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Ethnic Discrimination and Self-rated Health among Hispanic Emerging Adults: Examining the Moderating Effects of Self-esteem and Resilience

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Abstract

Exposure to ethnic discrimination has been conceptualized as a sociocultural stressor that is associated with lower self-rated health. However, this association remains understudied among Hispanics and less is known about constructs that may mitigate the effects of ethnic discrimination on self-rated health. Accordingly, this study aimed to (a) examine the association between ethnic discrimination and self-rated health among Hispanic emerging adults (ages 18–25), and (b) examine the extent to which self-esteem and resilience may moderate this association. A convenience sample of 200 Hispanic emerging adults from Arizona (n=99) and Florida (n=101) was recruited to complete a cross-sectional survey. Data were analyzed using hierarchical multiple regression and moderation analyses. Results indicate that higher ethnic discrimination was associated with lower self-rated health. Moderation analyses indicated that self-esteem functioned as a moderator that weakened the association between ethnic discrimination and self-rated health;

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however, resilience did not function similarly as a moderator. This study adds to the limited literature on ethnic discrimination and self-rated health among Hispanics and highlights that psychological factors, such as enhancing self-esteem, may help buffer the adverse effects of ethnic discrimination on health outcomes.

Keywords

The United States (U.S.) Census Bureau defines *Hispanic* or Latino/a as a person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin regardless of race (U.S. Census Bureau, 2022). As of 2022, it was estimated that the Hispanic population reached 62.1 million, accounting for 19% of the U.S. population, and approximately 26% of the Hispanic population are emerging adults (Funk & Lopez, 2022; Grisby et al., 2018). *Emerging adulthood* is a developmental period that roughly spans the ages of 18–25 years and reflects a stressful and difficult stage in life because individuals experience transitional life changes that involve striving to develop a personal identity, experiencing greater autonomy, often facing high levels of instability, and taking on new and challenging developmental tasks (Arnett, 2000).

Although Hispanic emerging adults encounter developmental stressors that may impact health (Arnett et al., 2014), many are also burdened with disproportionate exposure to *ethnic discrimination*, unjust and unfair treatment based on a person's ethnic background that operates as a sociocultural stressor that can adversely affect health (Clark et al., 1999; Williams & Mohammed, 2009). Investigating the effects of ethnic discrimination on health among Hispanic emerging adults is important from a public health perspective because they are one of the fastest-growing segments of the U.S. population and more likely than older Hispanic individuals to report ethnic discrimination (Noe-Bustamante & Flores, 2019; Robert Wood Johnson Foundation/National Public Radio, 2017). In the present study, we specifically examine *self-rated health*, a measure of subjective/perceived health status that serves as a valid and reliable predictor of mortality, chronic disease, and objective assessments of health (Benyamini, 2011; Bombak, 2013). Ethnic discrimination and its effects on self-rated health among Hispanics have been studied considerably less than other outcomes such as mental health (Andrade et al., 2021; Lee & Ahn, 2012; Paradies et al., 2015); however, of available work, greater discrimination is associated with lower self-rated health status (Andrade et al., 2021; Finch & Vega, 2004; Molina et al., 2013). Considering that self-rated health is not often studied among emerging adults, measuring self-rated health in this population is appropriate, important and ideal given that clinical endpoints (e.g., chronic disease) at this developmental stage are rare (Sokol et al.,2017).

Identifying modifiable moderators can serve as an essential step toward developing and improving evidence-based interventions for health (MacKinnon & Luecken, 2008). This is relevant for research on ethnic discrimination and health because exposure to ethnic discrimination cannot be completely eliminated; thus, we need to accumulate evidence of

modifiable moderators that may help to mitigate the effects of ethnic discrimination on health. In the present study, we focus on the moderating effects of self-esteem and resilience.

Our work is informed by an integrative framework that draws from three conceptual models—the Coping with Racism Model, Self-affirmation Theory, and the Reserve Capacity Model. The Coping with Racism Model posits that higher levels of perceived racism/ethnic discrimination will lead to poorer health and coping resources can act as moderators that buffer/mitigate the adverse effects of racism and ethnic discrimination on health outcomes (Brondolo et al., 2009). Building on Self-affirmation Theory (described under the subheading self-esteem), self-esteem is conceptualized as an intrapersonal/psychological coping resource that may mitigate the adverse association of ethnic discrimination on self-rated health. Similarly, based on the Reserve Capacity Model (described under the subheading resilience), the same assertion is made for resilience (Gallo et al., 2009; Steele et al., 1993; Taylor & Stanton, 2007).

Self-esteem

Self-esteem refers to the global evaluation of the self and has been conceptualized as an intrapersonal/psychological coping resource that is associated with higher levels of optimism and perceived personal control/mastery that, in turn, plays a role in more positive appraisals of stressors and the use of active coping strategies (Sowislo & Orth, 2013; Taylor & Stanton, 2007). In line with the Self-affirmation Theory, self-esteem functions as a coping resource that buffers the effects of stressors because it lowers perceptions of threat, reduces rumination and worry, and lessens defensive/maladaptive responses to stress (Creswell et al., 2005; Steele et al., 1993).

Although scholars have suggested the importance of understanding how self-esteem may impact self-rated health, this association has been relatively understudied (Arsandaux et al., 2019). The limited body of work on this topic has found that higher self-esteem is associated with better self-rated health, including among emerging adults (Arsandaux et al., 2019; Krause, 2016; Misra et al., 1996; Rohre & Young, 2004). In addition to functioning as a coping resource, it is plausible that self-esteem is linked with better self-rated health because individuals with higher self-esteem are less likely to engage in health risk behaviors (e.g., physical inactivity, smoking) and generally experience lower psychological distress (Arsandaux et al., 2019; Rohre & Young, 2004), which in turn, is related to better self-rated health. Past work indicates self-esteem can mitigate the harmful effects of rejection on health behaviors and biological stress responses (Ford & Collins, 2010, 2013). Self-esteem is an appealing construct in prevention science because it serves as a mutable target in interventions for emerging adults (Butkovic et al., 2020). Yet, no intervention or observational studies have examined the extent to which self-esteem may mitigate the effect of ethnic discrimination on self-rated health.

Resilience

Another factor that may counteract the adverse effects of ethnic discrimination on self-rated health is *resilience*, the ability to achieve positive adaptation despite experiencing threats

to adaptation such as adversity or stressful experiences (e.g., ethnic discrimination; Luthar et al., 2000; Masten, 2001). Conceptual frameworks of resilience and health, such as the Reserve Capacity Model, propose that resilience changes as an individual experiences stressful and positive events (Gallo et al., 2009). In addition, coping resources (e.g., tangible, interpersonal, intrapersonal resources) can enhance resilience in response to stress and adversity (Gallo et al., 2009). This model also proposes that the probability of better health outcomes for those from socially disadvantaged groups, including Hispanic populations, may increase if they build resilience to counteract the effects of social stressors (Gallo et al., 2009).

It should be noted that resilience is a multifaceted construct that can be measured in multiple ways (see Luthar et al., 2000; Reich et al., 2010; Windle et al., 2011 for comprehensive reviews of the construct). In the present study, we focus on perceived resilience, an individual's belief that they can "*bounce back*" from difficult and stressful situations (Connor & Davidson, 2003; Smith et al., 2008). Research suggests that perceived resilience is associated with better health outcomes because it operates as a resource that facilitates the use of active coping strategies in response to stressors (Connor & Davidson, 2003; Mayorga et al., 2023). Also, individuals with higher levels of perceived resilience may recover better from stressors, evidenced by a faster return to physiological homeostasis, which prevents or reduces the occurrence of adverse health outcomes (Connor & Davidson, 2003; Feder et al., 2010). Consistent with the extant literature, the Reserve Capacity Model, and other comprehensive frameworks of stress and coping (Gallo et al., 2009; Lazarus & Folkman, 1984), we proposed that perceived resilience is relevant to evidence-based interventions for health because it is a modifiable construct that may function as a coping resource to moderate/buffer the adverse effects of sociocultural stressors, such as ethnic discrimination, on health.

Present Study

The present study aimed to (a) examine the association between ethnic discrimination and self-rated health among Hispanic emerging adults, and (b) examine the extent to which self-esteem and perceived resilience may operate as moderators of this focal association. Based on the review of the existing literature, the following hypotheses were proposed. *Hypothesis one*: higher ethnic discrimination will be associated with lower self-rated health. *Hypothesis two*: self-esteem and resilience will moderate the association between ethnic discrimination and self-rated health, whereby higher levels of self-esteem and resilience will weaken the adverse association between ethnic discrimination and self-rated health.

Method

Procedure and Participants

The present study was approved by the Institutional Review Board of Florida International University. The present analyses used data from a cross-sectional study with a sample of 200 participants from the *Project on Health among Emerging Adult Latinos* (Project HEAL). Quota sampling was used to recruit a convenience sample of participants in Maricopa County, Arizona and Miami-Dade County, Florida using various recruitment strategies (e.g.,

in-person, posting flyers, targeted emails). Prospective participants interested in the study contacted the project coordinator to be screened and given access to the online survey if they met the eligibility criteria. Inclusion criteria for participants included being between ages 18 and 25, self-identifying as Hispanic or Latino/a, being able to read English, and currently living in Maricopa County, Arizona or Miami-Dade County, Florida. Participants provided informed consent to participate in the study by using an electronic informed consent form. All measures in the survey were in English. The survey took approximately 50 minutes to complete, and participants were compensated with a $30 electronic Amazon gift card. More details on the procedures for Project HEAL can be found elsewhere (Cano et al., 2020).

Measures

Ethnic discrimination.—Perceived ethnic discrimination was measured using the nine-item ethnic discrimination subscale from the Scale of Ethnic Experience (Malcarne et al., 2006). A sample item from this measure is, "In my life, I have experienced prejudice because of my ethnicity." Participants responded to items in the measure using a five-point Likert-type scale (1 = *strongly disagree*, 5 = *strongly agree*). Higher mean scores are indicative of higher perceived ethnic discrimination. Malcarne and colleagues (2006) found evidence that this measure is valid and reliable for Hispanic subgroups. Cronbach's reliability coefficient in the validity study was $\alpha = .82$ and in our sample, it was $\alpha = .90$.

Self-rated health.—General self-rated health status was assessed with a question from the Short-form Health Survey (Ware et al., 1995). The question used was, "Generally speaking, how would you describe your health status?" Participants responded to the question using a five-point Likert-type scale (1 = *poor*, 5 = *excellent*). This single item has been found to be a valid and strong predictor of morbidity and mortality (Bombak, 2013). This item has also been widely used in epidemiological studies in the U.S. with diverse populations, including Hispanic populations, and in international studies coordinated by the World Health Organization (Finch & Vega, 2004; Krieger et al., 2011; Subramanian et al., 2010).

Self-esteem.—Self-esteem was measured with the five-item positive self-esteem (self-confidence) subscale from the Rosenberg Self-esteem Scale (Rosenberg, 1979). A sample item from this measure is, "I feel that I have a number of good qualities." Participants responded to items using a four-point Likert-type scale (1 = *strongly disagree*, 4 = *strongly agree*). Higher sum scores indicate higher self-esteem. Analyses on the psychometric properties of this measure indicate that it is a valid measure for use with Hispanic populations with a Cronbach's reliability coefficient $\alpha = .79$ (Supple & Plunkett, 2011). The Cronbach's reliability coefficient in our sample was $\alpha = .87$.

Resilience.—Perceived resilience was measured with the six-item Brief Resilience Scale (Smith et al., 2008). A sample item from this measure is, "I tend to bounce back quickly after hard times." Participants responded to items using a five-point Likert-type scale (1 = *strongly disagree*, 5 = *strongly agree*). Higher mean scores indicate higher levels of resilience. Analyses of the psychometric properties of this measure indicate that it is a valid measure for use with Hispanic populations and the Cronbach's reliability coefficient ranged

from .80 to .91 (Rodríguez-Rey et al., 2016). The Cronbach's reliability coefficient in the present study was α = .76.

Demographic questionnaire.—The following sociodemographic variables were assessed and included as covariates: age, gender, (0 = men, 1 = women), study site (0 = Florida, 1 = Arizona), partner status (0 = single, 1 = has a partner), nativity (0 = immigrant, 1 = non-immigrant), Hispanic heritage group (0 = other Hispanic heritage, 1 = Mexican heritage), student status (0 = current college student, 1 = non-college student), employment status (0 = unemployed, 1 = employed), and financial strain (1 = has more money than needed, 2 = just enough money for needs, 3 = not enough money to meet needs). Existing literature has suggested that the aforementioned sociodemographic variables are associated with objective health outcomes or self-rated health (Angel et al., 2003; Dominguez et al., 2015; Savoy et al., 2014); thus, we included them in the regression analyses to control for potential confounding effects.

Statistical Analysis

Analyses were performed using SPSS v25. It should be noted that the data met assumptions of skewness, kurtosis, normality, and linearity. Descriptive statistics, including means and standard deviations, were computed for continuous variables, and frequencies and proportions were generated for categorical variables. Bivariate correlations between study variables were assessed using Pearson correlation coefficients.

A hierarchical multiple regression (HMR) model was used to estimate the main effects of the predictor variables on self-rated health. Predictor variables were entered into the HMR model in a specified order so that each block of predictors contributed explanatory variance to the outcome variable (i.e., self-rated health) after controlling for the variance explained by the previous block of variables (Cohen et al., 2003). Predictor variables were grouped and entered into the HMR model in the following order: (a) demographic variables were entered in the first block, (b) self-esteem and resilience were entered in the second block, and (c) ethnic discrimination was entered in the third and final block to determine the extent to which it uniquely predicted self-rated health above and beyond the other predictors.

The conceptual moderation model tested in the present study is depicted in Figure 1. Using PROCESS v3.2 for SPSS (Hayes, 2017), moderation analyses were conducted to examine the extent to which potential moderating variables had a differential effect on the direction and/or strength of the association between ethnic discrimination and self-rated health. PROCESS tests moderation by (a) performing a multiple regression to replicate the variance explained by all the predictor variables included in the HMR model, (b) estimating interaction terms between the focal predictor (e.g., ethnic discrimination) and the moderating variable (e.g., self-esteem), and (c) estimating conditional effects in relation to self-rated health. To estimate standardized regression coefficients in PROCESS, variables must be standardized. The moderation analyses controlled for all variables in the HMR model that were not included in the respective interaction terms.

Results

Descriptive Analyses

The mean participant age was 21.30 (SD = 2.09). Approximately half the sample was composed of women (n = 102, 51.0%) and participants from Arizona (n = 99, 49.5%). Regarding Hispanic heritage groups, the following groups were represented: Mexican (n = 88, 44.0%), Cuban (n = 33, 16.5%), Colombian (n = 24, 12.0%), other South American (n = 21, 10.5%), Central American (n = 20, 10.0%), and Puerto Rican (n = 9, 4.5%). Participants rated their perceived health as follows: poor (n = 1, 0.5%), fair (n = 30, 15.0%), good (n = 63, 31.5%), very good (n = 64, 32.0%), and excellent (n = 42, 21.0%). Frequencies, proportions, means, and standard deviations for all study variables are presented in Table 1. Bivariate correlations for all study variables are presented in Table 2.

Hierarchical Multiple Regression

Table 3 presents all the regression coefficients from the HMR model. Results indicate that 24.1% of the variance in self-rated health was explained by all predictor variables entered in the HMR model. The first predictor block included demographic variables and explained 16.0% of the variance in self-rated health, R^2 = .160, $F(9, 190)$ = 4.01, $p < .001$. The second block added self-esteem and resilience, which explained 4.7% of the variance in self-rated health, R^2 = .047, $F(2, 188)$ = 5.53, $p < .01$. The third and final block added ethnic discrimination, which explained 3.4% of the variance in self-rated health, R^2 = .034, $F(1, 187)$ = 8.45, $p < .01$. Standardized regression coefficients from the final regression model indicate that higher levels of ethnic discrimination were associated with lower self-rated health (β = −.23, $p < .01$). In addition, self-esteem (β = .17, $p < .01$), along with study site (β = −.27, $p < .05$) and financial strain (β = −.18, $p < .01$), had statistically significant associations with self-related health.

Moderation Analyses

A moderation analysis indicated that self-esteem exerted a statistically significant moderator effect on the association between ethnic discrimination and self-rated health (β = .16, p = .02), with self-esteem buffering the detrimental impacts of discrimination. Specifically, as shown in Figure 2, conditional effects indicate that ethnic discrimination had the strongest negative association with self-rated health for those reporting low levels of self-esteem (1 SD below the mean; β = −43, $p < .001$), and the association between discrimination and self-rated health was also statistically significant but weaker for those reporting average levels of self-esteem (β = −.27, $p < .001$). The conditional effect of ethnic discrimination on self-rated health was not statistically significant at high levels of self-esteem (1 SD above the mean; β = −.11, p = .25). Resilience did not moderate the association between ethnic discrimination and self-rated health (β = −.11, p = .07).

Discussion

The current study sought to document the link between ethnic discrimination and self-rated health and determine whether self-esteem and resilience mitigated this association. Using a sample of Hispanic emerging adults, we found that higher levels of ethnic discrimination

and lower levels of self-esteem were associated with lower self-rated health status, and self-esteem, but not resilience, buffered the association between ethnic discrimination and self-rated health.

The association observed between ethnic discrimination and self-rated health is consistent with other studies that included Hispanics of various age groups (Finch & Vega, 2004; Molina et al., 2013). However, the present study is likely the first that focused on Hispanic emerging adults and provided evidence that higher levels of ethnic discrimination are associated with lower self-rated health. This association may have important implications for public health because emerging adults engage in multiple health risk behaviors, but few interventions target this population (Cleveland & Goldstein, 2019; Schwartz & Petrova, 2019). Moreover, emerging adulthood is a developmental period that affords an opportunity to counteract the cumulative effects of ethnic discrimination by delivering health promotion interventions during a critical stage in life that may help prevent and/or delay the onset of chronic diseases (Bauldry et al., 2012; Bonnie et al., 2014). Evidence-based health interventions for emerging adults may be particularly suitable to target *prevescalation*—preventing the escalation of health risk behaviors rather than focusing exclusively on preventing the initiation of health risk behaviors (Villanti et al., 2019). A reason being that many emerging adults have already initiated health risk behaviors, such as smoking and binge drinking, that are often used as maladaptive strategies to cope with stressors and have been linked with poorer self-rated health. Thus, there needs to be a greater focus on interrupting the continuation and progression of such health risk behaviors (Schwartz & Petrova, 2019). However, longitudinal research designs are needed to better examine and understand the across-time psychosocial and behavioral mechanisms that link ethnic discrimination with self-rated health (Chen & Yang, 2014; Viruell-Fuentes, 2007).

That higher self-esteem was linked to better self-rated health is consistent with findings from other research studies (Arsandaux et al., 2019; Krause, 2016), and the moderating effect of self-esteem found in this study contributes novel evidence that merits further investigation. Our findings suggest that higher levels of self-esteem can help counteract the adverse effects of ethnic discrimination on self-rated health, and this appears to exhibit a gradient effect, with incrementally higher self-esteem providing stronger buffering effects. As observed in this study, the beneficial effects of self-esteem are conditional on having high levels of self-esteem. However, the simple slope of this condition was not statistically significant because within-time change in self-rated health observed across participants was low. By contrast, the worst condition was at low levels of self-esteem because this condition had the lowest levels of self-rated health, and this simple slope had the steepest decline in self-rated health across levels of ethnic discrimination.

Consistent with research on ethnic discrimination and its effects on mental health (Cano et al., 2016; Umaña-Taylor & Updegraff, 2007), our findings suggest that self-esteem is a relevant psychological factor in the association between ethnic discrimination and self-rated health. These findings may be explained in several ways. First, higher self-esteem may be protective for health because these individuals may be better able to separate and externalize (rather than internalize) the effects of unfair treatment from their self-concept (cf. Crocker & Major, 1989). Second, given that discrimination is associated with health-risk behaviors

among Hispanic emerging adults (Unger et al., 2014), it is plausible that in the context of stressful experiences such as ethnic discrimination, individuals with higher self-esteem feel more confident about finding alternative ways to cope and the decisions they make about engaging in health risk behaviors (e.g., substance use), which ultimately may protect them from poorer health (Edward & Romero, 2008). Finally, high self-esteem is associated with more positive social relationships, which help individuals cope with stress and subsequently lead to better health outcomes (Campos & Kim, 2017; Cohen, 2004; Harris & Orth, 2020).

Although research on self-esteem and self-rated health is limited, if our findings are replicated in future studies, self-esteem could be a promising factor to target in evidence-based interventions (Butkovic et al., 2020). Further, helping emerging adults increase and maintain high levels of self-esteem may be particularly relevant and practical because people during this developmental stage are often actively seeking to shape their identity and self-concept (Butkovic et al., 2020; Schwartz et al., 2015). For example, prior work suggests that ethnic discrimination may lead some individuals, including Hispanic emerging adults, to internalize negative stereotypes about their ethnic group, which in turn, leads to lower self-esteem (Brittian et al., 2015; Cano et al., 2016; Eccleston & Major, 2006; Hipolito-Delgado, 2016). A potential intervention strategy to counteract these negative effects on self-esteem may be to enact strategies to strengthen ethnic identity in Hispanic populations (Brittian et al., 2015; Umaña-Taylor et al., 2007; Umaña-Taylor et al., 2018).

The present study is one of the first to examine the association between resilience and self-rated health. However, resilience was not significantly associated with self-rated health and the moderating effect of resilience was not statistically significant. One explanation for these null findings is that we used a brief and global measure of perceived resilience that did not fully capture the complexity of resilience. Future research may benefit from using more comprehensive measures of resilience (Luthar et al., 2000). Another explanation may be that resilience did not have a main effect on self-rated health because underlying mediators such as psychosocial stress may also need to be assessed in tandem with resilience (Gallo & Matthews, 2003). Regarding the null moderation effect for resilience, it is possible that perceived resilience alone may not provide individuals with sufficient capacity to counteract the adverse effects of ethnic discrimination, particularly given other stressors in emerging adults' lives. Emerging adults often experience this developmental period as difficult and highly stressful due to the high levels of instability and demands associated with taking on new and challenging developmental tasks and life course transitions (Arnett, 2000).

Limitations

The present findings should be interpreted considering the following limitations. First, we utilized self-report measures that are susceptible to participant error and social desirability bias. Second, due to the cross-sectional study design, we cannot make firm conclusions regarding the causal or directional ordering of the associations observed, although they were both theoretically and empirically informed. The cross-sectional design is also a significant limitation because it does not lend itself to examining mediation effects, and it is plausible that self-esteem and resilience may function as mediators between ethnic discrimination and self-rated health (Cave et al., 2020). Third, although the single-item for

self-rated health used in the present study is widely used and has well-established validity and reliability, prior research has indicated that a multi-item measure of self-rated health may be associated more strongly with morbidity and mortality than this single-item measure (Van Ginneken & Groenewold, 2012). This study also relied on a brief and global measure of perceived resilience; future studies may benefit from using more comprehensive measures of resilience.

Limits to generalizability must also be acknowledged given our non-probability sampling technique and the English-based survey utilized in the current study. Most participants were college students and U.S.-born, and all were English-speaking and resided in two metropolitan areas with large Hispanic populations. Since the survey was only conducted in English, we could not test our models with monolingual Spanish speakers who may experience ethnic discrimination differently. Replication is needed to document whether the effects observed in the current study are similarly found with Spanish-dominant Hispanic participants in the U.S. and in Hispanic populations residing in areas not considered ethnic enclaves or Hispanic immigrant destinations as well as those in rural locales. Additionally, given the recruitment of "Hispanics" and "Latino/as" broadly, combined with our sample size, we were unable to conduct analyses to examine potential subgroup variation attributable to different Hispanic heritage groups (e.g., Mexican versus Puerto Rican).

Conclusion

Considering the high prevalence of ethnic discrimination reported by Hispanics in the U.S., ethnic discrimination and its pernicious effects will continue to be a significant social problem (Pew Research Center, 2015). Thus, it is imperative that researchers continue to examine how to mitigate the effects of ethnic discrimination on health. The present study adds to the limited literature on ethnic discrimination and self-rated health among Hispanic emerging adults and highlights self-esteem as a factor that weakens this association. Although resilience did not moderate the association between ethnic discrimination and self-rated health, future studies should include participants from other stages of psychosocial development to determine whether this null finding is present in other age-groups who likely have distinct interpersonal and intrapersonal resources compared to emerging adults.

Ethnic discrimination is generally not considered in evidence-based health interventions (Miller et al., 2018; Unger, 2015), and this, in combination with the study limitations described above, limit our ability to provide recommendations for interventions. That said, our findings suggest that intrapersonal/psychological factors such as self-esteem may serve as a coping resource that helps Hispanic emerging adults. As this field of research continues to advance, it is essential that it not only replicate our findings but also move beyond targeting psychological factors that may counteract the effects of ethnic discrimination on health. Scholars have recommended that health interventions also target environmental factors, communiuty factors, and public policies to create more structural and institutional change (American Psychological Association, 2014; Buhin & Vera, 2009, Phillips et al., 2015; Vera, 2020). One reason this is recommended is to place a greater emphasis on combating ethnic discrimination rather than relying on remedial strategies that are intended

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to help marginalized individuals cope with the adverse effects of ethnic discrimination (Buhin & Vera, 2009; Phillips et al., 2015). Ultimately, combating the effects of ethnic discrimination on health is a difficult public health challenge that will require multi-level intervention strategies, and our study offers some insight into intrapersonal factors (e.g., self-esteem) that may be helpful in this endeavor.

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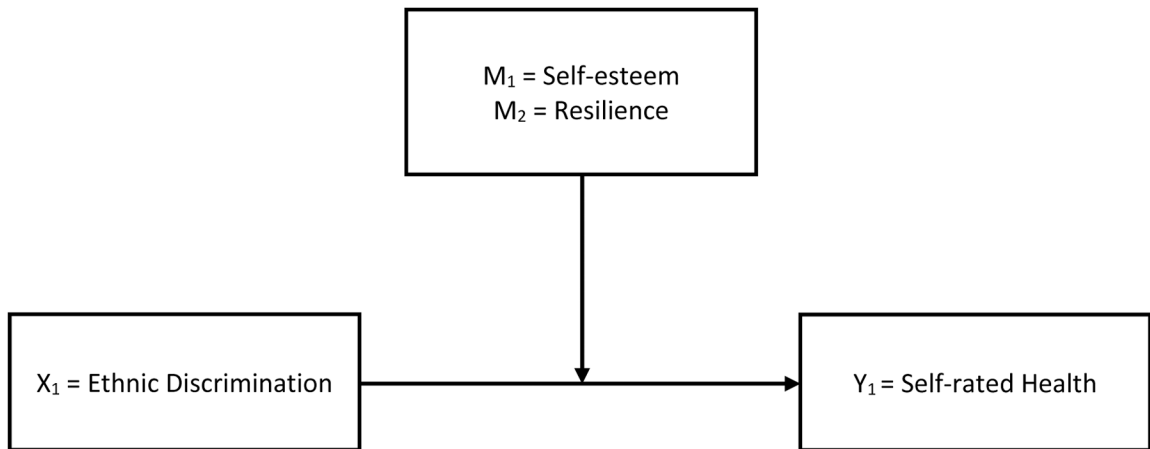
Figure 1.
Conceptual moderation model tested in the present study.

Note: X = Focal Predictor, M = Moderating Variables, Y = Outcome Variable.
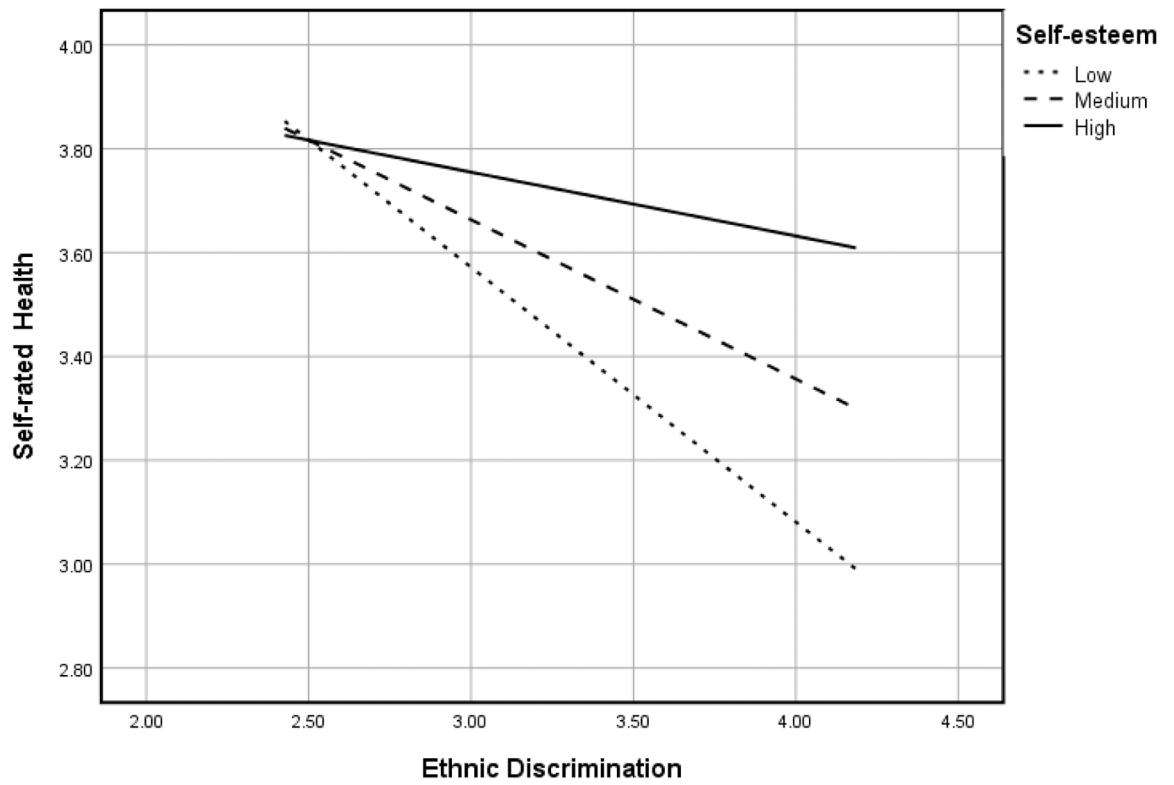
Figure 2.
Two-way interactions with self-esteem moderating the association between ethnic discrimination and self-rated health.

Table 1

Descriptive Statistics for Study Variables (n = 200)

Variable	
	n (%)
Gender	
Women	102 (51.0)
Men	98 (49.0)
Study Site	
Arizona	99 (49.5)
Florida	101 (50.5)
Nativity	
Immigrant	60 (30.0)
Non-immigrant	140 (70.0)
Hispanic Heritage	
Mexican	88 (44.0)
Other Hispanic Heritage	112 (56.0)
Partner Status	
Single	142 (71.0)
Has Partner	58 (29.0)
Student Status	
Current College Student	139 (69.5)
Non-College Student	61 (30.5)
Employment Status	
Employed	157 (78.5)
Unemployed	43 (21.5)
	M (SD)
Age	21.30 (2.09)
Financial Strain	2.30 (.60)
Self-esteem	16.98 (2.67)
Resilience	3.29 (.74)
Ethnic Discrimination	3.31 (.88)
Self-rated Health	3.58 (1.00)

Table 2

Bivariate Correlations for Study Variables

	Variable	1	2	3	4	5	6	7	8	9	10
1.	Age	-									
2.	Gender	−.05	-								
3.	Study Site	.17*	.05	-							
4.	Partner Status	.24**	.10	.07	-						
5.	Nativity	.08	.14*	.34**	−.01	-					
6.	Hispanic Heritage	.23**	.02	.86**	.06	.32**	-				
7.	Student Status	.30**	−.00	.02	.01	−.11	.00	-			
8.	Employment Status	.27**	.05	.40**	.09	.16*	.37**	.24**	-		
9.	Financial Strain	−.02	.09	.07	.03	.02	.06	.19**	.02	-	
10.	Self-esteem	.05	.06	.17*	.13	.06	.15*	−.01	.14*	−.02	-
11.	Resilience	.01	−.18**	−.07	.022	−.13	−.07	.24**	.08	−.21**	.20**
12.	Ethnic Discrimination	.10	.26**	.43**	.15*	.30**	.43**	−.21**	.12	.16*	.06
13.	Self-rated Health	.08	−.09	−.27**	0.04	−.17*	−.21**	0.14	−.00	−.25**	.16*

*
$p < .05$,

**
$p < .01$

Table 3

Hierarchical Multiple Regression Model Predicting Self-rated Health

Variable	Model 1			Model 2			Model 3		
	b	*SE*	β	*b*	*SE*	β	*b*	*SE*	β
Block 1									
Age	.04	.04	.08	.05	.04	.09	.05	.04	.11
Gender	−.09	.14	−.05	−.07	.14	−.04	.02	.14	.01
Study Site	−.59	.26	−.30*	−.61	.26	−.31*	−.54	.26	−.27*
Partner Status	.08	.15	.04	.02	.15	.01	.08	.15	.04
Nativity	−.17	.16	−.08	−.15	.16	−.07	−.10	.15	−.04
Hispanic Heritage	.05	.26	.03	.04	.26	.02	.15	.25	.08
Student Status	.10	.16	.05	.06	.16	.03	−.03	.16	−.01
Employment Status	.22	.19	.09	.16	.18	.07	.14	.18	.06
Financial Strain	−.37	.12	−.22**	−.33	.11	.19**	−.31	.11	−.18**
Block 2									
Self-esteem				.06	.03	.17**	.06	.03	.17**
Resilience				.16	.10	.11	.13	.10	.09
Block 3									
Ethnic Discrimination							−.26	.09	.23**

Note: *b* = unstandardized coefficient, *SE* = standard error, β = standardized coefficient;

*
p .05,

**
p .01,

***
p .001;

R^2 = 16.0% for Block 1, R^2 change = 4.7% for Block 2, R^2 change = 3.4% for Block 3.