

## **Ethnic Minority Status Stress, Self-Efficacy, and Persistence Intentions among Hispanic College Women: A Moderation Analysis**

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### **Abstract**

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The purpose of the study was to examine among Hispanic college women to what extent ethnic minority status stress was uniquely associated to persistence intentions when taking into account general college stress. The study also examined if college self-efficacy moderated the relation of minority status stress to students' persistence intentions. Participants were 135 Hispanic undergraduate female students (67.4% of Mexican descent; 80.7% born in the United States) enrolled in a diverse, major research, urban, public university in the Southwest United States. Findings revealed that at the bivariate level, both college stress and minority stress were negatively related to students' college persistence intentions. However, ethnic minority status stress did not contribute unique variance to persistence intentions when controlling for general college stress. College self-efficacy moderated the relation of both college stress and minority status stress to persistence intentions; that is, both college stress and minority status stress were negatively related to persistence intentions among students who scored the lowest in self-efficacy; neither stress variable was associated to persistence intentions among students with the highest levels of self-efficacy. Implications of these findings are discussed.

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**Key Words:** Ethnic minority stress, college self-efficacy, college persistence, Hispanic

### **1. Introduction**

Stressors are events or situations that require a response from the individual in order to adapt or cope. Individuals experience stress when they encounter negative situations that both put at risk their sense of wellbeing and threaten to overwhelm their resources to cope (Folkman, Lazarus, Gruen, & DeLongis, 1986). Theoretical models conceptualize the relation of stress to mental health as the result of reciprocal interactions between persons and contexts (Thoits, 2010). During their academic careers, college students are exposed to stressors normative to their developmental stage (e.g. separation from parents, social and romantic life) and their role as students (e.g. academics, finances). For example, students may experience academic stress when they encounter difficulty in managing and successfully completing academic tasks (Torres & Solberg (2001). They may also experience stress associated with the developmental task of separating from their families, forming new friendships and integrating within the academic and social culture of the college campus, they attend.

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Researchers have argued that, in addition to the typical challenges associated with youth and college life, students from ethnic minority groups experience stressors related to their membership in a socially identified group that has been the target of discrimination and oppression (Contrada et al., 2001; Smedley, Myers, & Harrell, 1993). Ethnic minority status stress emerges as a result of experiencing undesirable situations (e.g. social, academic, institutional) that not only tax the person's coping system, but that individuals perceive to be linked to their ethnic group membership (French & Chavez, 2010). Several studies have shown that when controlling for normative college stressors, minority stress is uniquely associated to ethnic minority college students' psychological and academic adjustment (e.g. Arbona & Jimenez, 2014; Rodriguez, Myers, Morris, & Cardoza, 2000; Smedley et al., 1993; Wei et al., 2010; Wei, Ku, & Liao, 2011).

The Hispanic population in the U.S, which has steadily increased over the last few decades, reached a new high of 55.4 million in 2014 to become 17.4% of the country's population (Krogstad & Lopez, 2015). In the recent past, the high school drop-out rate among Hispanics has declined while their college enrollment has increased substantially (by 201% from 1993 to 2013). Even though they are the largest minority group in U.S. campuses, Hispanics 25 to 29 years old have demonstrated lower attainment rates of four-year college degrees (15%) than their African American (20%) and White (40%) peers (Krogstad & Lopez, 2015). If these trends continue, in the near future a large segment of the US population will be undereducated.

Among Hispanic students who first started college in a four-year institution in 2003-2004, by 2009 a larger proportion of women (56 percent) than men (46 percent) had attained the degree. Among those who did not graduate, women reported different reasons than men for stopping their education (Ross et al., 2012). In addition, there is evidence to suggest that during the first college year women tend to underestimate, while men tend to overestimate, their college self-efficacy (Lopez, 2014). These findings suggest that the college experience may vary for Hispanic men and women. Therefore, it is important to examine factors that may be associated specifically with Hispanic women's college success and degree attainment.

As members of an ethnic and cultural minority group, at four-year institutions Hispanics are likely to experience unique challenges that may affect their sense of psychological and academic wellbeing, which in turn may contribute to their lack of persistence and degree completion (Rodriguez, et al., 2000). For example, studies have shown that Hispanic college students tend to experience a less positive campus environment than their White peers and that the stress they experience is negatively related to their academic adjustment, sense of belonging and overall wellbeing (Jones, Castellanos & Cole, 2002; Hurtado & Ponjuan, 2005). Similarly, the experience of within-group pressures to conform (Ojeda, Navarro, Rosales, Meza & Arbona, 2012) has been associated to lack of life satisfaction among Hispanic students. However, very few studies have examined the relative contribution of college stress and minority status stress to degree persistence dispositions among this population. Therefore, the purpose of the current study was to examine among Hispanic college women attending a four-year major research university: (a) the relative association of college stress and minority stress to their degree persistence intentions and (b) to what extent college self-efficacy served as a protective factor (moderator) in the relation of college stress and minority stress to persistence intentions.

### **1.1 Minority Stress**

Among ethnically diverse students, minority status stress results from negative campus experiences perceived to be motivated by the physical and/or cultural attributes salient to the individual's ethnic group (Smedley et al., 1993).

Minority stress has been operationalized in terms of several dimensions including: negative university social climate (perceptions of the campus environment as unwelcoming to members of the student's group); personal experiences of ethnic discrimination; intra-group stress (perceived pressure to conform to the norms of the student's ethnic group regarding language, behaviors and ways of thinking); and, achievement stress (fears of lacking in academic preparation relative to peers due to ethnic and social class background) (Smedley et al., 1993). Several studies have shown that minority status stress is positively associated to psychological distress when controlling for general college stress. These studies have included exclusively Hispanic college samples (Arbona & Jimenez, 2014; Rodriguez et al., 2000; Saldaña, 1994) and heterogeneous groups of African American, Asian and Hispanic students (Smedley et al., 1993; Wei et al., 2010). While there is evidence that the experience of psychological distress is negatively related to college students' grade point average and degree completion (Eisenberg, Golberstein, & Hunt, 2009), only one study was located that examined the relation of ethnic minority status stress to college persistence. Wei et al. (2011) reported that minority status stress was negatively related to persistence expectations among a mixed group of Asian American and Hispanic college students.

The few relevant studies located suggest that minority stress constitutes a risk for degree attainment among diverse college students. Therefore, further studies are warranted that examine the unique contribution of minority stress to college persistence attitudes among Hispanic college women. The identification of malleable factors, such as college self-efficacy, that may provide a buffer for the negative association of minority stress to students' college persistence expectations is necessary to devise effective interventions to increase the representation of Hispanics among college graduates in the United States.

## 1.2 Self-Efficacy

Self-efficacy, a central construct in social learning theory (Bandura, 1997), refers to the level of confidence individuals have regarding their ability to successfully complete specific tasks. According to Bandura (1997), among individuals who have acquired skills related to specific tasks, successful performance is enhanced by a strong belief in their capabilities to manage thoughts, feelings and task related behaviors to achieve desired goals. Individuals with higher levels of self-efficacy are more likely to see difficult experiences or potential failure as challenges rather than threats, and, therefore, are more likely than their less efficacious peers to engage and persist in the pursuit of challenging outcomes (Bandura, 1997). Self-efficacy appears to play an important role in academic achievement, adjustment to college life, and persistence in college. In academic settings, high levels of self-efficacy have been associated with higher investment of time and effort in pursuing challenging tasks and higher engagement with facilitative resources in the environment; in contrast, lack of self-efficacy has been linked to stress, depression and disengagement (Choi, 2005; Pajares & Schunk, 2010).

College self-efficacy refers to students appraisals regarding their capability to successfully complete specific academic tasks (e.g. understanding course materials, write papers, pass exams) and manage social and interpersonal interactions (interactions with professors and integrating with peers)(Solberg, O'Brien, Villareal, Kennel, & Davis, 1993). Results of a meta-analytic study showed that self-efficacy beliefs were positively related to students' academic attainment and persistence attitudes across a wide variety of fields (Multon, Brown & Lent, 1991). More recent studies also have reported a positive relation of college self-efficacy to students' college satisfaction, academic performance and expectations of persistence to graduation (DeWitz, Woolsey, & Walsh, 2002; Garriott, Hudyma, Keene & Santiago, 2015; Vuong, Brown-Welty, Tracz, 2010) including students of Hispanic descent (Gloria, Castellanos, Lopez, & Rosales, 2005; Ojeda, Flores, & Navarro 2011; Torres & Solberg, 2001).

These findings are consistent with Bandura's (1997) proposition that strong self-efficacy beliefs increase students' resources to manage challenging tasks and reduce the level of perceived threat, which, in turn, lead to reduced stress and increased motivation to continue to pursue their academic goals. Consistent with this reasoning, Solberg et al (1993) proposed that college self-efficacy may serve as a moderator that buffers the negative relation of stress to college adjustment.

### **1.3 College Persistence**

According to leading theoretical models, two strong predictors of college retention and graduation are students' integration into the academic and social life of their institutions and their intentions to persist until graduation (Bean & Eaton, 2000; Tinto, 1975). Furthermore, college students' intent to persist to degree completion and commitment to their institution are strongly correlated with actual persistence behaviors (Cabrera, Nora, & Castañeda, 1993; Hausmann, Ye, Schofield, & Woods, 2009). It is reasonable to expect that among students from diverse ethnic backgrounds, minority stress will interfere with their integration to the college's social and academic environment (DeWitz et al., 2009), and therefore, negatively impact their persistence intentions. At the same time, Torres and Solberg (2001) reported that among Hispanic students college self-efficacy was negatively related to college stress and positively associated to social integration (connection to students and faculty) and college persistence intentions. Therefore, it is reasonable to speculate that college self-efficacy may ameliorate the expected negative relations of college stress and minority stress to college persistence intentions. However, no study was found that examined college self-efficacy as a moderator of the relation of college and minority status stress to students' persistence intentions.

### **1.4 The Present Study**

The objectives of the present study were to examine among Hispanic female undergraduate students enrolled in a four-year major university in the United States: (a) the collective and unique contribution of college stress and minority stress to students intentions to persist until degree attainment, (b) to what extent college self-efficacy moderates the relation of college stress to persistence intentions, and (c) to what extent college self-efficacy moderates the relation of college minority stress to persistence intentions. The following four hypothesis were examined: (1) the relation of general college stress and ethnic minority status stress to persistence intentions would be negative and statistically significant; (2) minority status stress would contribute unique variance to persistence intentions when controlling for general college stress; (3) college self-efficacy would moderate the relation of college stress to persistence intentions; and (4) college self-efficacy would moderate the relation of minority status stress to persistence intentions. In both moderation analyses it was expected that the negative relation between stress to persistence intentions would be stronger among students with lower college self-efficacy compared to their peers with higher levels of self-efficacy. In other words, college self-efficacy would buffer the negative relation of both college and minority status stress to students' persistence intentions.

## **2. Methods**

### **2.1 Participants**

Participants were 135 Hispanic, female undergraduate students (67.4% of Mexican descent and 31% from other Latin American countries) enrolled in a diverse, research, urban, public university in Southwest United States.

At the time of data collection, 61.7% of the institution's student body self-identified as ethnic minority (19.9% Hispanic); 72% of the faculty self-identified as White, non-Hispanic and only 7% as Hispanic. Of the 135 participants, the majority were born in the US (80.7%), and 73% reported that neither parent had attended college. Participants ranged in age from 18 to 38 years old with a mean age for the sample of 22.9. Most of the participants reported psychology (56%) as their major; the rest of the students were distributed among 13 other majors across the social sciences, natural sciences, and liberal arts. Students completed the study's instruments on-line and most of them received class credit for research participation.

## 2.2 Instruments

*General College Stress.* The College Stress Scale (CSS; Rodriguez et al., 2000) 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." A college stress score was obtained by averaging the scale's 18 items. In the present study, the internal reliability Cronbach's alphas for the scale's scores was .89

*Minority Status Stress.* The 22-item adaptation of the Minority Status Stress Scale (MSSS; Smedley et al., 1993) by Arbona and Jimenez (2014) was used to measure four dimensions of minority student stress: negative university social climate ( e.g., " Racist policies and practices of the university"), discrimination (e.g. " Being treated rudely or unfairly because of my race" ), intra-ethnic pressures ("Pressures from people of my same race, e.g. how to act, what to believe ") and lack of academic confidence (e.g., "My academic background for college is inadequate"). Participants 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." A total minority stress score was obtained by averaging the 22 items included in the scale. The internal consistency Cronbach's alpha coefficient for the total score was .92.

*College Self-Efficacy.* Items from the academic and social subscales from the College Student Self Efficacy Inventory (CSEI; Solberg et al., 1993) were averaged to assess college self-efficacy. Participants were asked to rate how confident they felt regarding completing course related tasks (e.g. write course papers; do well in exams) and social tasks (e.g. participated in class discussions; ask a professor a question) on a 10-point Likert scale that ranged from 1 "not at all confident" to 5 "extremely confident." A total self-efficacy score was obtained by averaging the 11 items included in the two sub-scales. The internal consistency Cronbach's alpha coefficient for the participants' self-efficacy score was .92.

*College Persistence Intentions.* Two subscales from the College Persistence Questionnaire (Davidson, Beck, & Milligan, 2009) were used to assess students' college persistence intentions: the Degree Commitment and Institutional Commitment subscales (total 9 items). Degree commitment refers to the importance students give to receiving the diploma (e.g. "How strong is your intention to persist in the pursuit of your degree here or elsewhere?"). Institutional commitment refers to students' satisfaction with and confidence in the institution they are enrolled (e.g. "how confident are you that this is the right university for you"). Participants were asked to provide answers of each item on a 5-point Likert scale; higher scores indicated higher levels of persistence intentions. College persistence intentions' scores were obtained by averaging the two scale's 9 items.

In previous studies with college students, the Degree Commitment and Institutional Commitment subscales demonstrated test-retest reliability coefficients of  $r = .67$  and  $r = .78$ , respectively and internal reliability Cronbach's alphas of  $r = .70$  and  $r = .78$ , respectively (Davidson et al., 2009). In the present study, the internal reliability Cronbach's alphas for the persistence intentions measure scores was .70

### 3. Results

#### 3.1 Preliminary Analyses

Table 1 shows the bivariate correlations, means, and standard deviations of all continuous variables included in the study. While college self-efficacy was not correlated to college stress ( $r = .12$ , ns), it was significantly correlated to minority status stress ( $r = -.23$ ). The correlations of college stress and minority status stress to persistence intentions were  $-.25$  and  $-.19$ , respectively (both statistically significant). College self-efficacy was positively correlated to persistence intentions ( $r = .47$ ). The correlations of age and college grades (GPA) to persistence intentions were not statistically significant; therefore, these variables were not controlled for in the study's main analyses

**Table 1: Correlations, Means, and Standard Deviations for Variables included in Analyses**

Variables	1	2	3	4	Mean (SD)
College Stress					3.7 (.88)
Minority Status Stress	.43***				2.5 (.91)
College Self-Efficacy	-.12	-.23**			7.8 (1.5)
Persistence Intentions	-.25**	-.19**	.47**		.5 (0.48)
College Grades	-.20*	.01	.12	.11	.2 (0.50)
Age	-.07	.02	.28**	.02	22.9 (3.89)

Note: The potential range of scores was 1 to 5 for College Stress, Minority Stress, and College Self-Efficacy and it was 1 to 10 for Persistence Intentions

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

#### 3.2 Regression Analyses

Three hierarchical regression analyses were conducted to examine hypothesis three, four and five. The first regression analyses examined the collective and unique contribution of college stress, minority stress, and college self-efficacy to persistence attitudes. Multicollinearity analyses indicated that collinearity among the three predictors was not a problem. The VIF values for the predictor variables in the model were all below 10 (values ranged from 1.05 to 1.27) and the tolerance statistics were all above .2 (values ranged from .79 to .95). Tolerance values below .2, VIF values greater than 10 and average VIF values substantially greater than 1 are cause for concern (Field, 2009). Results of the first regression analyses, displayed in Table 2, indicated that college stress entered in step 1, was negatively related to persistence ( $\beta = -.25$ ,  $R^2 = .06$ ,  $p < .001$ ). However, minority stress, entered in step 2, did not contribute additional variance to persistence intentions. College self-efficacy, entered in step 3, contributed additional variance to persistence intentions when controlling for the two stress variables ( $\beta = .48$ ,  $R^2 = .29$ ,  $\Delta R^2 = .22$ ,  $p < .001$ ).

Inspection of the Beta coefficients on step 3 indicated that both college stress and self-efficacy contributed unique variance to persistence intentions in the expected direction.

**Table 2: Hierarchical Regression Analyses Summary for College Stress, Minority Stress, and Self-Efficacy Predicting Persistence Intentions**

Step/Predictor measures	$\beta$	R <sup>2</sup>	$\Delta R^2$
Step 1		.06**	
College Stress	-.25**		
Step 2		.07	.01
College Stress	-.20*		
Minority Stress	-.11		
Step 3		.29**	.22***
College Stress	-.19*		
Minority Stress	-.01		
College Self-Efficacy	.48***		

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

To avoid multicollinearity problems associated with the inclusion of several interaction terms in the same regression model, two additional regression analyses were conducted to examine to what extent self-efficacy moderated the relation of college stress and of minority stress to persistence attitudes. Results, displayed on Table 3, showed that: (a) in both analyses the change in R<sup>2</sup> from step 1 to step 2, where each of the interaction terms was entered, was statistically significant, and (b) in step 2, the Beta coefficients for each interaction term also was statistically significant, which indicates the presence of a moderation effect for both college stress by self-efficacy ( $\Delta R^2 = .08$   $p < .01$ ;  $\beta = .23$ ,  $p < .01$ ) and minority stress by self-efficacy ( $\Delta R^2 = .03$   $p < .05$ ;  $\beta = .18$   $p < .05$ ).

**Table 3: Hierarchical Regression Analyses: College Self-Efficacy, General College Stress and Minority Status Stress in relation to Persistence Intentions**

Step/Predictor measures	$\beta$	R <sup>2</sup>	$\Delta R^2$	$\beta$	R <sup>2</sup>	$\Delta R^2$
	College Stress			Minority Status Stress		
Step 1		.29***			.26***	
Stress Variable	-.20**			-.09		
Self-Efficacy	.48***			.49***		
Step 2		.35***	.06**		.29***	.03*
Stress Variable	-.25**			-.11		
Self-Efficacy	-.45***			.45***		
Stress x Self E.	.23**			.18*		

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

In order to interpret the interaction effects, the relation of each stress variable to persistence intentions was plotted at three levels of the moderator: the college self-efficacy mean, one standard deviation above the mean, and one standard deviation below the mean (Aiken & West, 1991). The plots, displayed in Figure 1 and Figure 2, showed that the negative relation of both college stress and minority status stress to persistence attitudes were the strongest at low levels of college self-efficacy.

Slope analyses for the interaction effects for college stress (Figure 1) showed that the slope of the line that depicts the relation of college stress to persistence intentions at high levels of self-efficacy was not different from zero ( $t = -.11, p > .05$ ), while the slope of the line that depicts the relation of college stress to persistence intentions at either medium ( $t = -3.67, p < .001$ ) or low level ( $t = 6.15, p < .001$ ) of self-efficacy was different from zero. These findings mean that at high levels of self-efficacy, the relation of college stress to persistence intentions was not statistically significant and that at both medium and low levels of self-efficacy, the negative relation of college stress to persistence intentions was statistically significant.

Slope analyses for minority status stress (Figure 2) showed that the slope of the line that depicts the relation of minority status stress to persistence intentions at either medium ( $t = -1.68, p > .05$ ) or high ( $t = .64, > .05$ ) levels of self-efficacy was not different from zero, while the slope of the line that depicts the relation of minority stress to persistence intentions at low levels of self-efficacy ( $t = -3.36, p < .001$ ) was different from zero. These findings indicate that at high and medium levels of self-efficacy, the relation of minority status stress to persistence intentions was not statistically significant and that the negative relation of minority status stress to persistence intentions was statistically significant only at low levels of self-efficacy.

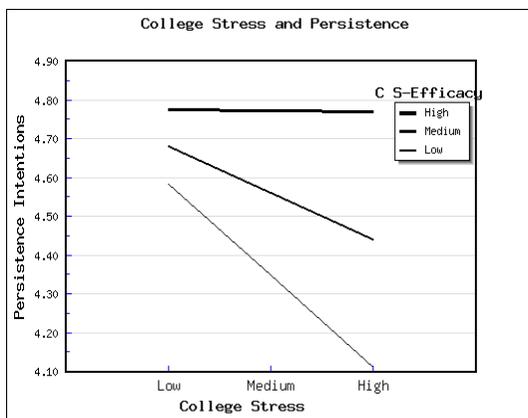


Figure 1: Plot of college self-efficacy as moderator of the relation of college stress to persistence intentions

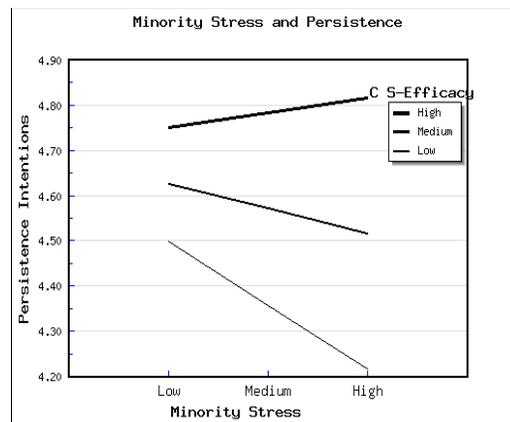


Figure 2: Plot of college self-efficacy as moderator of the relation of minority stress to persistence intentions

#### 4. Discussion

The purpose of the study was to examine the relation of ethnic minority status stress to college persistence intentions among Hispanic college women enrolled in an ethnically diverse major research university in the southwest region of the United States. The study also examined to what extent college self-efficacy played a protective role in the relation of general college stress and ethnic minority status stress to students' college persistence intentions.

As expected, at the bivariate level both general college stress and ethnic minority status stress were negatively associated to students' college persistence intentions. However, results of the first regression analyses did not provide support for the study's second hypothesis that ethnic status minority stress would be uniquely associated to persistence intentions when controlling for general college stress. Instead, when both stress variables were considered simultaneously in the regression analyses, only college stress contributed unique variance to students' persistence intentions. These findings are not consistent with previous studies that have shown that among ethnic minority students, including Hispanics, minority status stress contributed unique variance to lack of psychological well-being when controlling for general college stress (Arbona & Jimenez, 2014; Rodriguez et al., 2000; Smedley, 1993; Wei et al., 2010). Taken together, these findings suggest that college stressors may have a greater bearing on students' college persistence decisions than minority status stressors, which appear to have a stronger relation to feelings of wellbeing even after college stress has been taken into account. However, the relatively high bivariate correlation of college stress to minority status stress ( $r=.43$ ) also may help explain the lack of unique contribution of minority status stress to persistence attitudes among this sample of Hispanic college women, even though preliminary analyses indicated that collinearity among the predictors was not a problem.

Consistent with previous findings, college self-efficacy was positively associated to students' persistence intentions (Gloria et al., 2005; Multon et al., 1991; Torres & Solberg, 2001). Results of the last step of the first regression analyses showed that college self-efficacy contributed a relatively large proportion of additional variance (22%) to persistence intentions when controlling for general college stress and minority status stress and that both college stress and self-efficacy contributed unique variance to persistence attitudes. At the bivariate level, college self-efficacy was negatively associated to minority status stress while it was unrelated to general college stress, which suggests that among Hispanic college women experiences of discrimination, perceptions of an unwelcoming campus environment, doubts about their academic capabilities and intra-ethnic pressures may undermine their sense of competency to successfully perform academically and socially in college. It is possible that because general college stressors are common to all students, and are an expected aspect of the college experience, such stressors are less likely than minority status stress to undermine ethnic minority students' perceptions about their own capabilities.

Findings provided support for the study's moderation self-efficacy hypotheses. The expected negative relation of college stress and minority status stress to persistence intentions was strongest among students with the lowest level of self-efficacy, while neither of the stress variables was associated to persistence intentions among students with the highest levels of self-efficacy. In other words, findings suggest that college self-efficacy buffers the negative relation of both college stress and minority status stress to students' intention and commitment to complete a four-year college degree. As proposed by Bandura (1997), it is likely that students' self-efficacy beliefs regarding their capacity to do well academically and socially facilitated their ability to integrate within the university's academic and social environment, select goals that increased their probability of success (Hsieh, Sullivan, & Guerra, 2007) and invest themselves cognitively and emotionally in the necessary tasks to reach their academic goals (Bean & Eaton, 2001).

The study's findings must be interpreted in light of its limitations. It is not possible to know to what extent findings will generalize to Hispanic male college students or to Hispanic college women who differ from participants in the current study in terms of ethnic diversity of the college campus they attend. Because of the cross-sectional nature of the study, no causal inferences can be made regarding the relation of college and ethnic minority status stress to persistence intentions. It is possible that students who are less committed to completion of their degree may experience higher levels of college and/or minority status stress.

The study's limitations notwithstanding, one of the contributions of the study is the identification of college self-efficacy as a potential buffer in the negative relation of college and minority status stress to persistence intentions. Fortunately, college self-efficacy is a malleable individual characteristic. According to Bandura's theory, verbal persuasion and vicarious learning are two important sources of self-efficacy (Bandura, 1997). Previous studies have found that students who report higher levels of interaction with supportive faculty as mentors and advisors also tend to report higher levels of academic and college self-efficacy (Santos & Reigadas, 2002; Vogt, 2008). Furthermore, in studies with diverse college students, academic self-efficacy mediated the relation of faculty-student interactions to college grades (DeFreitas & Bravo, 2012); college self-efficacy also mediated the relation of environmental supports to self-perceived academic progress (Garriott et al., 2015). These findings suggest that consistent with Bandura's theory, formal and informal interactions with supportive others, including faculty, may provide opportunities for students to receive encouragement regarding their ability to succeed in college related tasks as well as opportunities to learn from faculty mentors how to navigate the college experience. From an instructional perspective, sources of academic self-efficacy include curriculum that incorporates graduated mastery experiences and opportunities to learn from appropriate peer role-models (Torres & Solberg, 2001). Environmental sources of self-efficacy may be most important for first-generation and ethnic minority college students who may not have immediate family members to guide them through their college experiences (DeFreitas & Bravo, 2012).

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