

6-21-2021

Associations of Sociocultural Stressors with Psychological Distress and Self-rated Health among Hispanic Emerging Adults

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FLORIDA INTERNATIONAL UNIVERSITY

Miami, Florida

ASSOCIATIONS OF SOCIOCULTURAL STRESSORS WITH PSYCHOLOGICAL
DISTRESS AND SELF-RATED HEALTH AMONG HISPANIC EMERGING ADULTS

A dissertation submitted in partial fulfillment of

the requirements for the degree of

DOCTOR OF PHILOSOPHY

in

PUBLIC HEALTH

by

Abir Rahman

2021

To: Dean Tomás R. Guilarte
R.Stempel College of Public Health and Social Work

This dissertation, written by Abir Rahman, and entitled Associations of Sociocultural Stressors with Psychological Distress and Self-rated Health among Hispanic Emerging Adults, having been approved in respect to style and intellectual content, is referred to you for judgment.

We have read this dissertation and recommend that it be approved.

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Florida International University, 2021

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DEDICATION

I dedicate my dissertation to my beloved Mother and Father, my lovely wife, Nasrin. Words cannot fully express how grateful I am for their sacrifice and unconditional support. I also dedicate my dissertation to my dear brother, sister-in-law, my niece Raaya and my Parents-in-law. I truly appreciate the tremendous help and support you provided me throughout this process.

ACKNOWLEDGMENTS

Life does not stop for anything. Like many other Ph.D. students, I also had to pass through difficult times. One such moment was when my mother was diagnosed with cancer while I was thousands of miles away from home struggling with my own challenges. During that time, one who helped me navigate this difficult time academically was my major professor, Dr. Miguel Ángel Cano. I am grateful to him for all his support. He is a compassionate person, a caring advisor, from whom I learned a lot. His support, constructive feedback, and overall him being a true mentor throughout this journey were incredible. I want to thank my parents and my wife, for their unwavering support and patience. I am also grateful to my committee members, Dr. Zoran Bursac, Dr. Mariana Sanchez, and Dr. Chanadra Young Whiting, for their help and guidance during my Ph.D. work. A huge thanks to all the participants in the Project on Health among Emerging Adult Latinos (Project HEAL). This study was supported by the National Institute on Alcohol Abuse and Alcoholism [K01 AA025992].

ABSTRACT OF THE DISSERTATION

ASSOCIATIONS OF SOCIOCULTURAL STRESSORS WITH PSYCHOLOGICAL
DISTRESS AND SELF-RATED HEALTH AMONG HISPANIC EMERGING
ADULTS

by

Abir Rahman

Florida International University, 2021

Miami, Florida

Professor Miguel Ángel Cano, Major Professor

Emerging adulthood (18-25 years) is a distinct period of life, characterized by a high level of instability in the matters of romantic life, work, and challenging developmental undertakings. Various events related to these developmental tasks may leave lifelong impacts on emerging adult's identities and health across adulthood. Further, due to the unstable nature of this period, individuals in this age group are vulnerable to various mental health problems. Hispanic emerging adults may be particularly at risk of experiencing adverse health outcomes, as on top of normative developmental stressors (e.g., increased autonomy, finding employment), they are often exposed to various chronic sociocultural stressors. However, few studies have examined this period, let alone involving Hispanic emerging adults, in part due to the recent establishment of this period as a distinct stage of life. Considering the future health implications of this period, utilizing data from the Project

on Health among Emerging Adult Latinos (Project HEAL), this research investigated the associations between cultural stressors (acculturation gap conflicts, ethnic discrimination) and outcomes such as depressive symptoms, psychological stress, and perceived health status among 200 Hispanic emerging adults. We also examined potential resources (family cohesion, distress tolerance, and optimism) that can help protect Hispanic emerging adults from the detrimental effects of acculturation gap conflicts and ethnic discrimination.

Our findings from hierarchical multiple regressions indicated that those with higher acculturation gap conflicts were more likely to experience depressive symptoms and perceive their health as poor. Similarly, Hispanic emerging adults who were experiencing higher ethnic discrimination were more likely to develop psychological stress. Results from moderation analyses showed that family cohesion moderated the association between acculturation gap conflicts and depressive symptoms. Additionally, both distress tolerance and optimism moderated the association between ethnic discrimination and psychological stress.

It is critical to identify culturally relevant and modifiable determinants that can have beneficial or adverse associations with the mental health of Hispanic emerging adults so that steps can be taken to design or modify prevention and intervention programs to safeguard the health of one of the fastest-growing segments of the U.S. population. The findings of this study add to the limited literature by making a meaningful contribution to a subject area that needs more exploration.

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INTRODUCTION

Depression is one of the major causes of disability and a leading contributor to the overall burden of disease globally (WHO, 2020). Approximately 264 million people worldwide have depression (James et al., 2018). It comes with high societal costs and compared to many other chronic diseases it causes greater functional impairment (Kessler, 2012; Wells et al., 1989). Also, if left untreated or mismanaged, depression can lead to suicidal and homicidal ideation, which in many instances turn into actual deaths (Collins & White, 2003; HHS, 2014). Another condition, psychological stress, appears when a situation or surrounding environment is perceived to be beyond an individual's coping resources (Cohen et al., 2007; Folkman & Lazarus, 1984). Literature shows that being exposed to chronic psychological stress is deleterious, as it has been detected to be a significant determinant of different chronic diseases, including cardiac disease, cancer, and depression (Cohen et al., 2007; World Health Organization, 2010). Further, research shows self-rated health is a pragmatic measure of perceived health status in public health research, as it acts as a valid indicator of mortality, chronic diseases, and objective health status evaluations, including in Hispanic communities (inclusive of Latino/Latina/Latinx; Benyamini, 2011; Bombak, 2013; Finch et al., 2002).

Mental health plays a significant role in the overall health and well-being (Keyes, 2005; O'Connor et al., 2012). Despite that, little is known about the role played by mental health on the development and adjustment of emerging adults (18-25 years). This life stage is uniquely different socially, cognitively, and biologically from late adolescence and

young adulthood (Arnett, 2000; Tanner et al., 2009). For example, adolescents are still dependent on their parents/caretakers, not allowed to participate in various civic activities (i.e., voting, joining military service), and currently undergoing puberty-related biological changes. Conversely, emerging adults are semiautonomous, can participate in various civic activities, are reproductively mature, and cognitively better equipped, yet not expected to carry serious responsibilities common for adults. Additionally, they have lesser control over emotional reactions and possess less interpretative prowess compared to older adults (Tanner et al., 2009).

Emerging adulthood is a period of life marked by various events (e.g., new relationships, education, job) that often leave a lifelong impact on their identity across adulthood (Demiray et al., 2009; Elnick et al., 1999). This is important, as emerging adults are particularly vulnerable to mental health problems partly due to the group's unique developmental features, characterized by heightened levels of instability in the areas of romance, work, and challenging developmental undertakings (Arnett et al., 2014). Further, this period is also known for experimentation and risk-taking, such as substance abuse, driving under influence, and risky sexual behavior (Claxton and van Dulmen 2013; Krieger et al. 2018; Li et al. 2016). For the most part, the unstable nature of the emerging adulthood years makes them more vulnerable to developing various mental health problems, including depression and psychological stress (Arnett, 2000). Furthermore, the experimentation, risk-taking trait, and feeling in-between may ultimately make them perceive that their health is poor, which is as stated before have actual implications on their health.

Hispanic emerging adults may be at higher risk of developing adverse mental health outcomes as on top of normative developmental stressors, this group often faces additional socio-cultural stressors, such as acculturation gap conflicts, ethnic discrimination (Cano et al., 2021; Noe-Bustamante & Flores, 2019). Not surprisingly, a higher prevalence of depression was found among the Hispanic population compared to non-Hispanic Whites, for both mild (26.1% vs. 21.5%) and moderate-to-severe symptoms, based on National Center for Health Statistics (9.4% vs. 6.9%; Pratt & Brody, 2014). Additionally, prior research on Asian American and Hispanic emerging adults found higher acculturation gap conflicts to be associated with higher depressive symptoms (Dennis et al., 2010; Pham et al., 2020). Findings from these studies suggest that higher acculturation gap conflicts increase the risk of developing poor mental health, which in turn, may result in poorer self-rated health. Further, even though the association between ethnic discrimination and psychological stress among Hispanic emerging adults have not been examined before, a study involving African American emerging adults found higher levels of ethnic discrimination to be associated with higher negative emotions and lower psychological or coping resources (Joseph et al., 2020). Moreover, various research involving Hispanic and multiethnic emerging adult samples found higher levels of ethnic discrimination to be related to symptoms of depression, anxiety, lower self-esteem, and suicidal ideation (Cano et al., 2016; Cheref et al., 2019).

Overall Goals:

Taking all this into consideration, it is critical to advance our understanding of the associations between various cultural stressors (acculturation gap conflicts, ethnic

discrimination) and health outcomes (depression, ethnic discrimination, and self-rated health), and understand malleable factors (family cohesion, distress tolerance, and optimism) that can potentially weaken these deleterious associations. To do so, this study examined the relationship between acculturation gap conflicts and depressive symptoms and the moderating effects of family cohesion. Further, the association between ethnic discrimination and psychological stress was assessed, with distress tolerance and optimism as moderators. Finally, the relationship between acculturation gap conflicts and self-rated health was examined. Findings from this study can help to identify modifiable factors that may serve to inform the creation and modification of evidence-based prevention and intervention programs.

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MANUSCRIPT 1

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Rahman A., Sánchez, M., Bursac Z., Whiting C.Y., Piña-Watson B., Taskin T., Ramirez-Ortiz D., Leinaar E., Lozano A., Nehme L., Cano M.A. (2021). Depressive Symptoms, Family Cohesion, and Acculturation Gap Conflicts among Hispanic Emerging Adults. Family Relations (under review).

Abstract

Objective

This study examined the associations of family cohesion and acculturation gap conflicts with depressive symptoms and the moderation effect of family cohesion on the association between acculturation gap conflicts and depressive symptoms among Hispanic emerging adults.

Background

On top of normative developmental stressors (finding new jobs, relationships, education), Hispanic emerging adults face additional sociocultural stressors (acculturative stress, ethnic discrimination), which put them at risk of experiencing adverse psychological outcomes.

Methods

Data from a cross-sectional survey were collected from 200 participants from Arizona (n=99) and Florida (n=101). Hierarchical multiple regression and moderation analyses

were conducted to examine the association between acculturation gap conflicts and depressive symptoms and the moderating effects of family cohesion, respectively.

Results

Higher family cohesion was associated with lower depressive symptoms. Conversely, higher acculturation gap conflicts were associated with higher depressive symptoms. Moderation analyses indicated that family cohesion moderated the association between acculturation gap conflicts and depressive symptoms.

Conclusions

This study adds to the limited literature on acculturation gap conflicts among Hispanic emerging adults and advances our understanding of the role of family cohesion as a modifiable moderator.

Implications

It is critical to identify culturally relevant and modifiable determinants that can have beneficial or adverse associations with the mental health of Hispanic emerging adults. Findings from this study can be utilized to tailor prevention and intervention programs or modify existing programs for better performance.

Introduction

In developed countries, one age group that is particularly vulnerable to mental health problems are emerging adults (18-25 years old) in part due to this group's distinctive developmental features, characterized by a high level of instability in the matters of romantic life, work, and challenging developmental undertakings (Arnett et al., 2014). This

life stage is uniquely different socially, cognitively, and biologically from late adolescence and young adulthood (Arnett, 2000; Tanner et al., 2009). For example, adolescents are considered minors, who are still dependent on their parents/caretakers, not allowed to participate in various civic activities (i.e., voting, joining military service), and currently undergoing puberty-related biological changes. Conversely, emerging adults are semiautonomous, can participate in various civic activities, are reproductively mature, and cognitively better equipped, yet not expected to carry serious responsibilities common for adults. Additionally, they have lesser control over emotional reactions and possess less interpretative prowess compared to older adults (Tanner et al., 2009). Emerging adulthood is a period of life marked by various events (e.g., new relationships, education, job) that often leave a lifelong impact on their identity across adulthood (Demiray et al., 2009; Elnick et al., 1999). For the most part, the unstable nature of the emerging adulthood years makes them more vulnerable to developing symptoms of depression (Arnett, 2000). Not surprisingly, in the United States (U.S.), emerging adults reported the highest prevalence of elevated depressive symptoms (13.1%) compared to adolescents and all other adult groups (Substance Abuse and Mental Health Services Administration, 2018). Furthermore, the National Center for Health Statistics found that higher prevalence rates of depression were reported among Hispanics compared to non-Hispanic Whites, for both mild (26.1% vs. 21.5%) and moderate-to-severe symptoms (9.4% vs. 6.9%; Pratt & Brody, 2014). One possible reason for the higher prevalence of depressive symptoms among Hispanic emerging adults can be attributed to experiencing chronic sociocultural stressors (acculturative stress, ethnic discrimination), on top of normative developmental stressors (e.g., increased autonomy, finding employment) associated with the emerging adulthood

period (Arnett et al., 2014; Cano et al., 2021; Demiray et al., 2009; Elnick et al., 1999). Another factor that may be contributing to the increased rates of depression within this group could be acculturative conflicts that occur within historically immigrant cultures, such as those who are Hispanic.

Therefore, more research is needed to identify and comprehend culturally relevant and modifiable determinants that can have beneficial or adverse associations with the mental health of Hispanic emerging adults. In doing so, we can improve our efforts to prevent and treat depressive disorders among this understudied population. Accordingly, this study aimed to examine associations among acculturation gap conflicts and family cohesion with depressive symptoms among Hispanic emerging adults. These associations have been examined fairly often among Hispanic adolescents (Cano et al., 2016; Nair et al., 2018; Smokowski et al., 2008); however, little is known about acculturation gap conflicts and family cohesion and their respective associations with depressive symptoms during emerging adulthood. To further advance our understanding of acculturation gap conflicts and family cohesion among Hispanic emerging adults, our second aim was to examine the extent to which family cohesion moderates the association between acculturation gap conflicts and depressive symptoms.

Acculturation Gap Conflicts

The *acculturation gap* refers to differences between child and parent in the levels of behaviors, beliefs, and connection in the heritage culture (e.g., Hispanic culture) and receiving culture (U.S. culture; Smokowski et al., 2008). Researchers have found that compared to their parents, children often acculturate to the receiving culture faster, creating

an acculturation gap which may lead to family conflict and family-related stress (Hernandez & McGoldrick, 1999; Szapocznik & Kurtines, 1980). In turn, this conflict and stress may deteriorate family functioning and negatively impact a child's mental health (Conger et al., 2010; Smokowski et al., 2008). Acculturation gap can be exceptionally agitating, considering it has the potential to intensify intergeneration cultural conflicts and result in adverse outcomes. For example, a study involving Asian American emerging adults found intergenerational cultural conflict resulting from acculturation gaps to be significantly associated with depressive symptoms (Pham et al., 2020). Although conceptualization of the acculturation gap may suggest that it is only relevant to immigrant children, a study among Hispanic college students found that the parent-child acculturation gap also increased family distancing and depression in later generations (Hwang & Wood, 2009). Moreover, while assessing the relationship between acculturation gap and substance use among Hispanic adolescents, findings from a longitudinal study showed that the relationship did not vary based on generations (Unger et al., 2009).

The theory of bicultural family functioning further links acculturation and health-related outcomes through family functioning (Szapocznik & Kurtines, 1993). This theory posits that the offspring of Hispanic immigrant families tend to acquire the U.S. culture at a faster rate and to a greater extent compared to their parents. While the heritage culture remains immensely important to the parents, some youth may start to lose contact with the heritage culture (e.g., Hispanic culture). The differential rate of acculturation in a family may create a cultural gap that leads to decreased family functioning, which in turn, increases the risk of poor mental health outcomes. Several studies have tested this assumption and found inconsistent results. For example, researchers found that a higher

level of intergenerational acculturative conflict among parents and adolescents was associated with higher levels of depressive symptoms (Piña-Watson et al., 2019). Similarly, among Hispanic youth, family acculturation gap was found to be associated with higher levels of conduct problems and substance abuse (Marsiglia et al., 2009; Martinez Jr, 2006; Schofield et al., 2008, Unger et al., 2009). However, some other studies did not find the acculturation gap to be associated with parent-child conflict or youth adjustment problems (Gil et al., 1994; Lau et al., 2005; Pasch et al., 2006). A possible reason for these mixed findings can be attributed to the various methods adopted to measure the acculturation gap across studies. For instance, some studies have utilized parent and child reports of acculturation to examine cultural match/mismatches, mathematically calculated difference scores in acculturation, or estimated an interaction to measure the parent-child acculturation gap (Lau et al., 2005; Phinney & Vedder, 2006; Smokowski et al., 2008).

Considering these inconsistent findings, researchers suggest rethinking the primary premise of measuring the acculturation gap. Researchers encouraged identifying parent-child cultural differences that explicitly produce problems with communication, dispute, tension, or distress rather than focusing only on the differences in the parent-child's cultural orientation and assuming that leads to conflict (Basáñez et al., 2014). To measure this phenomenon more effectively, the Acculturation Gap Conflicts Inventory (AGCI) was developed. A study conducted among Hispanic college students utilizing an earlier version of the AGCI found that acculturation gap conflicts were a significant predictor of depressive symptoms (Dennis et al., 2010).

Presently, most research on the acculturation gap among Hispanics has focused on adolescents. Considering that emerging adulthood is a transformative period that is distinct from adolescence (Berry, 2004), it is imperative to examine *if* and *how* acculturation gap conflicts affect depressive symptoms among Hispanic emerging adults.

Family Cohesion

Family cohesion refers to the bond and interconnectedness that exists among family members and is hypothesized to be the strongest indicator of family functioning (Olson et al., 1983; Tolan et al., 1997). Among Hispanic families, higher family cohesion has been identified as a protective factor against sociocultural stressors and poor mental health (Guassi Moreira & Telzer, 2015; Hovey & King, 1996; Juang & Alvarez, 2010; Vidal de Haymes et al., 2011). Evidently, in an attempt to see the effect of family cohesion on depression during the transition from high school to college, a study involving college-freshmen found an inverse relationship between family cohesion and depression (Guassi Moreira & Telzer, 2015).

Family cohesion may be particularly relevant to the mental health of Hispanics because it aligns with their cultural value of *familismo* (Dinh et al., 2002). Literature suggests that familismo acts as a protective factor among Hispanics as it increases family supportiveness (Calzada et al., 2013). A longitudinal study with Hispanic adolescents found that higher familismo was associated with lower depressive symptoms (Cruz et al., 2019). Another study, while examining the moderating effect of familismo, found higher levels of familismo reduced intergenerational acculturative conflict, and thus shielding Hispanic adolescents from depressive symptoms (Piña-Watson et al., 2019). *Family*

functioning, a multidimensional construct that encompasses family cohesion, has been also found to act as a protective factor against health risk behaviors among Hispanic adolescents (Guilamo-Ramos et al., 2006; Unger et al., 2009). Furthermore, researchers have found that higher family functioning is associated with lower depressive symptoms (Hovey & King, 1996, Lorenzo-Blanco et al., 2016, Perreira et al., 2019, Sarmiento & Cardemil, 2009).

Emerging adulthood years are known for transition and greater autonomy (Anderson, 2003). During this period, many youths move out of their parental homes and live semi-autonomously; thus, family cohesion may be weaker among emerging adults, compared to adolescents and older adults (Cano et al., 2020; Goldscheider & Goldscheider, 1999; Kastner et al., 2002). In a study among African American emerging adults, no significant main effect of family cohesion was observed on stress (Hood et al., 2013). However, a study involving first-year college students in the Midwestern U.S. found family cohesion to be inversely related to depressive symptoms (Guassi Moreira & Telzer, 2015). This finding was further supported by a study on Chinese emerging adults (Cheung et al., 2019). To the best of our knowledge, few studies have examined family cohesion and mental health among Hispanic emerging adults. Moreover, in addition to depression being highly prevalent in Hispanic emerging adult population, research shows that disparity also exist in accessing mental healthcare for overall Hispanics (Alegria et al., 2008; Cabassa et al., 2008). Furthermore, many in the Hispanic population may not seek mental health care because of the negative perceptions and stigma associated with mental illness which includes depression. If we could improve our understanding of the factors that could protect Hispanic emerging adults from these poor outcomes, we could prevent further incidents of

depression within this population, thus decreasing the documented mental health disparities that exist in terms of prevalence. Cohesion within the family could be one of those processes that are a source of resilience and strength that may help protect Hispanic emerging adults from the detrimental effect of acculturative conflict on the mental health. Therefore, it is necessary to examine if family cohesion is associated with depressive symptoms during emerging adulthood among Hispanics, and if family cohesion may moderate the association between acculturation gap conflicts and depressive symptoms.

Present Study

Based on the review of the existing literature, the following hypotheses were proposed. *Hypothesis one*, higher levels of family cohesion will be associated with lower levels of depressive symptoms, and by contrast, higher levels of acculturation gap conflicts will be associated with higher levels of depressive symptoms. *Hypothesis two*, higher family cohesion will function as a moderator that weakens the adverse association between acculturation gap conflicts and depressive symptoms.

Methods

Procedure and Participants

The present study was approved by the Institutional Review Board of Florida International University. Data has been analyzed 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 prospective 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 ages 18 to 25, self-identifying as Hispanic or Latina/o, 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. 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 are published elsewhere (Cano et al., 2020).

Measures

Demographic Questionnaire. The following sociodemographic variables were assessed and included as covariates: age, gender, (0 = male, 1 = female), 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 you need, 2 = just enough money for your need, 3 = not enough money to meet your needs).

Depressive Symptoms. Self-reported symptoms of depression were measured with the 10-item short-form Center for Epidemiological Studies Depression Scale (Andresen et al., 1994). A sample item from this measure is, “I felt depressed.” Participants responded to items in this measure using a four-point Likert-type scale (0 = *rarely or none of the time*, 3 = *most or all of the time*) with higher sum scores being indicative of higher depressive

symptoms. Cronbach's reliability coefficient for this measure was $\alpha = .84$ in the present sample.

Family Cohesion. Perceived family cohesion was measured with the corresponding six-item subscale from the Family Relations Scale (Tolan et al., 1997). A sample item from this measure is, “Family members feel very close to each other.” Participants responded to items in this measure using a four-point Likert-type scale (1 = *not true at all*, 4 = *almost always or always true*) with higher mean scores indicating higher family cohesion. Cronbach's reliability coefficient for this measure was $\alpha = .90$.

Acculturation Gap Conflicts. Perceived acculturation gap conflicts were measured with the seven-item preferred-culture conflicts subscale from the Acculturation Gap Conflicts Inventory (Basáñez et al., 2014). A sample item from this measure is, “I’ve had some problems in my family because I prefer American customs.” Participants responded to items in this measure using a seven-point Likert-type scale (1 = *strongly disagree*, 7 = *strongly agree*) with higher mean scores indicating higher acculturation gap conflicts. Cronbach’s reliability coefficient for this measure was $\alpha = .84$.

Statistical Analysis Plan

All analyses were performed using SPSS v25. The overall missing data was 1%. Family cohesion, depressive symptoms, and covariates had 3%, 3%, and 0% missing data, respectively. Due to very little missing data, imputation was done utilizing the expectation-maximization (EM) algorithm. Descriptive statistics including means and standard deviations were computed for continuous variables, and frequencies and proportions were generated for categorical variables. Univariate correlations between continuous study

variables were assessed using Pearson correlation coefficients. Multicollinearity was assessed using two diagnostic indicators, tolerance and the variance inflation factor (VIF). It is recommended that the tolerance value be higher than .10 and the VIF value be lower than 10 (Cohen et al., 2003).

A hierarchical multiple regression (HMR) model was used to estimate the main effects of the predictor variables on depressive symptoms. 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., depressive symptoms) 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: (1) demographic variables were entered in the first block, (2) family cohesion was entered in the second block, and (3) acculturation gap conflicts were entered in the third and final block to determine the extent to which it uniquely predicted depressive symptoms above and beyond the other predictors.

Using PROCESS v3.2 for SPSS (Hayes, 2017), moderation analyses were conducted to examine the extent to which family cohesion affected the direction and/or strength of the association between acculturation gap conflicts and depressive symptoms. PROCESS tests moderation by (1) performing a multiple regression to replicate the variance explained by all the predictor variables included in the HMR model, (2) estimating interaction terms between the focal predictor (e.g., acculturation gap conflicts) and the moderating variable (e.g., family cohesion), and (3) estimating conditional effects in relation to depressive symptoms. To estimate standardized regression coefficients in PROCESS, variables must

be standardized. The moderation analysis controlled for all variables in the HMR model that were not included in respective interaction terms.

Results

Descriptive Analyses

The mean participant age was 21.30 ($SD = 2.09$), and 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 ($n = 21, 12.5%$), Central American ($n = 20, 10.0%$), and Puerto Rican ($n = 9, 4.5%$). Frequencies, proportions, means, and standard deviations for all study variables are presented in Table 1. Univariate correlations for all study variables are presented in Table 2. Significant positive correlations were found between depressive symptoms and study site, nativity, Latinx heritage, financial strain, and acculturation gap conflicts. Conversely, significant negative correlations were found between depressive symptoms and age, student status, and family cohesion. Assumptions of multicollinearity were met because all tolerance values were higher than .10 and all VIF values were lower than 10.

Hierarchical Multiple Regression

Table 3 presents all regression coefficients from the HMR model. Results indicate that 26.9% of variance in depressive symptoms was explained by all predictor variables entered in the HMR model. The first predictor block included demographic variables and explained 20.5% of variance in depressive symptoms, $R^2 = .205$, $F(9, 190) = 5.44$, $p <$

.001. Standardized regression coefficients from the first regression model indicate that nativity ($\beta = .16, p < .05$) and student status ($\beta = -.24, p < .001$) were associated with depressive symptoms. The second block added family cohesion, which explained 3.1% of variance in depressive symptoms $\Delta R^2 = .031, F(1, 189) = 7.70, p = .006$. Standardized regression coefficients from the second regression model indicate that student status ($\beta = -.23, p < .01$) and family cohesion ($\beta = -.18, p < .01$) were associated with depressive symptoms. The third and final block added acculturation gap conflicts, which explained 3.3% of variance in depressive symptoms $\Delta R^2 = .033, F(1, 188) = 8.45, p = .004$. Standardized regression coefficients from the final regression model indicate that being a student ($\beta = -.24, p < .001$) and higher family cohesion ($\beta = -.15, p = .02$) were associated with lower depressive symptoms. Conversely, higher acculturation gap conflicts ($\beta = .19, p = .004$) were associated with higher depressive symptoms.

Moderation Analysis

A moderation analysis indicated that family cohesion exerted a statistically significant moderator effect on the association between acculturation gap conflicts and depressive symptoms ($\beta = .12, p = .04$). As seen in Figure 1, an examination of conditional effects show that acculturation gap conflicts had the strongest association with depressive symptoms for those reporting high levels of family cohesion (1 *SD* below the mean; $\beta = .28, p = .003$), and the association between acculturation gap conflicts and depressive symptoms was also statistically significant but weaker for those reporting average levels of family cohesion ($\beta = .16, p = .02$). The conditional effect of acculturation gap conflicts

on depressive symptoms was not statistically significant at low levels of family cohesion (1 *SD* below the mean; $\beta = .03, p = .66$).

Discussion

In the current study, we tested two hypotheses. Based on our examination, the principal findings from this study can be summarized as follows. In line with our first hypothesis, the results of this study indicate higher levels of family cohesion were associated with lower levels of depressive symptoms, and higher levels of acculturation gap conflicts were associated with higher levels of depressive symptoms among the Hispanic emerging adults. However, our second hypothesis was partially met. Findings indicate that family cohesion functioned as a moderator in the association between acculturation gap conflicts and depressive symptoms; however, not in the direction we hypothesized.

Emerging adulthood can be a difficult period of life because research shows transitions and events related to family, relationships, and education during this period may leave a lifelong impact (Arnett et al., 2014; Demiray et al., 2009; Elnick et al., 1999). As mentioned previously, this developmental stage is particularly taxing for Hispanic emerging adults. On this account, it is of vital importance to detect culturally relevant and modifiable resources that may aid Hispanic emerging adults in preventing adverse psychological outcomes, such as symptoms of depression. After accounting for key sociodemographic variables and known covariates of depressive symptoms, this study indicated that higher family cohesion was linked to lower symptoms of depression. This finding is consistent with results from other studies that examined the association of family

cohesion with depressive symptoms among Chinese and African American emerging adults (Cheung et al., 2019; Harris & Molock, 2000). Data from this study indicate that family cohesion may be a key factor to help Hispanic emerging adults with depressive symptoms. This is comprehensible, as the literature suggests psychological well-being results from a cohesive and supportive family environment (Lin & Yi, 2019; Moose, 1984) and that individuals experience more depression when they perceive reduced support from their family (Overstreet & Mazza, 2003).

As expected, our study also found that higher levels of acculturation gap conflicts were significantly associated with higher depressive symptoms. Prior research on Asian American and Hispanic emerging adults found similar results (Dennis et al., 2010; Pham et al., 2020). This finding can be explained through the acculturation gap-distress theory which highlights the problematic nature of acculturation gaps (Szapocznik & Kurtines, 1993). The theory posits that differences in practices, values, and self-identities among parent-youth dyads lead to intergenerational cultural conflict. Subsequently this intergenerational cultural conflict can lead to poor youth mental health outcomes. While previous research has primarily focused on examining the effects of acculturation gaps on adolescents, our finding indicates that the association of acculturation gap conflict spans other developmental periods such as emerging adults. Out of the five dimensions of the emerging adulthood period, one important dimension is identity exploration in the matters of romantic life, job, and worldview (Arnett, 2000). A study among south Asian emerging adults residing in Canada found intergenerational cultural conflict resulting from acculturation gaps had implications on emerging adult's identity development (Uskul et al., 2011). This study showed the inner conflict between personal choice and

accommodating parent's wishes in the matter of romantic relationships outside of the heritage culture may lead to the development of fragmented identity among emerging adults. Another study involving Asian American college students found acculturation gaps to be associated with increased parent-child relationship conflict (Dinh & Nguyen, 2006). Adding to the limited literature, data from this study signals that acculturation gap conflicts may act as a risk factor for developing depressive symptoms among Hispanic emerging adults. However, future studies should be conducted to examine whether there are variations of the effects of acculturation gap conflicts on different Latinx emerging adult subgroups and generations. Doing so will guide the development of more precise and targeted interventions.

Findings from our study suggest family cohesion functioned as a moderator between the association of acculturation gap conflicts and symptoms of depression. As illustrated in Figure 1, individuals with high levels of family cohesion reported the lowest levels of depressive symptoms, followed by moderate and low levels of family cohesion. However, acculturation gap conflicts appear to erode the beneficial effects of family cohesion. This is understandable, as most emerging adults leave their homes and live independently in a cultural system that supports individualism (Vargas & Kimmelmeier, 2013). This often conflicts with Hispanic parents' observance of traditional values, including parental control (Lau et al., 2005). To preserve traditional value and as a result of worrying about the well-being of their children, the Hispanic family's outer bounds might become inflexible (Bacallao & Smokowski, 2007; Hernandez & McGoldrick, 1999). This inflexibility may trigger further conflicts. Prior research found that emerging adulthood years are marked with higher family conflict, particularly for Hispanics, due to the acculturation gaps (Lee

& Liu, 2001; Syed & Mitchel, 2015). Perhaps because of their interconnectedness and bond, these circumstances would take a much more emotional toll and result in more depressive symptoms. Moreover, higher depression due to parent-youth altercation may be seen in highly cohesive families as they may attempt to resolve intergenerational conflicts arising from acculturation gaps more frequently. Meanwhile, emerging adults coming from families with lower cohesion may altercate less with their parents as they are more indifferent toward each other, resulting in less depression. These can explain our finding that the higher levels of family cohesion may make the association between acculturation gap conflicts and depressive symptoms stronger, followed by a weaker but significant association in the presence of moderate levels of family cohesion.

Findings from this study add to the limited literature that assessed culturally relevant modifiable factors which may help Hispanic emerging adults prevent adverse psychological outcomes such as depressive symptoms. Different evidence-based intervention programs that are working with Hispanic families can further incorporate the findings of this study. Counseling about family cohesion and acculturation gap conflicts from these programs may benefit Hispanic emerging adults and their parents, as literature shows that assisting family members to comprehend similarities between the culture of origin and host culture while accepting some differences ultimately help to reduce depressive symptoms (Szapocznik et al., 1997). Additionally, fostering family adaptability may be another effective strategy to prevent the development of depressive symptoms (Bacallao & Smokowski, 2005). While we found higher family cohesion does help reducing depression, we also found that if depression results from acculturation gap conflicts, higher family cohesion worsens the situation. This finding can be translated into

intervention programs that are designed to deal with depression/mental health among Latinx youths. Programs can be tailored to identify the source of depression and approach accordingly. For example, if the source is determined to be acculturation gap conflicts, necessary steps can be taken to help negotiate differences in cultural values and improve communication. By doing so, the benefits of family cohesion as a coping resource can be utilized to deal with depressive symptoms.

Limitations

The study findings should be interpreted considering the following limitations. First, the present study used self-report measures that are susceptible to participant misrepresentation and error. Second, as the study adopted a cross-sectional design, the causal or directional order of the associations found cannot be confirmed. Third, considering how stress manifest differently based on gender, there may be a gender variation in the depressive symptom outcome. However, that have not been assessed as the study focused on objectives beyond gender differences. Lastly, generalizability may be limited due to the non-probability sampling technique and sample size inadequacy which limits the ability to detect subgroup variations attributable to nativity or different Hispanic heritage groups. Further, most participants were current college students and U.S.-born. Future studies should attempt to recruit more diverse samples that are more representative of the broader Hispanic population living in the United States.

Conclusions

Despite these limitations, the current study makes a meaningful contribution to an area of literature that needs more investigation. This is one of the first studies that assessed

relationships between acculturation gap conflicts, family cohesion, and depressive symptoms among Hispanic emerging adults. The findings from this study advance our understanding of how enhancing family cohesion and decreasing acculturation gap conflicts may help lower depressive symptoms among this vulnerable population. This study also illuminates the role of family cohesion in the relationship between the acculturation gap conflicts and depressive symptoms. Taken altogether, these findings suggest the need to modify prevention and intervention programs to help safeguard the mental health of Hispanic emerging adults.

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Tables and Figure

Table 1-1.
Descriptive Statistics for Study Variables (n = 200)

Variable	<i>n (%)</i>
Gender	
Female	102 (51.0)
Male	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	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)
<i>M (SD)</i>	
Age	21.30 (2.09)
Financial Strain	2.30 (.59)
Family Cohesion	3.20 (.66)
Acculturation Gap Conflicts	2.99 (1.61)
Depressive Symptoms	9.75 (6.39)

Table 1-2.
 Univariate Correlations for Variables Used in Regression Analyses (n = 200)

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1. Age	-											
2. Gender	-.05	-										
3. Study Site	.17*	.05	-									
4. Partner Status	.24**	.01	.07	-								
5. Nativity	.08	.14*	.34**	-.01	-							
6. Hispanic Heritage	.23**	.02	.86**	.06	.32**	-						
7. Student Status	.30**	-.01	.02	.01	-.11	.01	-					
8. Employment Status	.27**	.05	.40**	.09	.16*	.37**	.24**	-				
9. Financial Strain	-.02	.09	.07	.03	.02	.06	-.19**	.02	-			
10. Family Cohesion	.01	.05	.04	-.01	-.11	.02	.10	.04	-.02	-		
11. Acculturation Gap Conflicts	-.07	-.01	.11	-.05	.05	.03	.02	.08	.13	-.14*	-	
12. Depressive Symptoms	-.15*	.12	.20**	-.04	.25**	.18**	-.32**	-.04	.19**	-.21**	.24**	-

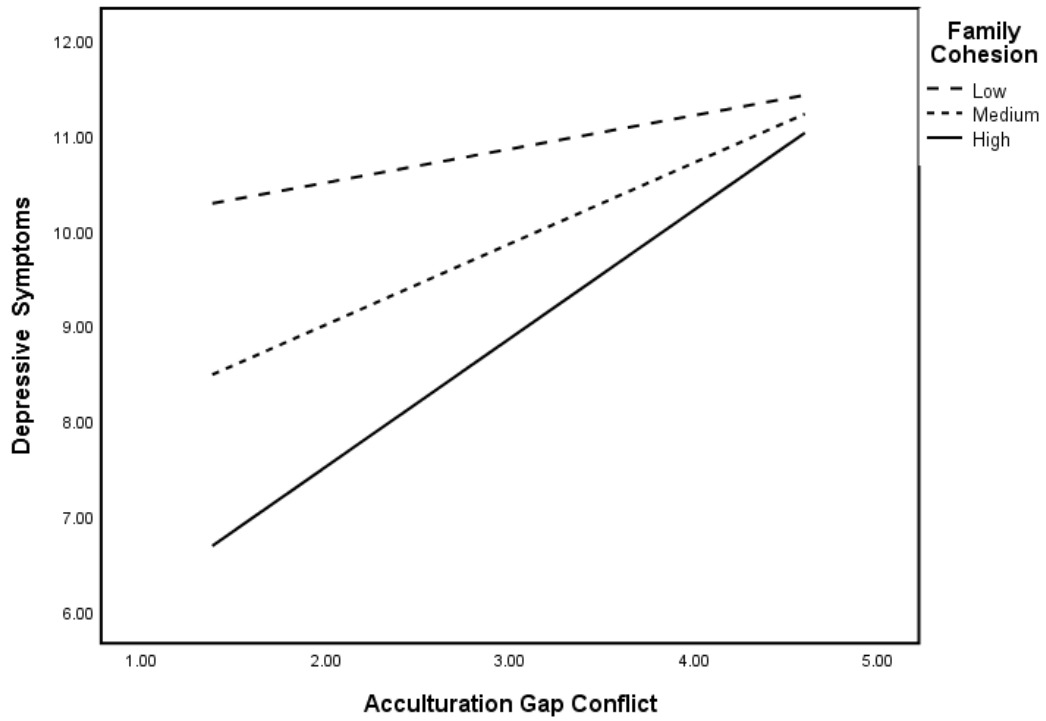
* $p < .05$, ** $p < .01$

Table 1-3.
Hierarchical Multiple Regression Model Predicting Depressive Symptoms (n =200)

Variable	Model 1			Model 2			Model 3		
	<i>b</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β
<i>Block 1</i>									
Age	-.30	.22	-.10	-.31	.22	-.10	-.25	.22	-.08
Gender	1.00	.84	.08	1.15	.83	.09	1.22	.81	.10
Study Site	1.56	1.64	.12	1.84	1.62	.14	1.10	1.61	.09
Partner Status	-.33	.94	-.02	-.36	.93	-.03	-.25	.91	-.02
Nativity	2.22	.98	.16*	1.88	.97	.14	1.84	.96	.13
Hispanic Heritage	.83	1.63	.07	.73	1.60	.06	1.32	1.59	.10
Student Status	-3.36	1.00	-.24***	-3.16	.98	-.23**	-3.35	.96	-.24***
Employment Status	-.88	1.15	-.06	-.84	1.13	-.05	-1.02	1.11	-.07
Financial Strain	1.30	.72	.12	1.27	.71	.12	1.01	.70	.09
<i>Block 2</i>									
Family Cohesion				-1.75	.63	-.18**	-1.47	.63	-.15*
<i>Block 3</i>									
Acculturation Gap							.75	.26	.19**
Conflicts									

Note: *b* = unstandardized coefficient, *SE* = standard error, β = standardized coefficient, * $p \leq .05$, ** $p \leq .01$, *** $\leq .001$
 $R^2 = 20.5\%$ for Block 1, ΔR^2 change = 3.1% for Block 2, ΔR^2 change = 3.3% for Block 3.

Figure 1. Two-way interaction with family cohesion moderating the association between acculturation gap conflicts and depressive symptoms.



Rahman A., Sánchez M., Bursac Z., Whiting C.Y., de Dios M.A., Cano M., Meek R., Taskin T., Shawon, M.S.R., Vazquez V., Koly K.N., Sánchez H., & Cano M.A. (2021). Ethnic discrimination and psychological stress among Hispanic emerging adults: Examining the moderating effects of distress tolerance and optimism. *Anxiety, Stress & Coping* (under review).

Abstract

Background and Objectives

Hispanic emerging adults are often exposed to ethnic discrimination, yet little is known about factors that buffer the effects of ethnic discrimination on psychological stress in this rapidly growing population. As such, this study aims to examine (1) the associations of distress tolerance, optimism, and ethnic discrimination with psychological stress and (2) the moderation effects of distress tolerance and optimism on the association between ethnic discrimination and psychological stress.

Design and Methods

Data were drawn from a cross-sectional study of $n = 200$ Hispanic adults ages 18-25, recruited from two urban counties in Arizona and Florida. Hierarchical multiple regression and moderation analyses were utilized to examine the associations and moderation effects.

Results

Findings indicated that higher optimism was associated with lower psychological stress. Conversely, higher ethnic discrimination was associated with higher psychological stress.

Moderation analyses indicated that both distress tolerance and optimism moderated the association between ethnic discrimination and psychological stress.

Conclusions

Study findings add to the limited literature on ethnic discrimination among Hispanic emerging adults and suggest that distress tolerance may be a key intrapersonal factor that can protect Hispanic emerging adults against the psychological stress often resulting from ethnic discrimination.

Introduction

Psychological stress, also known as psychosocial stress, manifests when an individual perceives that the environment or a situation is beyond his or her coping resources (Cohen et al., 2007; Folkman & Lazarus, 1984). Studies have shown that exposure to chronic psychological stress is harmful, as it has been identified to be a significant determinant of various chronic diseases, including heart disease, cancer, and depression (Cohen et al., 2007; World Health Organization, 2010).

Psychological stress is particularly salient in the years of *emerging adulthood* (ages 18-25), a distinct period of life characterized by the development of personal identity, greater autonomy, and challenging developmental tasks (Arnett et al., 2014). These challenging tasks include finding a romantic partner, job, educational pursuits, and taking on new social roles (Shanahan, 2000). The unstable nature of this period can make life difficult and stressful (Arnett 2000; Arnett et al., 2014). Stressors may be compounded among Hispanic emerging adults, one of the largest and most rapidly growing portions of the U.S. population, because they often report exposure to chronic sociocultural stressors, which may put them at greater risk of experiencing psychological stress (Cano, Schwartz

et al., 2020; Noe-Bustamante & Flores, 2019). One such sociocultural stressor is *ethnic discrimination*, defined as biased or unfair treatment based on one's ethnicity (Clark et al., 1999; Viruell-Fuentes, 2007). Research shows that, compared to older Hispanics, Hispanic emerging adults are more likely to report ethnic discrimination (Robert Wood Johnson Foundation/National Public Radio, 2017). Taking all this into consideration, it is critical to advance our understanding of the association between ethnic discrimination and psychological stress and understand malleable factors that can potentially weaken this deleterious association. Identifying modifiable factors may serve to inform the creation and modification of evidence-based prevention programs (MacKinnon & Luecken, 2008). Accordingly, the current study aims to (1) examine the associations between ethnic discrimination, distress tolerance, and optimism with psychological stress among Hispanic emerging adults; and (2) examine the extent to which distress tolerance and optimism may operate as moderators. Our study is guided by an integrative framework that draws from two conceptual models—the Biopsychosocial Effects of Perceived Racism and the Reserve Capacity Model. The Biopsychosocial Effects of Perceived Racism hypothesizes that higher levels of perceived racism/ethnic discrimination lead to higher levels of stress, and the Reserve Capacity Model posits that intrapersonal/psychological coping resources can act as moderators that buffer the adverse effects of sociocultural stress such as ethnic discrimination (Clark et al., 1999; Gallo et al., 2009).

Distress tolerance

Distress tolerance refers to an individual's capacity to encounter and endure challenging and distressful events and mental states (Leyro et al. 2010). A review of theories and empirical studies on distress tolerance suggests that individuals with low

distress tolerance were less capable of handling difficult circumstances and more likely to utilize maladaptive coping strategies while experiencing unpleasant emotional situations, in turn enhancing negative emotional states (Leyro et al. 2010; Wegner, 1994). Studies have also found that low distress tolerance is associated with different adverse psychological outcomes, including depressive symptoms, anxiety, and substance use disorders (Allan et al., 2014; Keough et al., 2010; Richards et al., 2011). Conversely, higher distress tolerance has been found to be associated with successful treatment outcomes for conditions such as depressive and anxiety disorders (Banducci et al., 2017; Cano, Schwartz et al., 2020; McHugh et al., 2014; Williams et al., 2013). Considering the beneficial role of distress tolerance, several psychological interventions have been designed to enhance distress tolerance in response to stressful situations which have shown favorable outcomes (Barlow et al., 2004; Orsillo & Roemer, 2005; Orsillo et al., 2003; Roemer & Orsillo, 2002; Williams et al., 2000). Furthermore, acknowledging the potential function of distress tolerance as an interpersonal coping resource, a comprehensive review recommends examining distress tolerance as a moderator to determine if it acts as a buffer between stressful exposures and psychological outcomes (Leyro et al., 2010).

As indicated, emerging adulthood is a transitional period of life, and these transitions can lead to higher levels of distress (Lane, 2014; Lane et al., 2017). Considering this developmental context, distress tolerance can be a potential psychological coping resource that may help emerging adults to cope with sociocultural stressors. Yet, few studies have assessed the role of distress tolerance on adverse outcomes among this population. A study involving Australian emerging adults found that improving distress tolerance may reduce the possibility of engaging in non-suicidal self-injury (Slabbert et al., 2020). Another study

involving college students found a significant mediating role of distress tolerance on the association between overparenting and poor mental health (Perez et al., 2019). To our knowledge, no prior study has assessed the relationship between distress tolerance and psychological stress among Hispanic emerging adults. As such, it is necessary to examine if distress tolerance may mitigate the association between ethnic discrimination and psychological stress among Hispanic emerging adults.

Optimism

Optimism is defined as a general predisposition for expecting positive rather than negative events in the future (Scheier & Carver, 1985). Individuals with higher optimism often confront life's challenges with a positive attitude, resulting in higher determination and higher success in completing objectives (Avvenuti et al., 2016). Individuals with higher levels of optimism also report better health, characterized by higher levels of antioxidants, lower levels of inflammation markers, and better lipid profiles (Carver & Scheier, 2014; Segerstrom, 2005). Furthermore, a review found optimism to act as a protective factor of psychological well-being for those experiencing elevated stress (Smith & MacKenzie, 2006). Studies have indicated that higher optimism is associated with lower depressive symptoms and anxiety disorders (Chang & Sanna, 2001; Hart et al., 2008; Van der Velden et al., 2007). Additionally, research has indicated that optimism can function as an intrapersonal coping resource that can offset the adverse effects of sociocultural stressors. For example, in a study involving young adults, optimism was found to moderate the relationship between race-related stress and anxiety symptoms (Lee et al., 2015). Another study involving young African American mothers found optimism to buffer the effects of

perceived ethnic discrimination, resulting in less depressive symptoms (Odom & Vernon-Feagans, 2010).

The unstable nature and challenging developmental tasks of emerging adulthood are associated with psychological stress (Arnett, 2000; Arnett et al., 2014). During this critical developmental period, optimism can be considered a psychological coping resource (Masten et al., 2006). However, a limited number of studies have examined the effect of optimism among emerging adults. Research among French college students found optimism to be inversely related to stress (Saleh et al., 2017). Another study involving Chinese emerging adults reported the beneficial role of optimism in the improvement of stress-related growth (Li et al., 2020). To our knowledge, no prior studies have examined the association between optimism and psychological stress and the moderating effect of optimism on the relationship between ethnic discrimination and psychological stress among Hispanic emerging adults. As such, among this population, it is imperative to assess if optimism may mitigate the association between ethnic discrimination and psychological stress.

Present study

Based on the review of the existing literature, the following hypotheses were proposed. *Hypothesis one*, higher levels of distress tolerance and optimism will be associated with lower levels of psychological stress, and by contrast, higher levels of ethnic discrimination will be associated with higher levels of psychological stress. *Hypothesis two*, distress tolerance and optimism will function as moderators that will weaken the adverse association between ethnic discrimination and psychological stress.

Methods

Procedure and participants

The present study consisted of 200 participants from the *Project on Health among Emerging Adult Latinos* (Project HEAL) and was approved by the Florida International University's Institutional Review Board. Participants were recruited utilizing a quota sampling technique from Maricopa County, Arizona and Miami-Dade County, Florida. Different recruitment strategies (e.g., in-person invitations, posting flyers, targeted emails) were employed to recruit potential participants. Interested potential participants contacted the project coordinator for screening. Based on meeting the eligibility criteria, access was given to the online survey. Inclusion criteria were- ages 18 to 25, self-identifying as Hispanic or Latina/o, able to read English, and currently living in Maricopa County, Arizona or Miami-Dade County, Florida. Participants provided consent through an electronic informed consent form. The survey took approximately 50 minutes to complete the survey, and participants were compensated for their time with a \$30 electronic Amazon gift card. More details on the procedures for Project HEAL are published elsewhere (Cano, Sánchez et al., 2020).

Study measures

Demographic questionnaire: The sociodemographic variables assessed and included as covariates were: age (continuous, in years), gender, (0 = male, 1 = female), 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).

Psychological stress: Self-reported psychological stress was measured via the four-item Short Form Perceived Stress Scale (Cohen et al., 1983; Warttig et al., 2013). A sample item from this measure is, “How often have you felt difficulties were piling up so high that you could not overcome them?” Participants responded to items in this measure using a five-point Likert-type scale (0 = *never*, 4 = *very often*). Higher sum scores are indicative of higher psychological stress. In our sample, Cronbach’s reliability coefficient for the psychological stress was $\alpha = .70$.

Distress tolerance: Self-reported distress tolerance was measured using the three-item tolerance subscale from Distress Tolerance Scale (Simons & Gaher, 2005). A sample item from this measure is, “Feeling distressed or upset is unbearable to me” Participants responded to items in this measure using a five-point Likert-type scale (1 = *strongly disagree*, 5 = *strongly agree*). All the items were reverse scored so that higher mean scores would be indicative of higher distress tolerance. Cronbach's reliability coefficient for this measure was $\alpha = .83$ in the study’s sample.

Optimism: The Life Orientation Test-Revised was utilized to measure dispositional optimism. This test includes two factors, one with positive phrasing and one with negative phrasing that is reverse scored (Scheier, Carver, & Bridges, 1994). The present study only used the factor with the three negatively phrased items, as this factor has the highest factor loadings and higher internal consistency (Scheier et al., 1994; Segerstrom et al., 2011). A sample item from this measure is, “I rarely count on good things happening to me.” Participants responded to items in this measure using a five-point scale

(0 = *strongly disagree*, 4 = *strongly agree*). All the items were reversed scored so that higher sum scores would be indicative of higher optimism. In the study sample, Cronbach's reliability coefficient for this measure was $\alpha = .87$.

Ethnic discrimination: The nine-item ethnic discrimination subscale from the Scale of Ethnic Experience was utilized to measure perceived ethnic discrimination (Malcarne, Chavira, Fernandez, & Liu, 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. In the study's sample, Cronbach's reliability coefficient for this measure was $\alpha = .90$.

Statistical analysis plan

The SPSS v25 was utilized to conduct all analyses. Descriptive statistics including means and standard deviations were computed for continuous variables, and frequencies and proportions were generated for categorical variables. Correlations between continuous study variables were assessed using Pearson correlation coefficients. Multicollinearity was assessed using two diagnostic indicators, tolerance and the variance inflation factor (VIF). It is recommended that the tolerance value be higher than .10 and the VIF value be lower than 10 (Cohen et al., 2003).

Hierarchical multiple regression (HMR) models were used to estimate the main effects of the predictor variables on psychological stress. 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., psychological stress) 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: (1) demographic variables were entered in the first block, (2) distress tolerance and optimism were entered in the second block, and (3) ethnic discrimination was entered in the third and final block to determine the extent to which it uniquely predicted psychological stress above and beyond the other predictors.

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 psychological stress. PROCESS tests moderation by (1) performing a multiple regression to replicate the variance explained by all the predictor variables included in the HMR model, (2) estimating interaction terms between the focal predictor (e.g., ethnic discrimination) and the moderating variable (e.g., distress tolerance), and (3) estimating conditional effects in relation to psychological stress. 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 respective interaction terms.

Results

Descriptive analyses

The mean participant age was 21.30 ($SD = 2.09$), and approximately half the sample was composed of women ($n = 102, 51.0\%$) and participants from Arizona ($n = 99, 49.5\%$). The following Hispanic heritage groups were represented: Mexican ($n = 88, 44.0\%$), Cuban ($n = 33, 16.5\%$), Colombian ($n = 24, 12.0\%$), other South American ($n = 21, 12.5\%$), Central American ($n = 20, 10.0\%$), and Puerto Rican ($n = 9, 4.5\%$). Frequencies,

proportions, means, and standard deviations for all study variables are presented in Table 1. Correlations for all study variables are presented in Table 2. Assumptions of multicollinearity were met, as because all tolerance values were higher than .10 and all VIF values were lower than 10.

Hierarchical multiple regression

Table 3 presents all regression coefficients from the HMR model. Results indicate that 50.7% of the variance in psychological stress was explained by all predictor variables entered in the HMR model (Model 3). The first predictor block included demographic variables and explained 20.8% of the variance in psychological stress, $R^2 = .208$, $F(9, 190) = 5.54$, $p < .001$. The second block added distress tolerance and optimism, which explained 27.9% of the variance in psychological stress $\Delta R^2 = .279$, $F(2, 188) = 51.02$, $p < .001$. The third and final block added ethnic discrimination, which explained 2.0% of the variance in psychological stress, $\Delta R^2 = .020$, $F(1, 187) = 7.75$, $p = .006$. Standardized regression coefficients from the final regression model indicate that being unemployed ($\beta = -.14$, $p = .02$) and higher optimism ($\beta = -.52$, $p < .001$) were associated with lower psychological stress. Conversely, being male ($\beta = .12$, $p = .03$) and perceived higher ethnic discrimination ($\beta = .18$, $p = .006$) were associated with higher psychological stress.

Moderation analyses

The first moderation analysis indicated that distress tolerance exerted a statistically significant moderating effect on the association between ethnic discrimination and psychological stress ($\beta = -.12$, $p = .02$). Conditional effects showed that ethnic discrimination had the strongest association with psychological stress for those reporting low levels of distress tolerance (1 *SD* below the mean; $\beta = .32$, $p < .001$), and the association

between ethnic discrimination and psychological stress was also statistically significant but weaker for those reporting average levels of distress tolerance ($\beta = .18, p = .01$). The conditional effect of ethnic discrimination on psychological stress was not statistically significant at high levels of distress tolerance (1 *SD* above the mean; $\beta = .07, p = .34$).

The second moderation analysis indicated that optimism also had a statistically significant moderating effect on the association between ethnic discrimination and psychological stress ($\beta = .12, p = .03$). Conditional effects showed that ethnic discrimination had the strongest association with psychological stress for those reporting high levels of optimism (1 *SD* above the mean; $\beta = .26, p < .001$), and the association between ethnic discrimination and psychological stress was also statistically significant but weaker for those reporting average levels of optimism ($\beta = .13, p = .05$). The conditional effect of ethnic discrimination on psychological stress was not statistically significant at low levels of optimism (1 *SD* below the mean; $\beta = .04, p = .64$). Both moderating effects are depicted in Figure 1.

Discussion

The key findings of this study can be outlined as follows. Our first hypothesis was partially supported. Findings indicate that higher levels of ethnic discrimination were significantly associated with higher levels of psychological stress among Hispanic emerging adults. By contrast, higher levels of optimism were associated with lower levels of psychological stress; however, the association between distress tolerance and psychological stress was not statistically significant. Our second hypothesis was also partially supported. Findings indicate that both distress tolerance and optimism had moderating effects on the association between ethnic discrimination and psychological

stress. However, the moderating effect of optimism was not in the direction we hypothesized.

Stress has substantial adverse effects on mental and physical health (Thoits, 2010). In addition to experiencing a significant amount of stress, considerable changes in social roles occur during emerging adulthood years, which may have long-term health effects (Bell & Lee, 2008). Furthermore, Hispanic emerging adults face additional sociocultural stressors in addition to normative developmental stressors, putting them at higher risk of experiencing adverse psychological outcomes (Cano, Schwartz et al., 2020). Taking all these factors into consideration, it is imperative to identify modifiable and protective factors that can help this vulnerable population with psychological stress. As expected, higher levels of ethnic discrimination were found to be significantly associated with higher levels of psychological stress in the present study. This finding can be explained through the conceptual frameworks of social determinants of health, which propose that based on one's racial background, experiencing actual or perceived ethnic discrimination, unjust or wrong treatment, enhances the risk of poor mental health (Cano et al., 2015; Clark et al., 1999; Viruell-Fuentes, 2007; Williams et al., 2003). This conclusion has been supported by different studies involving various groups of emerging adults. For example, a study among African American emerging adults found higher levels of ethnic discrimination to be associated with higher negative emotions and lower psychological or coping resources (Joseph et al., 2020). Additionally, different studies with Hispanic and multiethnic emerging adult samples found higher levels of ethnic discrimination to be related to symptoms of depression, anxiety, lower self-esteem, and suicidal ideation (Cano et al., 2016; Cheref et al., 2019).

Findings from this study also indicate that higher optimism was associated with lower psychological stress. This finding is in line with other studies that examined optimism and psychological stress among emerging adults. For example, a study among German college students found optimism to be negatively associated with psychological stress (Saleh et al., 2017). Similarly, another study involving first-year university students found an inverse relationship between optimism and stress (Mazé and Verlhiac, 2013). This finding is expected as literature shows higher optimism to be associated with a wide range of positive factors, including life satisfaction, sense of coherence, hope, and psychological well-being (Chang & Sanna, 2001; Krok, 2015, Liu et al., 2018). Furthermore, a meta-analysis found that optimism can be enhanced through psychological intervention (Malouff, & Schutte, 2017).

Our study did not find distress tolerance to be significantly associated with psychological stress. Perhaps because optimism is a stronger predictor of psychological stress compared to distress tolerance, the association was not found significant. Nonetheless, our study findings suggest that distress tolerance functioned as a moderator between the association of ethnic discrimination and psychological stress. More specifically, individuals who reported low levels of distress tolerance, experienced higher levels of psychological stress across higher levels of ethnic discrimination. This finding can be explained through the stress process model, which consists of three elements - stressors, moderators, and resultant health outcomes (Pearlin, 1989). This model is concerned with the degree to which enhancing or diminishing intrapersonal, interpersonal, and social factors succeeds in restraining the recurrence, seriousness, and spread of stressors in the lives of people while predicting mental health outcomes (Katerndahl &

Parchman, 2002). Results of the present study suggest that distress tolerance may be a key intrapersonal factor that can help Hispanic emerging adults with psychological stress resulting from ethnic discrimination. This finding is in line with literature that examined the effect of distress tolerance on various associations. For example, a longitudinal investigation involving African American college students found the beneficial effect of higher distress tolerance on the relationship between ethnic discrimination and psychological well-being (Le et al., 2020). Another study examining the effects of overparenting on the mental health of college students found distress tolerance to be a significant factor that may help them during the transition to college (Perez et al., 2019). To our knowledge, this is the first study to examine the moderating effects of distress tolerance on the relationship between ethnic discrimination and psychological stress among Hispanic emerging adults.

Findings from our study also suggest that optimism acted as a moderator between the association of ethnic discrimination and psychological stress. Participants with high levels of optimism reported the lowest levels of psychological stress, followed by moderate and low levels of optimism that have higher reported psychological stress levels. Nonetheless, in the presence of ethnic discrimination, the beneficial effects of optimism appeared to weaken. After becoming 18 years old, many emerging adults leave their homes and live semi-autonomously (Vargas & Kemmelmeier, 2013). While facing ethnic discrimination in a new environment, it is possible that emerging adults who are more optimistic tend to ignore other resources (e.g., social support) that might help them deal with discrimination, resulting in higher psychological stress. Further prospective

observational studies can be conducted to clarify the role of optimism in the relationship between ethnic discrimination and psychological stress.

Limitations

The following limitations need to be considered while interpreting the findings of the study. First, this study used self-reported measures that are subject to participant misrepresentation and measurement error. Gender was classified as male or female only, precluding an examination of gender minority or non-binary subgroups. Second, due to the cross-sectional design of the study, we cannot establish directionality or cause-effect relationships. Lastly, the study utilized a non-probability sampling technique and relatively small sample size, potentially limiting generalizability and the ability to detect subgroup variations attributable to nativity or different Hispanic heritage groups. Further, most participants were current college students and U.S.-born. Future studies should attempt to recruit more diverse samples that are more representative of the broader Hispanic population living in the United States.

Conclusions

The present study adds to the limited literature on different modifiable factors that may aid Hispanic emerging adults in deal with ethnic discrimination. This study is one of the first to examine the relationships between ethnic discrimination and psychological stress among Hispanic emerging adults. The findings from this study advance our understanding of how enhancing optimism and decreasing ethnic discrimination may aid this population to lower psychological stress. Furthermore, this study also highlights the roles of distress tolerance and optimism in the relationship between ethnic discrimination and psychological stress. Taken altogether, these findings can be translated to modify

different prevention and intervention programs that can play a vital role in reducing psychological stress among Hispanic emerging adults.

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Tables and Figure

Table 2-1.
Descriptive Statistics for Study Variables (n = 200)

Variable	<i>n (%)</i>
Gender	
Female	102 (51.0)
Male	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)
	<i>M (SD)</i>
Age	21.30 (2.09)
Financial Strain	2.30 (.60)
Distress Tolerance	2.89 (1.08)
Optimism	7.20 (2.79)
Ethnic Discrimination	3.31 (.88)
Psychological Stress	6.83 (2.96)

Table 2-2.
Univariate Correlations for Study Variables

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13
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. Distress Tolerance	.05	-.14	.08	.09	-.14	.10	-.03	-.09	-.02	-			
11. Optimism	.03	-.05	-.22**	.01	-.21**	-.18**	.16*	.02	-.22**	.08	-		
12. Ethnic Discrimination	.10	.26**	.43**	.15*	.30**	.43**	-.21**	.12	.16*	-.08	-.36**	-	
13. Psychological Stress	-.06	.20**	.13	-.09	.22**	.10	-.26**	-.15*	.22**	-.11	-.63**	.41**	-

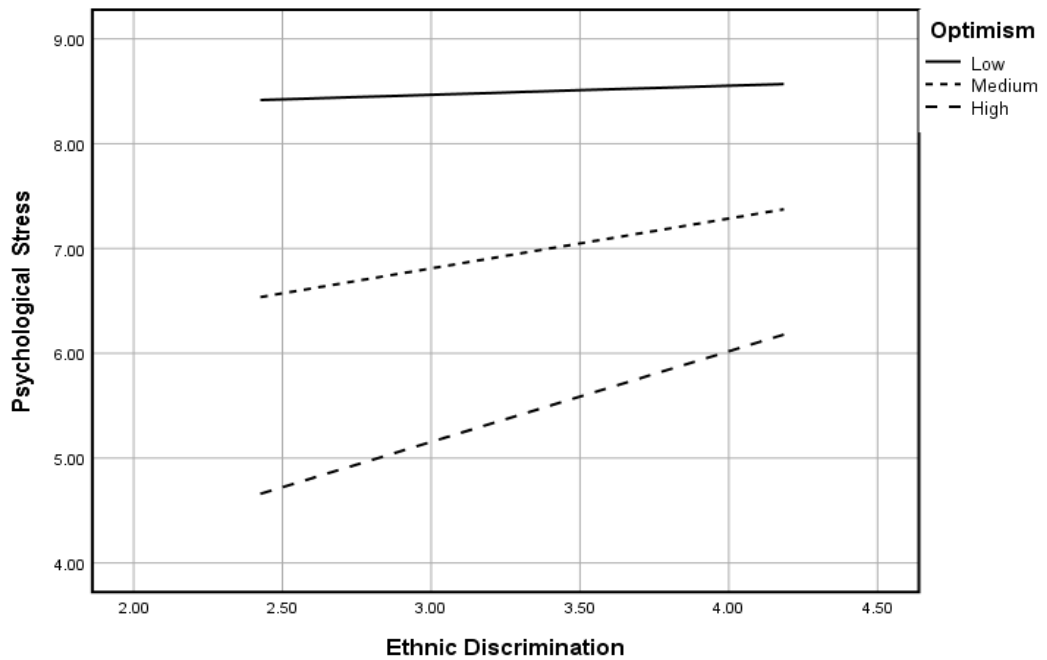
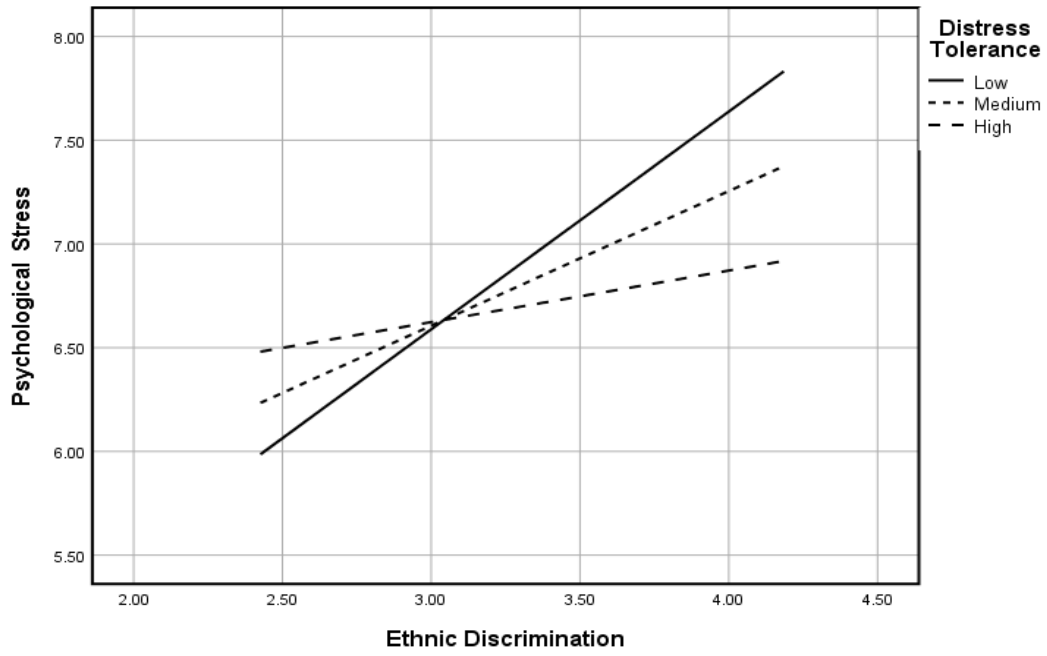
* $p < .05$, ** $p < .01$

Table 2-3.
Hierarchical Multiple Regression Model Predicting Psychological Stress

Variable	Model 1			Model 2			Model 3		
	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β
<i>Block 1</i>									
Age	.07	.10	.05	.09	.08	.06	.07	.08	.05
Gender	1.01	.39	.17**	.96	.32	.16**	.73	.32	.12*
Study Site	.91	.76	.15	.24	.62	.04	.11	.61	.02
Partner Status	-.61	.44	-.09	-.52	.35	-.08	-.67	.35	-.10
Nativity	1.01	.45	.16*	.43	.38	.07	.34	.37	.05
Hispanic Heritage	-.15	.75	-.03	-.06	.61	-.01	-.34	.61	-.06
Student Status	-1.18	.46	-.18**	-.89	.37	-.14*	-.69	.37	-.11
Employment Status	-1.42	.53	-.20**	-1.07	.44	-.15*	-1.02	.43	-.14*
Financial Strain	.84	.33	.17**	.31	.27	.06	.29	.27	.06
<i>Block 2</i>									
Distress Tolerance				-.14	.15	-.05	-.10	.15	-.04
Optimism				-.59	.06	-.56***	-.55	.06	-.52***
<i>Block 3</i>									
Ethnic Discrimination							.62	.22	.18**

Note: *b* = unstandardized coefficient, *SE* = standard error, β = standardized coefficient; * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$; $R^2 = 20.8\%$ for Block 1, ΔR^2 change = 27.9% for Block 2, ΔR^2 change = 2.0% for Block 3.

Figure 1. Two-way interactions with distress tolerance and optimism moderating the association between ethnic discrimination and psychological stress.



Rahman A., Sánchez M., Bursac Z., Whiting C.Y., Taskin T., Kaur A., Leinaar E., Ahmed S., Karim N., de Dios M.A., Cano M.A. (2021). Acculturation Gap Conflicts and Self-rated Health among Hispanic Emerging Adults. *Families, Systems, & Health* (under review).

Abstract

Introduction

Emerging adulthood is a distinct developmental stage of life. This challenging period may be particularly stressful for Hispanic emerging adults because of the various cultural stressors they face, in addition to normative developmental stressors. Even though the effects of some cultural stressors on self-rated health have been examined among Hispanics, one relevant cultural stressor that has not been examined among any age group is acculturation gap conflict. As such, this study aims to examine whether acculturation gap conflict is associated with self-rated health after controlling for established predictors.

Methods

From two urban counties of Arizona and Florida, 200 Hispanic emerging adults completed a cross-sectional survey. The study participants included males ($n=98$) and females ($n=102$). Data were analyzed using hierarchical multiple regression.

Results

Standardized coefficients from a hierarchical multiple regression model indicated that higher levels of acculturation gap conflicts were associated with lower self-rated health after controlling for psychological stress and other demographic variables.

Discussion

Findings from this study indicate that acculturation gap conflict is a unique construct associated with self-rated health and thus merits further investigation as it may have implications for health interventions targeting Hispanics. It should be noted this may be the first study on acculturation gap conflicts and self-rated health.

Introduction

In public health research, *self-rated health* is an indicator of subjective/perceived health status that is pragmatic because it acts as a valid indicator of mortality, chronic conditions, and objective health status evaluations, including in Hispanic communities (inclusive of Latino/Latina/Latinx; Benyamini, 2011; Bombak, 2013; Finch et al., 2002). From a developmental standpoint, Hispanic emerging adults may be particularly at risk of adverse health outcomes because, in addition to normative developmental stressors associated with emerging adulthood (e.g., increased autonomy, finding employment) this population is often exposed to various cultural stressors (e.g., discrimination, acculturation stress; Arnett et al., 2014; Cano et al., 2020; Demiray et al., 2009; Elnick et al., 1999). Studies have found that cultural stressors such as ethnic discrimination are associated with poor self-rated health among Hispanics (Finch & Vega, 2003); however, one cultural

stressor that is relevant to many Hispanics and has not been examined with self-rated health is acculturation gap conflicts.

Taking these factors into account and the fact that self-rated health merits investigation during emerging adulthood because clinical endpoints (e.g., chronic disease) at this developmental stage are uncommon (Sokol et al., 2017). Accordingly, this study aimed to examine if acculturation gap conflicts are associated with self-rated health among Hispanic emerging adults after controlling for sociodemographic variables and established predictors (e.g., psychological stress) of self-rated health.

Acculturation Gap Conflicts

An *acculturation gap* describes dissimilarities between parents and children in their degrees of adherence to behaviors, beliefs, and attachments of their heritage culture (e.g., Hispanic culture) and receiving culture (e.g., U.S. culture; Smokowski et al., 2008). This discrepancy in the acculturation rate may lead to a cultural gap, resulting in a higher risk of adverse health outcomes (Szapocznik & Kurtines, 1993). Researchers have found acculturation gap conflicts are linked with internalizing and externalizing symptoms among youth (Asvat & Malcarne, 2008; Lui, 2019). Furthermore, among Hispanic youth, acculturation gap conflicts have been identified as a stressor that may compound over time and lead to different adverse outcomes such as poor mental health and substance abuse (Marsiglia et al., 2009; Nair et al., 2018; Toro & Farver, 2020). These findings align with conceptual models such as the *acculturation gap–distress model* (Szapocznik & Kurtines, 1993). However, to our knowledge, no study has examined the association between acculturation gap conflicts and self-rated health among Hispanic emerging adults or in any

other age group. Based on our review of the literature we hypothesize that higher levels of acculturation gap conflict will be associated with lower self-rated health.

Methods

Procedure and Participants

This cross-sectional study used data from the *Project on Health among Emerging Adult Latinos* (Project HEAL). The Institutional Review Board of Florida International University approved this study. The study is comprised of 200 participants, and they provided informed consent to participate. Participants were recruited from Maricopa County, Arizona, and Miami-Dade County, Florida, utilizing quota sampling and various recruitment strategies (e.g., in-person, posting flyers, targeted emails). Inclusion criteria included being ages 18 to 25, self-identifying as Hispanic or Latina/o, currently living in one of the two study sites, and able to read English. The survey took approximately 50 minutes to complete, and participants were compensated with a \$30 Amazon gift card. More details on the procedures are published elsewhere (Cano et al., 2020).

Measures

Demographic variables. The following were included as dichotomous covariates: gender, study site, partner status, nativity, Hispanic heritage group, student status, and employment status. Age and financial strain (1 = *has more money than needed*, 2 = *just enough money for needs*, 3 = *not enough money to meet needs*) were also included as covariates.

Self-rated health. General self-rated health was assessed using a 5-point Likert-type scale (1 = *poor*, 5 = *excellent*; Ware, Kosinski, & Keller, 1995). The question used was,

“Generally speaking, how would you describe your health status?” This single item is a valid and strong predictor of morbidity and mortality (Bombak, 2013).

Psychological stress. The 4-item *Short Form Perceived Stress Scale* (PSS-4) was used to assess the degree to which general life situations are appraised as stressful in the past 30 days (Cohen et al., 1983). This measure uses a 5-point Likert-type scale (0 = *never*, 4 = *very often*) and higher scores indicate higher stress. Cronbach’s reliability coefficient for this measure was $\alpha = .70$. Research has indicated that stress is a strong predictor of self-rated health (Baum et al., 2001; Farmer & Ferraro, 1997); therefore, to examine a more robust model, psychological stress was included as a covariate to test if the focal predictor (i.e., acculturation gap conflicts), was associated with self-rated health even after controlling for a well-established predictor.

Acculturation gap conflicts. Perceived acculturation gap conflicts were measured with the 7-item preferred-culture conflicts subscale from the *Acculturation Gap Conflicts Inventory* (Basáñez et al., 2014). This measure uses a 7-point Likert-type scale (1 = *strongly disagree*, 7 = *strongly agree*) with higher mean scores indicating higher acculturation gap conflicts. Cronbach’s reliability coefficient for this measure was $\alpha = .90$.

Statistical Analysis Plan

The main effects of the predictor variables on self-rated health were estimated using hierarchical multiple regression (HMR). Variables were entered into the HMR model in a specified order so that each block of predictors contributed to the explanatory variance of the outcome variable (i.e., self-rated health) after controlling for the variance explained by the previous block of variables (Cohen et al., 2003).

Results

The means, standard deviations, and univariate correlations of the study variables are presented in Table 1. The frequencies and proportions for all the categorical variables are as follows: *gender*, [male=98(49%), female=102(51%)], *study site* [(Florida=101(50.5%), Arizona=99(49.5%)], *nativity* [(immigrant=60(30%), non-immigrant=140(70%)], *Hispanic heritage group* [(Mexican=88(44.0%), other Hispanic heritage=112(66.0%)], *partner status* [(single=142(71%), has a partner=58(29%)], *student status* (current college student=139(69.5%), non-college student=61(30.5%)), and *employment status* [(unemployed=43(21.5%), employed=157(78.5%)].

Findings indicate that 24.8% of the variance in self-rated health was explained by all the predictor variables entered into the HMR model. The first block of the HMR model (demographic variables) explained 16.0% of the variance in self-rated health, $R^2 = 0.160$, $F(9, 190) = 4.01$, $p \leq .001$. The second block (psychological stress) explained 6.2% of the variance in self-rated health, $\Delta R^2 = 0.062$, $F(1, 189) = 15.02$, $p \leq .001$. Acculturation gap conflicts was added in the final block which explained 2.6% of the variance in self-rated health, $\Delta R^2 = 0.026$, $F(1, 188) = 6.46$, $p = .01$. Table 2 presents the regression coefficients from the HMR model. Standardized regression coefficients from the final HMR model indicate that higher levels of psychological stress ($\beta = -.24$, $p \leq .001$) and acculturation gap conflicts ($\beta = -.17$, $p = .01$) were associated with lower self-rated health.

Discussion

As hypothesized, higher levels of acculturation gap conflicts were associated with lower self-rated health after accounting for key sociodemographic variables and

psychological stress, an established predictor of self-rated health. In the case of Hispanic emerging adults, who are already facing challenging developmental tasks, it is conceivable that experiencing additional stressors, such as acculturation gap conflicts, may be associated with poorer self-rated health. Our finding can be explained by the acculturation gap-distress theory (Szapocznik & Kurtines, 1993). This theory posits that dissimilarities based on practices, values, and self-identities between parents and youth create intergenerational cultural conflict, which in turn, results in youth's adverse health outcomes. For example, a longitudinal analysis found that increased acculturation gap conflicts between Hispanic parent-youth dyads may lead to subsequent substance use (Unger et al., 2009). Other studies also linked increased acculturation gap conflicts with health risk behaviors and depression among Hispanic youth (Nair et al., 2018; Schwartz et al., 2013). These studies suggest that higher acculturation gap conflicts increase the risk of engaging in health risk behaviors (e.g., substance use) and developing poor mental health, which in turn, may result in poorer self-rated health. However, longitudinal studies would be needed to test this speculation.

Limitations

Several limitations need to be considered when interpreting the findings. First, self-report measures were utilized, which are susceptible to participant misrepresentation and error. Second, the measure of self-rated health was limited to a single item. Third, due to the cross-sectional design, temporality or causal relationships cannot be confirmed. Finally, the small sample size and utilization of non-probability sampling, limit generalizability.

Conclusions

The present study makes a meaningful contribution to an area of research that needs more exploration. To our knowledge, this is the first study to examine acculturation gap conflicts in relation to self-rated health among Hispanic emerging adults (or any other racial/ethnic group). Findings from this study indicate that aside from psychological stress, acculturation gap conflicts are a unique predictor of self-rated health. Considering the significance of the emerging adulthood period, the study findings underscore the importance of further investigations to identify modifiable factors that can help Hispanic emerging adults overcome acculturation gap conflicts and improve their overall health.

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Tables

Table 3-1.
Univariate Correlations, Means, and Standard Deviations (n = 200)

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1.Age	-											
2.Gender	-.05	-										
3.Study Site	.17*	.05	-									
4.Partner Status	.24**	.01	.07	-								
5.Nativity	.08	.14*	.34**	-.01	-							
6.Hispanic Heritage	.23**	.02	.86**	.06	.32**	-						
7.Student Status	.30**	-.01	.02	.01	-.11	.01	-					
8.Employment Status	.27**	.05	.40**	.09	.16*	.37**	.24**	-				
9.Financial Strain	-.02	.09	.07	.03	.02	.06	-.19**	.02	-			
10.Psychological Stress	-.06	.20**	.12	-.09	.22**	.10	-.26**	-.15*	.22**	-		
11.Acculturation Gap Conflicts	-.07	-.01	.11	-.05	.05	.03	.02	.08	.13	.20**	-	
12.Self-rated Health	.08	-.09	-.27**	.04	-.17*	-.21**	.14	-.00	-.25**	-.37**	-.26**	-
<i>M</i>	21.30	-	-	-	-	-	-	-	2.30	6.83	2.99	3.58
<i>SD</i>	2.09	-	-	-	-	-	-	-	.59	2.96	1.61	1.00

Note: *M* = mean, *SD* = standard deviation.

* $p < .05$, ** $p < .01$. Variable coding: gender, (0=male, 1=female), 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).

Table 3-2.
Hierarchical Multiple Regression Model Predicting Self-Rated Health (n =200)

Variable	Model 1			Model 2			Model 3		
	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β
<i>Block 1</i>									
Age	.04	.04	.08	.05	.04	.10	.04	.03	.08
Gender	-.09	.14	-.47	.00	.13	.00	-.02	.13	-.01
Study Site	-.59	.26	-.30*	-.50	.26	-.25*	-.42	.25	-.21
Partner Status	.08	.15	.04	.02	.15	.01	.01	.15	.01
Nativity	-.17	.16	-.08	-.07	.15	-.03	-.07	.15	-.03
Hispanic Heritage	.05	.26	-.03	.04	.25	.02	-.04	.25	-.02
Student Status	.10	.16	.05	-.01	.16	-.01	.03	.16	.01
Employment Status	.22	.19	.09	.83	.18	.03	.13	.18	.05
Financial Strain	-.37	.12	-.22**	-.29	.11	-.17**	-.26	.11	-.16*
<i>Block 2</i>									
Psychological Stress				-.09	.02	-.28***	-.08	.03	-.24***
<i>Block 3</i>									
Acculturation Gap Conflicts							.11	.04	-.17**

Note: *b* = unstandardized coefficient, *SE* = standard error, β = standardized coefficient, * $p \leq .05$, ** $p \leq .01$, *** $\leq .001$

$R^2 = 16.0\%$ for Block 1, ΔR^2 change = 6.2% for Block 2, ΔR^2 change = 2.6% for Block 3.
Variable coding: gender, (0=male, 1=female), 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).

Conclusions

Emerging adulthood is a transitional phase of life that is uniquely different from adolescence and adulthood. Considering the lifelong influence this period has, few studies have examined this period, specifically while focusing on Hispanic emerging adults. This is one of the first studies that assessed the impacts of socio-cultural stressors such as acculturation gap conflicts, ethnic discrimination on depressive symptoms, psychological stress, and self-rated health among this population. Further, potential resources were assessed that can help alleviate the deleterious effects of these cultural stressors.

The first manuscript revealed that a higher acculturation gap is associated with higher depressive symptoms. Conversely, higher family cohesion was associated with lower depressive symptoms. Even though higher family cohesion was found to be a resource that can help to reduce depressive symptoms, acculturation gap conflicts appeared to erode the beneficial effects of family cohesion on depressive symptoms. These findings highlight how increasing family cohesion and decreasing acculturation gap conflicts may help this vulnerable population lower depressive symptoms. This study also highlights family cohesion's role in the association between the acculturation gap conflicts and depressive symptoms and the need to identify the source of depression among this population so that prevention and intervention programs can be tailored to help negotiate differences in cultural values and improve communication.

The second manuscript further examined another sociocultural stressor, ethnic discrimination, and its association with psychological stress. Findings indicated that higher ethnic discrimination was associated with higher psychological stress. Conversely, higher

optimism was associated with lower psychological stress. This manuscript also examined whether distress tolerance and optimism can function as resources that can help Hispanic emerging adults to overcome psychological stress resulting from ethnic discrimination. Findings indicate that individuals with low levels of distress tolerance experienced higher levels of psychological stress across higher levels of ethnic discrimination, highlighting the importance of having higher distress tolerance. Further, individuals with high levels of optimism had the lowest levels of psychological stress, followed by moderate and low levels of optimism. However, ethnic discrimination appeared to weaken the beneficial effects of optimism. These findings will be important to inform the development of targeted intervention programs that can help Hispanic emerging adults overcome psychological stress resulting from ethnic discrimination.

The third manuscript focused on the effects of acculturation gap conflicts on Hispanic emerging adult's perceived health. Psychological stress is an established predictor of poor self-rated health. By accounting for psychological stress, this manuscript built a robust model to examine the association between acculturation gap conflicts and self-rated health and found that those experiencing higher acculturation gap conflicts are more likely to perceive their health as poor. Findings underscore the importance of accounting for acculturation gap conflicts when designing or modifying intervention programs intended to improve the self-rated health of Hispanic emerging adults.

Altogether, findings from this study enhance our understanding of how different cultural stressors affect the mental health of Hispanic emerging adults. This study also reveals potential resources that can be utilized to weaken various adverse associations

between sociocultural stressors and mental health outcomes. Healthcare providers can use the information of this study to better prepare to help Hispanic emerging adults exposed to chronic sociocultural stressors and suffering from problems like depression, psychological stress, and poor perceived health.

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