

BRIEF REPORT

Minority Stress, Ethnic Identity, and Depression Among Latino/a College Students

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The main purpose of the study was to examine among Latino/a college students the extent to which dimensions of minority stress related to ethnic group membership (college climate, academic achievement, ethnic discrimination, and intra-ethnic pressure stress) were uniquely associated with depression symptoms when general college stress was taken into account. The study also examined if ethnic identity moderated the relation of minority stress to depression symptoms. Participants were 309 Latino/a undergraduate students (53% women; 69% of Mexican descent) enrolled in a diverse, major research, urban, public university in the southwestern United States. Findings revealed that minority stress in the areas of academic concerns and negative perceptions of the campus climate contributed unique variance to depression symptoms when controlling for gender and students' general college stress. Ethnic identity did not moderate the relation of any of the minority stress dimensions to depression. Implications of these findings are discussed.

Keywords: ethnic minority stress, ethnic identity, depression, Latino/a

Research conducted from the psychological, sociological, and medical perspectives has shown that stress related to exposure to socially undesirable and negative events is associated to poor physical and mental health outcomes (Thoits, 2010). Stress is experienced when individuals perceive that contextual characteristics or demands of the situation (stressors) exceed their ability to respond or cope, which, in turn, threatens their well-being (Folkman, Lazarus, Gruen, & DeLongis, 1986). Researchers have used the term *minority stress* to refer to the experience of stress in negative or undesirable situations in which the individual's membership in a stigmatized social group, that is, a group that is the target of discrimination and prejudice, is a salient aspect of the person–situation interaction (French & Chavez, 2010; Smedley, Myers, & Harrell, 1993).

In the study of the relation of perceived stress to psychological functioning among diverse college students, it is important to distinguish between specific stressors that result from students' membership in a minority group from typical stressors associated with college life (e.g. academics, finances) and young adulthood (e.g., social and romantic relations). Research findings have pro-

vided support for the hypothesis that minority stress is a source of additional risk for maladjustment among ethnic minority students when the role strains often experienced by college students are taken into account (e.g., Smedley et al., 1993; Wei et al., 2010). However, few studies have examined the relative contribution of specific dimensions of college and minority stress to psychological adjustment among ethnic minority students. At the same time, theoretical formulations and some research findings suggest that ethnic identity, that is, identification with and connection to one's ethnic group, may protect the self from the negative mental health consequences of minority stress (e.g. Umaña-Taylor, 2011).

It is estimated that by the year 2050, approximately 29% of the U.S. population will be Latino/a (Passel & Cohen, 2008). From 2000 to 2010, the Latino/a population in the United States grew by 44% (from 35.2 million to 50.7 million); however, during the same time period, the percentage of Latinos/as with a bachelor's degree increased by only 3% (from 10% to 13%; Motel & Patten, 2012). In addition to the typical college stressors, it is likely that Latino/a student's experience unique challenges as members of an ethnic minority group that may negatively affect their psychological well-being (Rodriguez, Myers, Morris, & Cardoza, 2000). In turn, the experience of psychological distress may be detrimental to these students' academic achievement and college persistence (Eisenberg, Golberstein, & Hunt, 2009). However, few studies have examined the relative contribution of dimensions of general and minority stress to psychological adjustment among Latino/s college students. Therefore, the objectives of the current study were to examine among Latino/a college students: (a) the relative association of dimensions of minority stress to depression symptoms, taking into account general college stress, and (b) the extent to which ethnic identity moderates the relation of minority stress to depression.

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Minority Stress

Minority stress refers to negative experiences in the campus environment that students perceive to be linked to social, physical, or cultural attributes salient to the specific minority group individuals identify or are identified with (Smedley et al., 1993). In an early study, Smedley et al. (1993) operationalized minority stress among an ethnically diverse group of students (African American, Latino/a, and Filipino) attending a predominantly White university in terms of five dimensions: social climate, difficulties in intergroup relations, discrimination, within-group pressures, and academic achievement stress. *University social climate stress* refers to perceptions of the campus environment as unwelcoming to members of the student's group. *Intergroup stress* captures perceptions of negative relations among students from different racial and ethnic groups, primarily with White students. *Discrimination stress* refers to concerns related to personal experiences of prejudice and discrimination based on the person's group membership. *Within-group stress* captures perceived pressure to conform to the norms of the student's group regarding language, behaviors, and ways of thinking. *Achievement stress* reflects the student's concerns about the relative inadequacy of his or her academic preparation and ability that are compounded by group membership and family social class background.

Five studies were found that examined the relation of minority stress as operationalized by Smedley et al. (1993) to psychological outcomes among ethnic minority college students while controlling for general college stress. Studies that derived a global stress score revealed that minority stress was positively associated with depression among Latino/a freshman students (Saldaiña, 1994) and a heterogeneous group of ethnic minority students (African American, Asian and Latino) attending predominantly White institutions (Wei et al., 2010). Similarly, the global index of minority stress was uniquely and negatively related to college persistence attitudes among a heterogeneous group of Latino/a and Asian American students (Wei, Ku, & Liao, 2011). Results of the two studies that examined the relative contribution of Smedley et al.'s dimensions of college minority stress indicated that only stress related to academic achievement contributed unique variance to psychological distress among a mixed group of African American, Latino/a, and Filipino students attending a predominantly White institution (Smedley et al., 1993) and among Latino/a college students attending an ethnically diverse institution (Rodriguez et al., 2000).

The review of the literature suggests that minority stress constitutes a unique source of risk for the social and psychological adjustment of ethnic minority college students. However, this body of research has several limitations. Because most studies have included in their samples students from various ethnic groups, the generalizability of findings to members of specific ethnic groups is limited. Furthermore, very few studies have examined the relative contribution of the various dimensions of college-related minority stress to psychological distress and potential moderators of these relations.

Ethnic Identity

Ethnic identity refers to the aspect of the self-concept that derives from the recognition of membership in a socially identified ethnic group. Among members of ethnic minority groups, identity formation entails coming to terms with the meaning and conse-

quences of membership in a stigmatized group within the larger society (Phinney & Ong, 2007). From the perspective of identity development theory (Erikson, 1968; Marcia, 1989), an achieved sense of ethnic identity encompasses both exploration about the group one identifies with and the development of emotional attachments and commitments that result in a secure and shared identification with members of the group. Consistent with the notion that a sense of belonging to groups that are meaningful to the person leads to a positive sense of self, researchers have speculated that higher levels of ethnic identity may counter the negative association of minority stress to mental health outcomes (Phinney & Ong, 2007). However, this hypotheses has not always been supported by empirical findings.

Results of both descriptive (Umaña-Taylor, 2011) and meta-analytic (Smith & Silva, 2011) reviews of the ethnic identity empirical literature indicate that ethnic identity achievement has been positively related to adaptive psychological adjustment, primarily among adolescents and heterogeneous groups of ethnic minority participants. However, results with just Latinos/as have been less consistent (Umaña-Taylor, 2011). In her extensive literature review, Umaña-Taylor (2011) concluded that among Latino/a samples (primarily adolescents) a higher level of ethnic identity has been positively related to both adaptive (e.g. self-esteem, coping, optimism) and nonadaptive adjustment (e.g., alcohol and drug use, delinquency), while other studies have indicated no association of ethnic identity to psychological adjustment (e.g. depression among early adolescents and self-esteem among college students).

Empirical studies with Latino/as also have yielded mixed findings regarding ethnic identity's role as a protective factor in the relation of minority stress to psychosocial adjustment (Umaña-Taylor, 2011). For example, among Mexican American adolescents, ethnic identity buffered the expected relation of perceived discrimination to self-esteem and to engagement in risky behaviors, but did not buffer the relation of discrimination to internalizing problems (Umaña-Taylor, Updegraff, & Gonzales-Backen, 2011). Similarly, among Latino/a college students attending campuses with diverse student bodies, ethnic identity achievement did not moderate the relation of either stereotype concerns (French & Chavez, 2010) nor acculturative stress (Iturbide, Raffaelli, & Carlo, 2009) to depression. Given these inconsistent findings and the dearth of studies examining minority stress and ethnic identity among Latino/a college students, further research with this population is warranted to examine ethnic identity as a moderator of the relation of minority stress to psychological well-being.

The Present Study

The first objective of the study was to determine to what extent four dimensions of minority stress identified by Smedley et al. (1993; university climate, academic achievement, discrimination, and within-group pressure stress) contributed unique variance to depression symptoms with Latino/a college students when the effects of general college stress (academic, social/emotional, and financial concerns) were controlled. The second objective was to examine if ethnic identity moderated the relation of each of the four domains of minority stress to depression symptoms. Considering previous findings (Rodriguez et al., 2000; Smedley et al., 1993), we expected that at least one of the domains of minority

stress—achievement stress—would contribute unique variance to depression when general college stress was controlled. Because previous research with Latinos/as has yielded mixed findings, no specific predictions were made regarding the role of ethnic identity as a moderator of the relation of minority stress dimensions to depression.

Method

Participants

Participants were 309 Latino/a undergraduate students (69% of Mexican descent) enrolled in a diverse, major research, urban, public university in the southwestern United States. Close to 62% of students at this university self-identified as ethnic minority (20% Hispanic), while 72% of the faculty self-identified as White non-Hispanic and 7% as Hispanic (information retrieved from the university's web site in September 2009). Most participants were born in the United States (79%), and 53% were women; 49% were the first ones in their immediate families to attend college, and 69% reported that neither parent had attended college. Participants ranged in age from 18 to 29 years (mean age = 21). Approximately, 24% were freshman, 21% sophomore, 33% juniors, and 22% seniors. Students completed questionnaires online, and most received class credit for research participation. Participants reported the following college majors: psychology (32%); natural science, math, or engineering (21.7%); business or economics (18.7%); education (7.8%); anthropology, architecture, history, or language (5.5%); political science or sociology (4.2%); and undecided or undeclared (10%).

Instruments

Demographic questionnaire. This questionnaire asked about participants' age, gender, and ethnicity; their family's country of origin; students' and parents' place of birth; parents' education level; and students' year in college, major, and college generational status.

Generic college stress. The College Stress Scale (CSS; Rodriguez et al., 2000), an 18-item instrument, was used to measure three dimensions of general college stress: academic stress (seven items; e.g., knowing how to prepare for exams, writing course papers); social emotional stress (six items; e.g., handling personal relationships, balancing social and academic commitments), and financial stress (five items; e.g., paying for bills and living expenses). Students were asked to rate the stressfulness of each item based on their college experience on a 5-point Likert scale that ranged from 1 (*does not apply*) to 5 (*extremely stressful*). Rodriguez et al. (2000) reported Cronbach's alpha coefficients for the three scales' scores for Latino/a college students ranging from .80 to .84; Cronbach's alpha for the three subscales in the study ranged from .81 to .82. A score for each college stress dimension was obtained by averaging the items within each subscale. Higher scores indicated higher levels of stress.

Minority college stress. Twenty-two items from the Minority Status Stress Scale (MSSS; Smedley et al., 1993) were used to measure four dimensions of ethnic minority student stress. The MSSS consists of 33 items and five subscales labeled Negative University Social Climate (11 items), Difficulties in Intergroup Relations (seven items), Discrimination (five items), Within-

Group Pressures (four items), and Lack of Academic Confidence (six items). Participants were asked to rate, based on their college experience, the stressfulness of the MSSS 33 items on a 5-point Likert scale that ranged from 1 (*does not apply*) to 5 (*extremely stressful*). As noted earlier, Smedley et al. (1993) developed the MSSS with a heterogeneous group of ethnic minority students (African American, Latino/a, and Filipino) attending a predominantly White institution. We conducted a principal axis factor analyses (PAF) with oblimin rotation to examine the adequacy of the factor structure of the original 33 items with study participants. The obtained five-factor solution partially reproduced three of the five minority stress dimensions identified by Smedley et al. (1993): academic achievement, discrimination, and social climate. However, the other two factors were noninterpretable; one of the factors included 10 items from three different subscales, and the other factor included three items from two different subscales.

In the only study located in which the MSSS had been used to examine dimensions of minority stress (besides the original Smedley et al., 1993, study), Rodriguez et al. (2000) excluded six items (two from the 11-item Social Climate subscale and four from the seven-item Intergroup subscale) that they deemed were not applicable to Latino/a students attending an ethnically diverse institution where they conducted their study (e.g., having to live mostly around White people, and the White-oriented campus culture of the university). Inspection of our data revealed that over 80% of participants indicated either "Does not apply" or "Not stressful at all" in response to those six MSSS items. Consistent with Rodriguez et al. (2000), we excluded those six items and conducted a second PAF analyses with oblimin rotation with the remaining MSSS 27 items. The Kaiser-Meyer-Olkin (KMO) measure indicated that the sample was adequate for the analyses (KMO = .93). Similarly, Bartlett's test of sphericity, $\chi^2 = 5045.455$, $p < .001$, indicated that correlations between the 27 items were sufficient large for factor analyses (Field, 2009).

Consistent with the scree plot, four factors were extracted that accounted for 60% of the variance. Items with loadings of .40 or larger in only one factor were retained; five of the 27 items did not meet this criteria and were not included in the final scale (one of the excluded items had high loadings on two factors while the rest had low loadings in all factors). Results revealed four factors with simple structure that were very similar to four of the five minority stress factors identified by Smedley et al. (1993), excluding the intergroup relations dimension.

The first factor (five items, $\alpha = .86$, explained variance = 40%, eigenvalue = 10), labeled *social climate stress*, consisted of five of the nine items included in the analyses from the original MSS subscale of the same name (e.g., "The university is an unfriendly place"). The second factor (six items, $\alpha = .80$, explained 9% of the variance, eigenvalue = 2), labeled *academic achievement stress*, included all the items that the original MSS subscale of the same name comprised (e.g., "Being the first in my family to attend a major university"). The third factor (six items, $\alpha = .91$, explained variance = 6%, eigenvalue = 1.62), labeled *discrimination stress*, consisted of the five items included in the original MSS subscale of the same name (e.g., "Being discriminated against") plus one item from the original Social Climate subscale ("White students and faculty expect poor academic performance from students of my race"). The fourth factor (five items, $\alpha = .87$, explained variance = 5%, eigenvalue = 1.25), labeled *within-group stress*,

comprised three of the five items that constituted the original subscale of the same name (e.g., “People close to me thinking I am acting White”) plus one item from the original Social Climate subscale (“Pressure that what I do is representative of my ethnic group’s abilities and behaviors”) and one item from the original Intergroup Stress subscale (“Trying to maintain my ethnic identity while attending the university”). In sum, 22 of the 27 items included in the second PAF analyses were retained, and 19 of the 22 items loaded in their respective MSSS factors identified by Smedley et al. (1993). Two PhD-level experts in multicultural psychology were asked to examine a table that listed these 19 items grouped within their four respective factors (without factor labels) and place the three mismatched items according to the meaning of the items in each group. Both experts concurred with the PAF results in the placement of the three mismatched items. A score for each minority stress dimension was obtained by averaging responses to the items included in its respective factor; higher scores indicated higher levels of minority stress.

Depression. The 20-item Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977) was used to assess depression symptoms (e.g., “I felt sad”) experienced in the past week using a 4-point scale ranging from 0 (*less than 1 day per week*) to 3 (*5–7 days a week*). The total score ranges from 0 to 60; higher scores indicate higher levels of symptoms. The CES-D has shown high internal consistency coefficients (from $\alpha = .85$ to $\alpha = .90$) among African American, Anglo American, and Hispanic American respondents from community and psychiatric settings (Roberts, 1980; Wei et al., 2010). Correlations of the CES-D with scores of other depression inventories have ranged from .81 to .91 (Weissman, Prusoff, & Newberry, 1975). The Cronbach’s alpha for the CES-D scores with participants in this study was .91.

Ethnic identity. Ethnic identity achievement was assessed with the Multigroup Ethnic Identity Measure–Revised (MEIM-R; Phinney & Ong, 2007), a six-item scale that captures both exploration of (three items) and commitment to (three items) ethnicity as an aspect of the self. A sample item for exploration is “I have often talked to other people in order to learn more about my ethnic group”; a sample item for commitment is “I feel a strong attachment toward my own ethnic group.” Participants were asked to indicate to what extent each item described them in a Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The ethnic identity achievement score was calculated by averaging responses to the six items; higher scores indicated higher levels of ethnic identity achievement. Results of confirmatory factor analyses of the MEIM-R scores with a heterogeneous sample of ethnic minority college students (51% Latino) in an urban, ethnically diverse university revealed that both the correlated two-factor model and the hierarchical one second-order factor model provided an adequate fit for the data (Phinney & Ong, 2007). The Cronbach’s alpha for the combined ethnic identity achievement score was .81 in the scale development sample and .89 with participants in the present study.

Results

Preliminary Analyses

The data were examined for outliers and for conformity with a normal distribution. Using boxplots, we identified three outliers in

one of the predictor variables, MSSS Negative University Social Climate subscale, and these were eliminated from the data, reducing the sample size to 309 from 312 participants. The values for skewness and kurtosis for all variables were larger than zero, which indicated that in all cases, data deviated to some extent from a normal distribution. However, skewness and kurtosis values of ± 1 are considered good for most psychometric uses, while ± 2 values are usually acceptable (Field, 2009). With the exception of the MSSS Negative University Social Climate subscale (skewness = 1.0, kurtosis = 1.5), values for skewness (range from .02 to .82) and kurtosis (range from .05 to .66) for all other variables in the model were lower than 1, which suggests that the distribution of the variables was adequate for the analyses.

Results of two analyses of variance (two-way) revealed no gender, college generational status, or college classification (freshman through senior) differences in depression and gender differences only in ethnic identity. Compared with men, women reported higher levels of ethnic identity ($M = 3.31$, $SD = 0.89$; $M = 3.63$, $SD = .89$; $F(1, 234.33) = 7.84$, $p = .007$, partial $\eta^2 = .03$). Two multivariate analyses of variance (three-way; MANOVA) were conducted to examine gender, college generational status, and college classification (freshman through senior) differences in (a) the three college stress dimensions and (b) the four minority stress dimensions. Follow-up tests to the MANOVAs indicated that there were gender effects only in relation to the two sets of stress variables: college stress, $F(3, 291) = 3.99$, $p = .01$; Wilk’s $\Lambda = .96$, partial $\eta^2 = .04$, and minority stress, $F(4, 290) = 2.49$, $p = .04$; Wilk’s $\Lambda = .97$, partial $\eta^2 = .03$. Compared with men, women reported higher levels of academic general college stress— $M = 3.37$, $SD = 0.60$; $M = 3.60$, $SD = 0.66$; $F(1, 117.99) = 10.47$, $p = .001$, partial $\eta^2 = .04$ —and academic achievement minority stress— $M = 2.73$, $SD = 0.86$; $M = 3.07$, $SD = 0.90$; $F(1, 222.96) = 9.40$, $p = .002$, partial $\eta^2 = .03$. Because there were gender differences in three of the predictor variables, gender was included as a control in the regression analyses.

Table 1 shows the bivariate correlations and the mean and standard deviations for all continuous variables included in the study. Ethnic identity was not related to depression; it was only related (positively) to discrimination and intra-ethnic minority stress. The correlations among the three college stress variables ranged from .33 to .52 and among the four minority stress variables from .32 to .68. The correlations of the college general stress and ethnic minority stress variables to depression ranged from .25 to .56. Multicollinearity analyses indicated that collinearity among the predictors did not seem to be a problem. While tolerance values below .2, variance inflation factor (VIF) values greater than 10, and average VIF values substantially greater than 1 are cause for concern, results indicated that the tolerance statistics for the predictor variables in the model were all above 0.2 (values ranged from .42 to .89) and VIF values were all below 10 (values ranged from 1.12 to 2.44) with an average of 1.65. Nevertheless, before conducting the regression analysis, we standardized the predictor and control variables (Field, 2009).

Regression Analyses

Results of a hierarchical regression analyses (controlling for gender entered in Step 1) indicated that (a) the three general college stress variables entered as a set in Step 2 were positively

Table 1

Correlations, Means, and Standard Deviations for Variables Included in Analyses

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | Mean (SD) |
|--------------------------|-------|--------|--------|--------|--------|--------|--------|--------|-------------|
| 1. Ethnic Identity | | | | | | | | | 3.5 (0.90) |
| 2. CS Academic | -.01 | | | | | | | | 3.5 (0.65) |
| 3. CS Social/Emotional | -.04 | .45*** | | | | | | | 3.2 (0.80) |
| 4. CS Financial | .01 | .33*** | .52*** | | | | | | 3.0 (0.92) |
| 5. MS University Climate | .13 | .05 | .18** | .18** | | | | | 1.9 (0.61) |
| 6. MS Achievement | .03 | .47*** | .56*** | .35** | .32*** | | | | 2.9 (0.89) |
| 7. MS Discrimination | .18** | .13* | .24*** | .16** | .59*** | .43*** | | | 2.3 (0.94) |
| 8. MS Intra-Ethnic | .14* | .20*** | .40*** | .29*** | .59*** | .53*** | .68*** | | 2.3 (0.80) |
| 9. Depression | -.11 | .43*** | .50*** | .35*** | .26** | .56*** | .25*** | .34*** | 15.7 (10.4) |

Note. Possible range of scores for the Ethnic Identity, College Stress, and Minority Stress Scales = 1–5 and for the Depression Scale = 0–60. CS = College Stress; MS = Minority Stress.

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

related to depression ($R^2 = .31$, $\Delta R^2 = .30$, $p < .001$); (b) the minority college stress variables, entered as a set in Step 3, contributed additional variance to depression ($R^2 = .39$, $\Delta R^2 = .08$, $p < .001$); and (c) ethnic identity, entered in Step 4, also contributed additional variance to depression ($R^2 = .42$, $\Delta R^2 = .03$, $p < .05$). The change in R^2 from Step 4 to Step 5, where the multiplicative terms of the four minority stress variables by ethnic identity were entered, was not statistically significant indicating the absence of a moderation effect.

Inspection of the beta coefficients in Step 4 (reported in Table 2) indicated that controlling for all the variables in the model, two general college stress variables (academic and social) and two minority college stress variables (university climate and academic achievement) were uniquely associated to depression. As expected, the general college stress and minority stress variables were positively associated to depression. Because ethnic identity had a nonsignificant zero-order relation to depression, its significant beta coefficient is the result of a suppression effect, and therefore, the observed relation is not meaningful.

Because of the difficulty in detecting interaction effects, four separate post-hoc hierarchical regression analyses were conducted to examine individually each of the four interaction terms corresponding to the four dimensions of minority stress by ethnic identity. Results indicated that even when examined separately, ethnic identity did not moderate the relation of any of the minority stress dimensions to depression. According to estimates provided by Aiken and West (1991), a sample size of 143 would be required for statistical power of .80 to detect a small main and interaction effect in a hierarchical regression model (R^2 for main effect = .05 and R^2 for main effect and interaction = .10) using $p < .05$ as the criterion for statistical significance. Therefore, with a sample of 309 participants, the study had enough power to detect a small interaction effect.

Discussion

Results revealed that among undergraduate Latino/a students attending a diverse college campus, minority stress was uniquely associated to depression (controlling for general college stress). Similar findings were reported with Latino/a students on a diverse campus (Rodríguez et al., 2000) and heterogeneous groups of ethnic minority students on a predominantly White campus (Smed-

ley et al., 1993; Wei et al., 2010). These findings provide support for the proposition that as members of a marginalized group in society, Latino/a college students experience minority-related stress that may compound the negative effect of general college stress on their psychological well-being. The relevance of minority stress to Latino/a students' psychological functioning is highlighted by the relative large proportion of participants who reported elevated levels of depression symptoms. Approximately 44% of participants scored above 16 on the CES-D, the cut-off

Table 2

Hierarchical Regression Analyses Summary for Gender, College Stress, Minority Stress, and Ethnic Identity Predicting Depression

| Step/predictors | β | R^2 | ΔR^2 |
|-----------------------|---------|-------|--------------|
| Step 1 | | .01 | |
| Gender | .10 | | |
| Step 2 | | .31 | .30*** |
| Gender | .02 | | |
| CS Academic | .24*** | | |
| CS Social Emotional | .34*** | | |
| CS Financial | .10 | | |
| Step 3 | | .39 | .08*** |
| Gender | -.01 | | |
| CS Academic | .16** | | |
| CS Social Emotional | .20** | | |
| CS Financial | .07 | | |
| MS University Climate | .12* | | |
| MS Achievement | .33*** | | |
| MS Discrimination | -.03 | | |
| MS Intra-Ethnic | -.02 | | |
| Step 4 | | .42 | .03** |
| Gender | -.02 | | |
| CS Academic | .16** | | |
| CS Social Emotional | .19** | | |
| CS Financial | .07 | | |
| MS University Climate | .13* | | |
| MS Achievement | .32*** | | |
| MS Discrimination | -.01 | | |
| MS Intra-Ethnic | -.01 | | |
| Ethnic Identity | -.13** | | |

Note. The ΔR^2 from Step 4 to Step 5, where interaction terms by ethnic identity were entered, was not statistically significant. CS = College Stress; MS = Minority Stress.

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

proposed by Mulrow et al. (1995) as indicative of depression. In a study in which the CES-D was used with a heterogeneous group of ethnic minority students (African American, Asian, and Latino/a) attending a predominantly White college, Wei et al. (2010) also reported a 44% depression rate. Taken together, findings suggest that similar to ethnic minority students at predominantly White institutions, Latino/a students attending a university with a diverse student body reported relatively elevated levels of depression symptoms and the stress related to their minority status contributed uniquely to their negative affect.

The current study allowed for the examination of specific dimensions of general and ethnic minority college stress in relation to depression. A review of the beta coefficients in the regression analyses showed that stresses related to general college academic and social-emotional concerns, but not stress related to financial issues, contributed unique variance to depression. Consistent with what one may expect, Latino/a college students who reported having more difficulty dealing with academic tasks (e.g. preparing for and taking exams, writing papers, fulfilling course requirements) and with social and personal relationships also reported higher levels of depressive symptoms. Taking into account these general college stressors, two minority stressors also contributed unique variance to students' depression symptoms: negative perceptions of the university climate and concerns regarding their potential to succeed academically.

Academic concerns emerged as a salient issue in relation to Latino/a students' psychological well-being. Consistent with Rodriguez et al. (2000), our findings indicated that in addition to the typical academic stressors experienced by most college students, minority stress related to academic achievement concerns that may be compounded by ethnic and/or family background uniquely contributed to Latino/a students' depression symptoms. Experiences that may predispose Latino/a students to doubt their academic potential relative to their peers include access to underfunded schools, the need to work at a young age to help their families, and, similar to about 70% of participants in the present study, parents without college experiences who may not be able to help their children navigate the academic landscape. Another factor that may contribute to students' doubts regarding their academic competence is low expectations from professors and peers who may believe that ethnic minority students have received preferential treatment regarding college admission. These perceived doubts may, in turn, contribute to Latino/a students' pressures to prove their ability to succeed and negatively impact their sense of well-being (Rodriguez et al., 2000; Wei et al., 2011).

As a group, students reported relative low levels of negative perceptions of the university climate ($M = 1.9/5$). However, the extent to which students perceived the campus climate as unwelcoming to Latinos/as emerged as uniquely associated with depression symptoms. This last finding is consistent with the notion that the campus climate is affected not only by the ethnic composition of the student body, but also by the extent to which other aspects of the environment, such as administration, faculty, and curriculum, are inclusive and sensitive to the needs of diverse students (Hurtado, Griffin, Arellano, & Cuellar, 2008; Rodriguez et al., 2000). For example, the small representation of Latino/a faculty at the institution (7%), relative to the proportion Latino/as (20%) in the student body, may have precluded some students from finding

mentors, which, in turn, may have contributed to students' negative perceptions of the campus climate and related stress.

Ethnic identity was positively related to minority stress in the areas of discrimination and intra-ethnic minority stress. These findings, which are consistent with previous longitudinal and cross-sectional studies that have shown positive relations of perceived discrimination to ethnic identity (Smith & Silva, 2011), may be explained by the self-categorization theory that proposes that individuals are likely to be most sensitive to contextual factors that are relevant to their salient identities (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987, as cited in Smith & Silva, 2011). In other words, Latino/a students with relative high levels of ethnic identity may have a heightened awareness of negative interpersonal interactions related to ethnicity. However, ethnic identity was not related to depression, and it did not moderate the relation of stress to depression, which is also consistent with the results of previous studies with Latino/a college students attending ethnically diverse institutions (French & Chavez, 2010; Iturbide et al., 2009). Ethnic identity may be more relevant among Latino/a students attending nondiverse college campuses. For example, in a study with a heterogeneous group of ethnic minority students in a predominantly White institution, bicultural competence buffered the relation of a global measure of minority stress to depression (Wei et al., 2010). Further research is needed to examine if ethnic identity moderates the relation of minority stress to other outcomes such as academic achievement and college persistence.

Limitations and Implications

Findings must be interpreted in light of the study's limitations. It is not possible to know to what extent findings will generalize to Latino/a students who differ from participants regarding the ethnic diversity of their college campuses. Another limitation is that post hoc analyses were conducted to determine the final set of items included in the MSSS subscales. The fact that 19 of the 22 retained items loaded in their original MSSS subscales and that the two multicultural experts coincided with the PAF results in the placement of the three mismatched items provides some degree of confidence regarding the validity of the obtained factors. Nevertheless, additional work is needed to establish the validity and generalizability of the minority stress subscales among ethnic minority students attending institutions with diverse student bodies. Finally, the study's cross-sectional design does not allow for causal inferences regarding the relation of general college stress or minority stress to depression.

These limitations notwithstanding, one of the contributions of the study is the identification of aspects of minority stress that are uniquely associated to depression symptoms among Latino/a college students. Consistent with Rodriguez et al. (2000), our findings indicated that Latino/a college students on a campus with a diverse student body reported relatively high levels of depression symptoms. Furthermore, dimensions of minority stress were associated to these students' psychological distress. Findings also underscored the importance of a positive campus climate in universities with diverse student bodies. In their extensive literature review, Hurtado and Ponjuan (2005) concluded that the most frequently implemented campus diversity initiatives include infusion of diversity into the curriculum, co-curricular initiatives (e.g., student organizations, intergroup dialogues), community outreach, and

integrative activities such as service-learning and living-learning programs. Further research is needed to examine the effects of these initiatives in ethnic minority students' perceptions of the campus climate and their college and psychological adjustment (Hurtado et al., 2008).

Results also highlight the importance of attending to Latino/a students' academic needs and concerns, particularly in light of findings from longitudinal research that indicate that depression is a predictor of students' grades and college persistence (Eisenberg et al., 2009). It is possible that academic concerns and depression have a reciprocal relation: academic achievement concerns may lead to depression symptoms, which, in turn, may lead to lower achievement and further demoralization feelings. Further research is needed to examine to what extent Latino students' academic achievement concerns stem primarily from lack of academic self-efficacy or from the need of academic enrichment and support. For example, it is possible that academic self-efficacy may buffer the relation of minority academically related stress to depression. Nevertheless, findings suggest that Latino students are likely to benefit from academic enrichment and study-skills interventions that may strengthen both their preparedness to manage college work and their sense of academic self-efficacy.

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