideation, attempts, and perceived likelihood: "Have you ever thought about or tried to kill yourself?" (rated 0–6); "How often have you thought about killing yourself in your whole life?" (rated 0–4); "Have you ever told someone that you were going to commit suicide, or that you might do it, in your whole life?" (rated 0–2); and "What chance is there that you will attempt suicide in your lifetime?" (rated 0–4). Composite reliability of the four SBQ-C items was substantial, .83, and was estimated using McDonald's omega ([McDonald, 1999](#)). Clinical cutoffs have not been established.

**Depressive symptoms.** The Reynolds Adolescent Depression Scale, 2nd Edition (RADS-2; [Reynolds, 2002](#)) was utilized to assess depressive symptoms. The RADS-2 is a 30-item scale that measures four dimensions of depression (i.e., dysphoria, anhedonia, negative self-evaluation, and somatic concerns). Participants indicate how often they experience each symptom on a 4-point scale ranging from "almost never" to "most of the time", with scores ranging from 30 to 120. Internal consistency in the present sample was .89.

##### 5.3. Analytical strategy

We first calculated correlations to show dependence between our variables of interest and determine the presence of

multicollinearity. We then conducted ordinary least squares regression analysis in which youths' SBQ-C sum scores were regressed onto their discrimination scores, gender, and the interaction between their discrimination scores and gender.

As the four SBQ-C items are ordinal scaled and severely skewed, structural regression models using a weighted least squares estimator designed for ordinal data were used. As a first step, we estimated a 1-factor latent variable model in which the four SBQ-C items served as ordered categorical indicators (Millsap, 2011). The latent factor was scaled by fixing one factor loading in order to free the variance of the latent SBQ-C factor. The 1-factor latent variable model fit the data well ( $\chi^2 = 0.40$ ,  $df = 2$ ,  $p = .818$ ), so we proceeded to use the latent SBQ-C factor as the outcome in all structural regression models. The benefit of estimating a latent SBQ-C factor is that the SBQ-C variable is unbiased by measurement error and adjusts for item skew.

Additionally, we fit a series of structural regression models to test the hypothesis that perceived discrimination predicts suicidality in Latina girls more so than in Latino boys, and to examine the additional contribution of depressive symptoms in differentially predicting suicidality. The first model (Model 1) only included the effect of perceived discrimination on latent SBQ-C. The second model (Model 2) added gender, and the third model (Model 3) included the interaction effect between perceived discrimination and gender. The fourth model (Model 4) included covariates, which consisted of mother's level of education, number of people living in the home, age (centered at age 13), and country of birth. The fifth model (Model 5) additionally included depressive symptoms. Our conceptual model is illustrated in Fig. 1. Finally, we ran two additional logistic regression models including perceived discrimination, gender, depression, and all covariates, assessing suicidal ideation and suicidal attempts as the event of occurrence, separately.

All structural regression and WLSMV analyses were estimated using Mplus 8.2 (Muthén & Muthén, 1998-2017). Missing data were handled using a 4-step procedure in Mplus. First, for missing SBQ-C item data, univariate probit regression of each item on the covariates was used including all individuals who provided data. Second, bivariate probit regression of each pair of items on the covariates was implemented using all available data. Third, a weight matrix was then estimated based on maximum likelihood estimation in the first two steps. Finally, the model was fit using weighted least squares estimation. The procedure is considered to be superior to using pairwise present data, as it permits missingness to be accounted for by all covariates. As traditional chi-square tests of

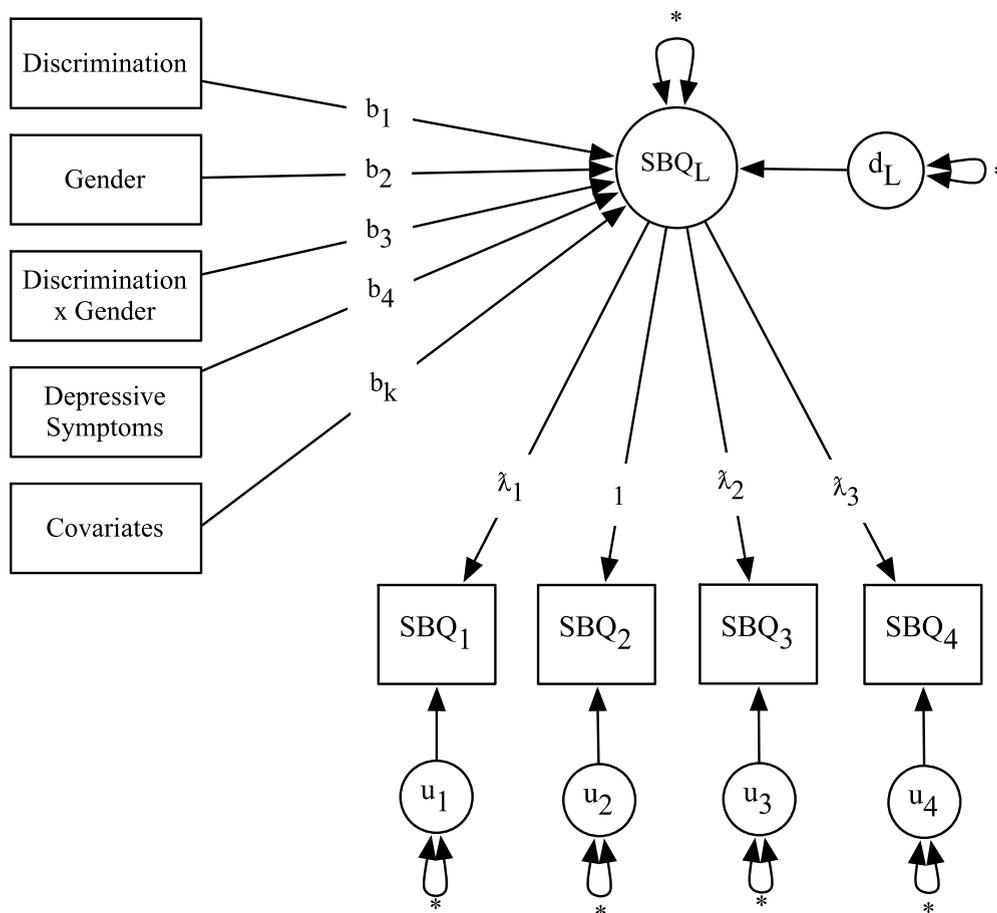


Fig. 1. Conceptual model.

nested models cannot be used with WLSMV, model comparisons were made using the DIFFTEST option in Mplus. The procedure consists of 2-steps to obtain chi-square distributed values to compare nested models, as WLSMV  $\chi^2$  values are not  $\chi^2$  distributed. Factor models fit with fewer parameters without significant loss of model fit were preferred.

## 6. Results

### 6.1. Sample characteristics

Descriptive statistics reflecting participant demographics and other study variables are reported in Table 1. Half the participants were female. On average, participants were 15.24 years of age and boys were older than girls. A majority (76.2%) were U.S.-born, and those who immigrated to the U.S. had spent approximately 44% of their lives in the U.S. Nearly half the participants were of Mexican origin. Over half of the participants were in ninth grade. A majority of participants' mothers had a high school education or lower, with 42.5% reporting their mothers earned the equivalent of 8th grade or lower level of education. Participants reported on average living in a household of 5.52 persons, including the participant.

### 6.2. Regression and moderation analyses

Table 2 shows a correlation matrix of all variables in our models. Experiencing discrimination was significantly related to all four suicidality items ( $r$ s ranged from .22-.38), and girls were more likely to endorse suicidality. Some differences emerged across the suicidality items. Older youth reported higher suicidality on the first two items, and youth who reported that their mothers had at least a college degree endorsed lower risk on the first item inquiring about prior suicidal ideation or attempt. All four suicidality items correlated highly with each other ( $r$ s ranged from .57-.82).

Table 3 reports indices of model fit and suicidality variance explained across our five models. According to these indices, model 4 was our best fitting model, which included both main and interaction effects, as well as several covariates. In terms of suicidality attributed to a cultural factor, discrimination only (Model 1) explained 14% of the variance. When we included gender along with discrimination, this increased by 4% (Model 2). When we included the moderation along with the two main effects, this increased to 22% of variance explained (Model 3). Next, we included covariates, whereby an additional 5% of the variance in the latent SBQ-C was explained. Lastly, we included a robust classic correlate of suicide to our cultural risk model. When combining depressive symptoms with the other variables in our prior models, depressive symptoms explained an additional 33% of the variance for a total of 60% of the suicidality variance in our sample (Model 5).

We report the findings from structural regression models 3, 4 and 5 in Table 4. Model 3 indicated that frequent discrimination positively predicted greater suicidality. Gender was also significantly associated with suicidality, indicating that girls were more likely to endorse suicidality. We found a significant moderation effect, such that the relationship between discrimination and suicidality was significant for both groups but stronger for girls than for boys. As is visible in Fig. 2, the slope of the female group (dashed line) is steeper than in the male group (solid line), suggesting that Latinas who perceive higher levels of discrimination are predicted to have the highest suicidality. In Model 4, we included relevant demographic factors as covariates, including mother's level of education,

**Table 1**  
Participant demographic characteristics (N = 390).

Variable	M(SD)	N (%)
Female	–	195(50)
Age	15.24(1.21)	–
US-born	–	297(76.2)
Age came to the US if non-US-born	8.90(5.44)	–
Percentage of life in the US if non-US-born	43.98 (31.65)	–
Ethnicity		
Mexican	–	179(45.9)
Salvadorian	–	117(30)
Honduran	–	8(2.1)
Other	–	68(17.4)
Current grade		
Ninth	–	221(56.7)
Tenth	–	30(7.7)
Eleventh	–	98(25.1)
Twelfth	–	27(6.9)
Mother's education level		
8th grade or lower	–	166(42.5)
9th-12 grade	–	126(32.3)
Some college or higher	–	17(4.4)
Number of people living in home	5.52(2.18)	–
Depressive symptoms	58.20(13.89)	–
Frequency of discrimination	19.50(9.31)	–
Suicide risk	1.26(2.37)	–

**Table 2**  
Correlation matrix of all model variables with standard errors in parentheses.

	1	2	3	4	5	6	7	8	9	10	11	12
1. Discrimination	–											
2. Gender	.09 (.05)	–										
3. Age	.06 (.05)	-.10 (.05) <sup>a</sup>	–									
4. Mother's education: 9th-12th grade level	.00 (.05)	.03 (.06)	-.04 (.05)	–	–							
5. Mother's education: some college or higher	.02 (.06)	.05 (.06)	-.10 (.06)	–	–							
6. US-born status	.04 (.05)	-.07 (.05)	.16 (.05) <sup>b</sup>	-.01 (.05)	-.00 (.05)	–						
7. People living in home	.05 (.06)	.03 (.05)	-.12 (.05) <sup>a</sup>	.03 (.05)	-.05 (.06)	.01 (.05)	–					
8. Depressive symptoms	.42 (.04)	-.20 (.05)	.002 (.05)	.02 (.05)	-.13 (.06)	.05 (.05)	.15 (.05)	–				
9. SBQ-C item 1	.35 (.05) <sup>b</sup>	-.15 (.06) <sup>b</sup>	.13 (.06) <sup>a</sup>	.08 (.06)	-.15 (.07) <sup>a</sup>	.04 (.06)	.07 (.06)	.54 (.04) <sup>b</sup>	–			
10. SBQ-C item 2	.33 (.06) <sup>b</sup>	-.22 (.06) <sup>b</sup>	.18 (.06) <sup>b</sup>	.03 (.06)	-.12 (.07)	.04 (.06)	.05 (.06)	.54 (.05) <sup>b</sup>	.82 (.03) <sup>b</sup>	–		
11. SBQ-C item 3	.22 (.08) <sup>b</sup>	-.15 (.08) <sup>c</sup>	.12 (.08)	.02 (.08)	-.05 (.09)	.02 (.08)	-.08 (.07)	.38 (.07) <sup>b</sup>	.69 (.05) <sup>b</sup>	.77 (.04) <sup>b</sup>	–	
12. SBQ-C item 4	.38 (.07) <sup>b</sup>	-.16 (.08) <sup>a</sup>	.08 (.07)	.05 (.08)	-.12 (.10)	.10 (.08)	-.08 (.07)	.43 (.07) <sup>b</sup>	.63 (.05) <sup>b</sup>	.72 (.04) <sup>b</sup>	.57 (.06) <sup>b</sup>	–

<sup>a</sup> = <.05.

<sup>b</sup> = <.01.

<sup>c</sup> = <.06.

**Table 3**  
Indices of model fit and suicide risk variance explained.

Model #	Model Description	$\chi^2$	df	$\Delta\chi^2$	$\Delta df$	p	R <sup>2</sup>
1	Discrimination	464.04	73	–	–	–	0.14
2	Discr, Gender	456.47	72	11.80	1	.001	0.18
3	Discr, Gender, Discr*Gender	457.81	71	7.54	1	.006	0.22
4	Discr, Gender, Discr*Gender, Covariates	526.50	66	10.89	5	.054	0.27
5	Discr, Gender, Discr*Gender, Covariates, Depressive symptoms	328.262	65	93.66	1	<.001	0.60

**Table 4**  
Structural regression model showing predictors of suicide risk.

Independent variable	Model 3			Model 4			Model 5		
	Estimate	Standard error	p-value	Estimate	Standard error	p-value	Estimate	Standard error	p-value
Discrimination	.39	.06	<.01	.39	.06	<.01	.39	.06	<.01
Gender	-.39	.11	<.01	-.39	.11	<.01	-.38	.11	<.01
Discrimination* Gender	.29	2.82	<.01	.29	.10	<.01	.29	.10	<.01
Age	–	–	–	.13	.05	<.01	.12	.05	<.01
Country of birth	–	–	–	.13	.15	.40	.13	.15	.39
Mother's education <sup>a</sup> : 9th-12 grade	–	–	–	.10	.13	.42	.10	.12	.42
Mother's education <sup>a</sup> : College or higher	–	–	–	-.35	.19	.06	-.35	.19	.06
Number of people living in home	–	–	–	.003	.02	.89	.003	.02	.89
Depressive symptoms	–	–	–	–	–	–	1.19	.09	<.01

<sup>a</sup> Reference group: 8th grade or lower education level

number of people living in the home, age, and country of birth. Finally, in Model 5 we examined depressive symptoms (our classic factor) in conjunction with discrimination (our cultural factor) and covariates. We found an effect for depressive symptoms and age predicting suicidality. We continued to find significant main and moderation effects for gender on discrimination. This suggests that even when accounting for the influence of depressive symptoms and sociodemographic factors like foreign-born status, age, and SES indicators, girls continued to endorse higher suicidality when they reported experiences with discrimination.

We conducted a sensitivity analysis to identify whether suicidal ideation, suicidal acts, or both were primarily predicted by the interaction between perceived discrimination and gender. In this post-hoc analysis, we dichotomized item 1 of the SBQ-C in which

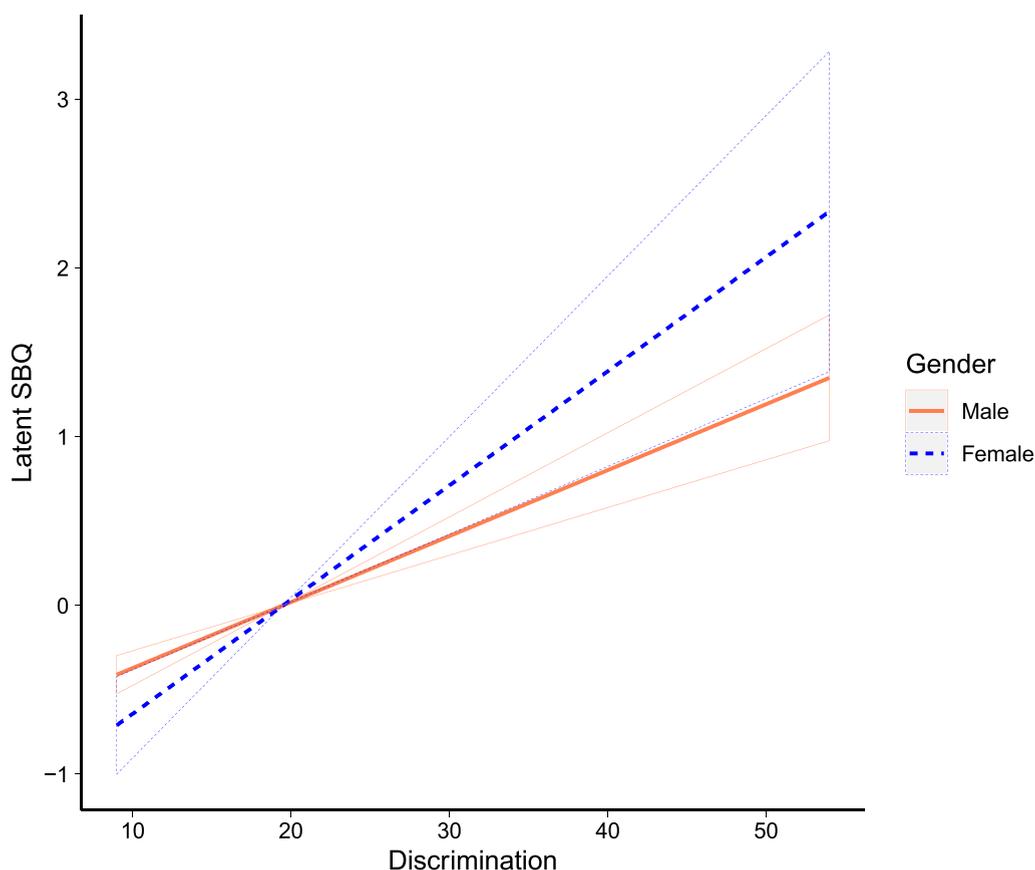


Fig. 2. Model showing gender and discrimination interaction and simple slopes.

participants were asked about ideation and acts so that either ideation (i.e., responses reflecting thinking about or planning suicide) or acts (i.e., responses reflecting attempts, with or without intent to die) was the event of occurrence. Logistic regression models that followed our modeling sequence above were fit to each outcome. In the logistic regression model with suicidal ideation as the event of occurrence, results were consistent with Model 5 above. In other words, depression, age, discrimination, gender, and the gender  $\times$  discrimination interaction were significant predictors of ideation. On the other hand, results of the model identifying suicidal acts as the event of occurrence indicated that only perceived discrimination ( $B = .31, SE = .12, p = .01$ ) and depression ( $B = .86, SE = .24, p < .001$ ) were significant predictors. These results, thus, suggest that gender differences in the effects of perceived discrimination on suicidality likely pertain to ideation rather than acts.

## 7. Discussion

Little is known about how classic and cultural factors together contribute to Latinxs' suicidality. The present study evaluated gender differences in the relationship between discrimination and suicidality among Latinx adolescents. Our results showed that discrimination is associated with increased suicidality among Latinx adolescents, and this association is stronger for girls versus boys even when controlling for covariates and a robust classic correlate of suicidality: depressive symptoms. Perceived discrimination accounted for individual differences in suicidality suggesting that it is an important but often overlooked correlate of suicidality among Latinx youth, particularly Latinas. Follow-up sensitivity analyses indicated that these results corresponded to suicidal ideation but not necessarily attempts.

Our findings may be understood using the interpersonal theory of suicide framework. It is possible that discrimination is a unique cultural experience of a type of perceived burdensomeness (PB) and thwarted belongingness (TB), which are two subjective states that put people at risk for suicidality. Some initial work supports this idea (Wang et al., 2013). For example, one study of LGB young adults who were predominantly Latinx showed that those who endorsed perceived or anticipated rejection due to their sexual orientation were more likely to report PB, which was associated with greater suicidal ideation (Hill & Pettit, 2012). Thus, one potential explanation for our findings is that Latinxs may exhibit suicidal ideation because they experience PB and TB through their exposure to discrimination. Alternatively, discrimination could interact with experiences of PB and TB to produce increased suicidality.

We offer a few potential explanations for our finding that the relationship between discrimination and suicidal ideation is stronger

for Latina girls than Latino boys. Our result is consistent with prior literature showing that the effect of PB and TB on suicidality is larger in samples with fewer men (Chu et al., 2017), indicating that women's suicidality may be more strongly affected by PB and TB. In one of the few studies with Latinxs, PB was associated with increased suicidal ideation regardless of a cultural protective factor (i.e., familism) among Mexican-American women (Garza & Pettit, 2010), emphasizing the impact of interpersonal stressors for Latinas. Given that the study only included Latinas, it is unclear if PB affected Latino men differently. Future studies should directly examine whether PB and TB differentially contribute to suicidality among Latinx girls versus boys.

Alternatively, it is possible that our finding reflects a different explanation. Latina girls may be more strongly affected by discrimination due to experiencing prejudice and unfair treatment based on multiple identities (i.e., ethnicity and gender). Prior research has indicated that experiencing multiple types of discrimination is predictive of poor mental health outcomes including depression and suicide, although these studies typically have not assessed the role of sexism (Vargas, Huey, & Miranda, 2020). Therefore, heightened influence of discrimination on Latina's suicidal ideation may be related to their multiple minority statuses. We were unable to explore the multiple discrimination hypothesis within our data. Future research should examine to what extent Latina girls may be at increased risk for suicide because they experience multiple types of discrimination.

The significance of discrimination in predicting suicidal ideation and attempts among Latinx adolescents adds to the evidence base of important cultural factors associated with suicidality. Interestingly, gender predicted only suicidal ideation and not attempts. This is somewhat surprising given that girls endorse higher rates of suicidal ideation and past attempts than boys (Kann et al., 2018). It is worth noting that few individuals in the present sample endorsed past attempts. As such, future studies should examine differential trajectories for suicide attempts and ideation among a clinical sample of Latinx adolescents with higher past suicide attempt rates.

Furthermore, our results indicate that discrimination - a culturally relevant factor - was a significant predictor of suicidality above and beyond a commonly studied classic correlate of suicidality: depressive symptoms. A future direction of our research could be to examine the interaction between discrimination and depressive symptomatology by gender to determine whether depressed Latinas are at an even greater risk for suicidality. In developing comprehensive models of suicidality for minority populations it is critical that we integrate both classic and culturally relevant factors. Future studies should continue to evaluate relevant sociocultural factors in the context of established theories of suicide, to further understand group specific pathways to suicidality and suicide risk.

### 7.1. Limitations

Our study has several limitations. While we propose that discrimination and other cultural factors should be integrated into the study of extant theories, we did not assess the core constructs of the interpersonal theory of suicide. Our study serves as an initial step to determine the role of a conceptually related construct - discrimination - that is highly relevant for ethnic minority groups. Prior studies with LGBTQ+ youth have found that discrimination and sexual minority stress is indirectly associated with depression and suicidal ideation (Baams, Dubas, Russell, Buikema, & van Aken, 2018; Baams, Russell, & Grossman, 2015) and suicide attempts (Fulginiti et al., 2020) through PB, and not TB. Additionally, sexual minority stress was found to have a direct effect on suicide attempts but not suicidal ideation (Fulginiti et al., 2020). Further studies should directly assess PB and TB constructs to determine the relationship with discrimination, different aspects of suicidality, and gender among Latinx adolescents. By incorporating cultural and classic factors in the context of established theories we will further refine pathway models for suicidality among vulnerable populations.

PB and TB are important predictors of suicidal ideation, but according to the interpersonal theory of suicide, lethal suicidal behaviors additionally involve the acquired capability for suicide (Joiner, 2005). Given our disparate findings for suicidal ideation versus attempts, future research should examine this distinction more closely and explore potential protective factors, such as family cohesion and self-compassion (Sun et al., 2020), among at-risk youth. Furthermore, a meta-analysis by Ribeiro et al. (2016) concluded that suicidal ideation and behavior are on their own weak predictors of future death by suicide. As such, additional studies should also assess capability for suicide.

Although our study examined suicidality in a less studied population, we did not distinguish between Latinx subgroups. Efforts to refine suicidality pathways can benefit from nuanced assessments of Latinxs (Duarte-Vélez & Bernal, 2007). Additionally, we only inquired about binary gender identity (i.e., male and female) in our study. Future studies could ask about non-binary identities and examine suicide-related pathways for gender non-conforming Latinx youth. Finally, several methodological constraints are worth noting. All of our study measures relied on participant self-report, calling into question concerns of common method variance. Additional studies can further support our findings by including different types of measures and information sources for the key constructs included in the present study. Finally, given the cross-sectional nature of our study, we are unable to draw conclusions regarding the directionality of the relationship. Longitudinal research is needed in this area.

## 8. Conclusion

The present study examined a cultural factor implicated in suicidality and potential pathways for gender differences among Latinx adolescents. Our results indicate that discrimination is associated with suicidality among adolescent Latinxs, particularly among girls. These findings highlight the value of including cultural and classic factors in the development of potential pathways to suicidality for different vulnerable groups. Future studies should further assess other relevant factors and more comprehensive models to predict suicidality among Latinx youth.

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## References

- Alegría, M. (2009). The challenge of acculturation measures: What are we missing? A commentary on thomson & hoffman-goetz. *Social Science & Medicine*, 69(7), 996–998. <https://doi.org/10.1016/j.socscimed.2009.07.006>.
- Baams, L., Dubas, J. S., Russell, S. T., Buikema, R. L., & van Aken, M. A. (2018). Minority stress, perceived burdensomeness, and depressive symptoms among sexual minority youth. *Journal of Adolescence*, 66, 9–18.
- Baams, L., Russell, S. T., & Grossman, A. H. (2015). Minority stress and mechanisms of risk for depression and suicidal ideation among lesbian, gay, and bisexual youth. *Developmental Psychology*, 51, 688–696.
- Centers for Disease Control and Prevention. (2018). *CDC WISQARS: Leading causes of death reports, 1981–2018*. [webappa.cdc.gov/sasweb/ncipc/leadcause.html](http://webappa.cdc.gov/sasweb/ncipc/leadcause.html).
- Cespedes, Y. M. (2008). *Evaluating a cultural process model of depression and suicidality in Latino adolescents (Unpublished doctoral dissertation)*. Los Angeles, CA: University of Southern California.
- Cheref, S., Talavera, D., & Walker, R. L. (2019). Perceived discrimination and suicide ideation: Moderating roles of anxiety symptoms and ethnic identity among Asian American, African American, and Hispanic emerging adults. *Suicide and Life-Threatening Behavior*, 49(3), 665–677.
- Chithambo, T., Huey, S. J., Jr., & Cespedes-Knadle, Y. (2014). Perceived discrimination and Latino youth adjustment: Examining the influence of relinquished control, discrimination attribution, nativity, and acculturation. *Journal of Latino Psychology*, 2(1), 54–66.
- Chu, C., Buchman-Schmitt, J. M., Stanley, I. H., Hom, M. A., Tucker, R. P., Hagan, C. R., ... Michaels, M. S. (2017). The interpersonal theory of suicide: A systematic review and meta-analysis of a decade of cross-national research. *Psychological Bulletin*, 143(12), 1313.
- Chu, J., Robinett, E. N., Ma, J. K., Shadish, K. Y., Goldblum, P., & Bongar, B. (2019). Cultural versus classic risk and protective factors for suicide. *Death Studies*, 43(1), 56–61.
- Cole, D. A. (1988). Hopelessness, social desirability, depression, and parasuicide in two college student samples. *Journal of Consulting and Clinical Psychology*, 56(1), 131–136.
- Cotton, C., Cotton, C., Peters, D., & Range, L. (1995). Psychometric properties of the suicidal behaviors questionnaire. *Death Studies*, 19(4), 391–397.
- Cotton, C. R., & Range, L. M. (1993). Suicidality, hopelessness, and attitudes toward life and death in children. *Death Studies*, 17(2), 185–191.
- Duarté-Vélez, Y. M., & Bernal, G. (2007). Suicide behavior among Latino and Latina adolescents: Conceptual and methodological issues. *Death Studies*, 31(5), 435–455.
- Duarté-Vélez, Y., Jones, R. N., & Spirito, A. (2018). Understanding suicidal ideation in Latino/a adolescents living in Puerto Rico. *Archives of Suicide Research*, 22(4), 569–583.
- Eaton, D. K., Foti, K., Brener, N. D., Crosby, A. E., Flores, G., & Kann, L. (2011). Associations between risk behaviors and suicidal ideation and suicide attempts: Do racial/ethnic variations in associations account for increased risk of suicidal behaviors among Hispanic/Latina 9th-to 12th-grade female students? *Archives of Suicide Research*, 15(2), 113–126.
- Franklin, J. C., Ribeiro, J. D., Fox, K. R., Bentley, K. H., Kleiman, E. M., Huang, X., ... Nock, M. K. (2017). Risk factors for suicidal thoughts and behaviors: A meta-analysis of 50 years of research. *Psychological Bulletin*, 143(2), 187.
- Fulginiti, A., Goldbach, J. T., Mamey, M. R., Rusow, J., Srivastava, A., Rhoades, H., ... Marshal, M. P. (2020). Integrating minority stress theory and the interpersonal theory of suicide among sexual minority youth who engage crisis services. *Suicide and Life-Threatening Behavior*, 50(3), 601–616.
- Garza, M. J., & Pettit, J. W. (2010). Perceived burdensomeness, familism, and suicidal ideation among Mexican women: Enhancing understanding of risk and protective factors. *Suicide and Life-Threatening Behavior*, 40(6), 561–573.
- Gomez, J., Miranda, R., & Polanco, L. (2011). Acculturative stress, perceived discrimination, and vulnerability to suicide attempts among emerging adults. *Journal of Youth and Adolescence*, 40(11), 1465.
- Hill, R. M., & Pettit, J. W. (2012). Suicidal ideation and sexual orientation in college students: The roles of perceived burdensomeness, thwarted belongingness, and perceived rejection due to sexual orientation. *Suicide and Life-Threatening Behavior*, 42(5), 567–579.
- Joiner, T. E. (2005). *Why people die by suicide*. Cambridge, MA: Harvard University Press.
- Kann, L., McManus, T., Harris, W. A., Shanklin, S. L., Flint, K. H., Queen, B., ... Lim, C. (2018). Youth risk behavior surveillance—United States, 2017. *Morbidity and Mortality Weekly Report - Surveillance Summaries*, 67(8), 1–114.
- Kessler, R. C., Mickelson, K. D., & Williams, D. R. (1999). The prevalence, distribution, and mental health correlates of perceived discrimination in the United States. *Journal of Health and Social Behavior*, 208–230.
- Kwon, S., & Han, D. (2019). Discrimination, mental disorders, and suicidal ideation in Latino adults: Decomposing the effects of discrimination. *Journal of Immigrant and Minority Health*, 21(1), 143–150.
- Lamis, D. A., & Lester, D. (2013). Gender differences in risk and protective factors for suicidal ideation among college students. *Journal of College Student Psychotherapy*, 27(1), 62–77.
- Suicide among racial and ethnic minority groups: Theory, research, and practice Leong, F. T., & Leach, M. M. (Eds.). *Taylor & Francis*, (2010).
- Linehan, M. M., & Nielsen, S. L. (1981). *Suicidal behaviors questionnaire (SBQ)*. University of Washington.
- Matheson, K., & Anisman, H. (2009). Anger and shame elicited by discrimination: Moderating role of coping on action endorsements and salivary cortisol. *European Journal of Social Psychology*, 39(2), 163–185.
- McDonald, R. P. (1999). *Test theory: A unified treatment*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Millsap, R. E. (2011). *Statistical approaches to measurement invariance*. New York: Routledge.
- Pascoe, E. A., & Smart Richman, L. (2009). Perceived discrimination and health: A meta-analytic review. *Psychological Bulletin*, 135(4), 531.
- Pérez-Rodríguez, M. M., Baca-García, E., Oquendo, M. A., Wang, S., Wall, M. M., Liu, S. M., et al. (2014). Relationship between acculturation, discrimination, and suicidal ideation and attempts among US hispanics in the national epidemiologic survey of alcohol and related conditions. *Journal of Clinical Psychiatry*, 75(4), 399–407.
- Pérez, D. J., Fortuna, L., & Alegria, M. (2008). Prevalence and correlates of everyday discrimination among US Latinos. *Journal of Community Psychology*, 36(4), 421–433.
- Plemmons, G., Hall, M., Doupnik, S., Gay, J., Brown, C., Browning, W., & Williams, D. (2018). Hospitalization for suicide ideation or attempt: 2008–2015. *Pediatrics*, 141(6).
- Reynolds, W. M. (2002). RADS-2: Reynolds adolescent depression scale. *Psychological Assessment Resources*.
- Ribeiro, J. D., Franklin, J. C., Fox, K. R., Bentley, K. H., Kleiman, E. M., Chang, B. P., et al. (2016). Self-injurious thoughts and behaviors as risk factors for future suicide ideation, attempts, and death: A meta-analysis of longitudinal studies. *Psychological Medicine*, 46(2), 225–236.
- Schmitt, M. T., Branscombe, N. R., Postmes, T., & García, A. (2014). The consequences of perceived discrimination for psychological well-being: A meta-analytic review. *Psychological Bulletin*, 140(4), 921.
- Shih, J. H., Eberhart, N. K., Hammen, C. L., & Brennan, P. A. (2006). Differential exposure and reactivity to interpersonal stress predict sex differences in adolescent depression. *Journal Of Clinical Child And Adolescent Psychology*, 35(1), 103–115.
- Sun, R., Ren, Y., Li, X., Jiang, Y., Liu, S., & You, J. (2020). Self-compassion and family cohesion moderate the association between suicide ideation and suicide attempts in Chinese adolescents. *Journal of Adolescence*, 79, 103–111.

- Van Orden, K. A., Witte, T. K., Cukrowicz, K. C., Braithwaite, S. R., Selby, E. A., & Joiner, T. E., Jr. (2010). The interpersonal theory of suicide. *Psychological Review*, *117*(2), 575.
- Vargas, S. M., Huey, S. J., & Miranda, J. (2020). A critical review of current evidence on multiple types of discrimination and mental health. *American Journal of Orthopsychiatry*, *90*(3), 374–390.
- Wang, K. T., Wong, Y. J., & Fu, C. C. (2013). Moderation effects of perfectionism and discrimination on interpersonal factors and suicide ideation. *Journal of Counseling Psychology*, *60*(3), 367.
- Williams, D. R., Yu, Y., Jackson, J. S., & Anderson, N. B. (1997). Racial differences in physical and mental health: Socio-economic status, stress and discrimination. *Journal of Health Psychology*, *2*(3), 335–351.