

# Minority Status Stress and Coping Processes Among African American College Students

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The current study tested coping efforts as moderators of the effects of minority status stress on general levels of perceived stress and academic performance for African American students at a predominantly White college and university (PWCU) and a historically Black college and university (HBCU). Multivariate analyses revealed that African American students at the PWCU experienced significantly higher levels of minority status stress than their counterparts at the HBCU. Students did not differ in overall levels of perceived stress and in most coping efforts assessed. HBCU students reported higher mean use of problem-oriented strategies and spiritual efforts than students at the PWCU. Moderated regression analyses revealed an increase in the effects of minority status stress on perceived stress at high levels of problem-oriented efforts. The effects of minority status stress on perceived stress decreased at higher levels of disengagement. In predicting academic performance, type of institution was the strongest predictor. Implications of the findings are discussed.

*Keywords:* African American students, stress, coping, academic performance

African Americans are increasingly enrolling in today's colleges and universities. Recent research evidence suggests that their academic and psychosocial outcomes vary by type of university (Greer, 2008; Greer & Chwalisz, 2007). Among African American students enrolled at predominantly White colleges and universities (PWCUs), earlier studies have demonstrated that they generally have poorer college adjustment and lower academic outcomes compared to their counterparts at historically Black colleges and universities (HBCUs) (e.g., Allen, 1992; Fleming, 1984). Factors such as poor college readiness and financial difficulty have been linked to low academic achievement for students at both types of institutions. However, a number of studies suggest that stressors experienced within the campus environment also influence the overall college adjustment of African American students at HBCUs and PWCUs

(e.g., Allen, 1992; Banks, 2010; Greer & Chwalisz, 2007; Prillerman, Myers, & Smedley, 1989; Smedley, Myers, & Harrell, 1993).

## Sources of Stress at PWCUs and HBCUs

Lazarus and Folkman (1984) defined stress as the product of person-environment interactions that are perceived by individuals as taxing or exceeding their available resources. Poor fit between the person and the environment can increase one's overall level of stress experienced. African American students at PWCUs occupy the social position as racial and ethnic minorities. Therefore, sources of stress on campus likely emanate from general college pressures (e.g., exams, financial difficulties) in addition to stressors related to minority status (e.g., Greer & Chwalisz, 2007; Prillerman et al., 1989; Watkins, Green, Guidry, & Stanley, 2007). Minority status stress is a unique source of stress that emanates from psychosocial difficulties related to racial and ethnic background (Greer, 2008; Greer & Chwalisz, 2007). Such stressors can include exposure to racial discrimination, strained relationships with faculty members outside of one's racial and ethnic group, being the first in one's family of origin to attend college, and racial and ethnic underrepresenta-

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tion in academic courses (Greer & Chwalisz, 2007; Smedley et al., 1993). It can also encompass intragroup conflicts, such as pressure to show loyalty to one's racial and ethnic group members (e.g., Prillerman et al., 1989). Among African American students at PWCUs, minority status stressors have been linked to adverse college outcomes such as low grade point average, poor psychological health, low social involvement, and decreased academic motivation (e.g., Greer & Chwalisz, 2007; Prillerman et al., 1989).

In contrast to their same-race PWCU counterparts, African American students attending HBCUs have been shown to experience largely supportive campus environments (e.g., Seifert, Drummond, & Pascarella, 2006). The results of earlier investigations on campus racial composition and academic outcomes implied that African American students at HBCUs experienced high academic achievement because they did not contend with negative minority status-related pressures within their environments (e.g., Allen, 1992; Fleming, 1984). In particular, HBCU students were shown to have higher retention and graduation rates, higher grade point averages, greater social involvement on campus, supportive relationships with faculty, and high satisfaction with college in comparison to African American students at PWCUs (e.g., Allen, 1992; Fleming, 1981, 1984).

Despite the findings of previous investigations, recent evidence suggests that HBCU environments may not completely buffer African American students from racial and ethnic-related challenges. Greer (2008) tested minority status stressors as predictors of overall levels of perceived stress and academic performance for African American students attending an HBCU. Students reported experiences of racial discrimination, intergroup conflict with same-race peers, along with severe pressure to succeed in college (Greer, 2008). Minority stressors were the strongest predictors of overall levels of perceived stress, but were not predictive of academic performance. The results of this investigation suggested that, although African American students generally represent the majority of the student body at many HBCUs, they experience race-related inter and intragroup stressors that adversely impact their mental health and well-being.

### **Coping With Racial and Ethnic-Related Stressors**

The ways in which African American students cope with racial and ethnic-related stressors can influence their overall levels of perceived stress and academic success. Coping is conceptualized as efforts used to manage, lessen, or endure the demands of situations that are perceived as stressful (Lazarus & Folkman, 1984). In general, coping behaviors are categorized as emotion-focused (i.e., strategies used to manage and/or alleviate emotional reactions), problem-focused (i.e., strategies used to resolve problems), or avoidant (i.e., strategies used to deny or minimize problems) (Lazarus & Folkman, 1984). Some disagreement exists regarding whether strategies commonly used by African Americans (e.g., spirituality, social support) reflect stable patterns or are situation-specific because of cultural influences on coping (Greer, 2007). However, some evidence suggests that the ways in which African Americans cope with racism and other forms of social inequities may differ from efforts used to address general life stressors (Clark, Anderson, Clark, & Williams, 1999).

A limited number of investigations have examined coping efforts used by African American students to address racial and ethnic-related difficulties in college (e.g., Swim, Hyers, Cohen, Fitzgerald, & Bylsma, 2003). Swim et al. (2003) found that African American students at a PWCU reported frequent and distressing experiences of racial discrimination. Students coped with race-related incidents by directly responding to perpetrators, by seeking social support, or by not responding at all (Swim et al., 2003). Other studies report differences in coping efforts by type of university. African American students at PWCUs have been found to use denial, distraction, and other avoidant strategies (e.g., alcohol use) to address race-related difficulties, whereas their counterparts at HBCUs have been found to rely on social support, and spirituality (e.g., Fleming, 1981). Still, some investigations report no differences in coping efforts between African American students attending PWCUs and HBCUs (e.g., Cooper, Mahler, & Whitt, 1994).

Inconsistent findings in the literature suggest that additional investigations are needed to understand the types of strategies used by African American students to combat racial and ethnic-

related difficulties on college campuses. In addition, a gap in the literature exists regarding the influence of coping efforts on mental health and academic outcomes for African American students in response to minority-related stressors. The few studies that have examined the effects of coping efforts on health and academic outcomes for this population of students have produced mixed results. In one investigation, Barnes and Lightsey (2005) examined social support, avoidance, and problem-focused efforts as moderators of the relationship between racial discrimination and overall levels of stress for African American students. Coping efforts did not moderate this relationship; rather, problem-solving and avoidant strategies were the strongest predictors of overall stress. The findings suggest that problem-solving efforts lowers stress for African American students, whereas avoidance efforts increase levels of stress (Barnes & Lightsey, 2005). In other studies, use of problem-focused strategies have been found to produce adverse health consequences for African American college students in their efforts to address race-related experiences, and avoidance efforts have been linked to reduced levels of stress (e.g., Clark & Adams, 2004).

Greer and Chwalisz (2007) conducted one of the few investigations in which coping efforts were examined to understand the effects of minority status stress on overall levels of perceived stress and academic performance for African American students at both types of institutions. Coping efforts were tested as mediators of these relationships. Minority status stress was found to contribute to overall levels of perceived stress and posed adverse effects on academic performance (Greer & Chwalisz, 2007). Coping strategies were not significant mediators of the effects of minority status stress on general perceived stress and academic performance (Greer & Chwalisz, 2007). These results suggested that coping efforts did not account for the relationship between minority status stress, general perceived stress and academic performance. However, there were two prominent limitations in this investigation.

First, Greer and Chwalisz tested coping efforts as mediators that served only to explain the relationships between minority status stress, general perceived stress, and academic performance. However, unlike moderation, tests of mediation do not provide information regarding

the strength of the relationships between the predictor and criterion (Baron & Kenny, 1986). It is plausible that the effects of minority status stress on overall levels of perceived stress and academic performance differ at levels of coping efforts. Second, the measure used in the investigation to assess coping efforts was not designed to assess coping behaviors of African Americans. Greer and Chwalisz used the Coping Orientations to Problems Experienced Inventory (COPE; Carver, Scheier, & Weintraub, 1989) to measure coping strategies. Although this measure has been used in a number of investigations with African American college students (e.g., Clark, 2004; Danoff-Burg, Prellow, & Swenson, 2004; Mosher, Prellow, Chen, & Yackel, 2006), the conceptual underpinnings of the measure have been shown to be somewhat inconsistent with the coping strategies commonly used by African Americans (Greer, 2007). For instance, Carver et al. (1989) conceptualized turning to religion as an emotion-focused strategy which implies that this strategy is used to manage emotional reactions to stress as opposed to problem-resolution. However, research evidence demonstrates that African Americans commonly use religion and spirituality to problem-solve (e.g., Abrams, 2004). Such conceptual concerns limit the COPEs validity in assessing the coping behaviors of African American populations, and therefore, may have contributed to the null findings reported by Greer and Chwalisz. Greer (2007) proposed an alternative strategy to the use of the COPE with African American populations that allows researchers to use the measure to assess culturally congruent coping efforts (i.e., efforts that reflect core cultural worldviews of African Americans). Application of Greer's (2007) strategy may have led to different results in Greer and Chwalisz's investigation.

### The Current Study

The current study was designed to address the limitations of Greer and Chwalisz's study by examining coping efforts as moderators of the relationships between minority status stress, general levels of perceived stress, and academic outcomes for African American college students attending an HBCU or a PWCU. The COPE factor structure offered by Greer (2007) was applied in the current study. Given the relationships

among the variables that have been established in previous literature, it was hypothesized that coping strategies would moderate the effects of minority status stress on perceived stress and academic outcomes, such that frequent use of coping strategies would buffer the effects of minority status stress on overall levels of perceived stress and academic performance.

## Method

### Participants

The sample for this study consisted of 202 African American undergraduate students from a large PWCU located in the Midwest ( $n = 99$ ) and from an HBCU located on the Eastern region of the United States ( $n = 103$ ). The participants ranged in age from 18 to 48 years, with a mean age of 21.02 years ( $SD = 4.41$ ). Ninety percent reported that they were single ( $n = 182$ ), and 10% reported their marital status as engaged, partnered, or divorced ( $n = 20$ ). Sixty-eight percent of the sample were women ( $n = 136$ ) and 32% were men ( $n = 66$ ). Representation across educational class levels was relatively equal. Twenty-one percent were freshmen ( $n = 42$ ), 27% were sophomores ( $n = 55$ ), 34% were juniors ( $n = 69$ ), and 18% were seniors ( $n = 36$ ). The majority of the participants reported being employed either full-time or part-time ( $n = 132$ ), and 70 participants reported that they were unemployed.

### Measures

**Minority-Status Stress.** The Minority Student Stress Scale (MSS; Prillerman et al., 1989; Smedley et al., 1993) was used to assess participant experiences of minority-status stress. The measure is comprised of 37 items that are summed to produce five subscales. Sample items from each of the scales include, "being the first in my family to attend a major university" (achievement-related stressors), "few students of my race being in my classes" (environmental stressors), "pressures to show loyalty to my race" (intrapersonal stressors), and "relationships between different ethnic groups" (interpersonal stressors). Items are answered on a Likert-type scale with response options that range from 0 (*does not apply*) to 5 (*extremely stressful for me*). High MSS scores

reflect considerable distress related to minority status experiences on campus. Prillerman et al. (1989) reported Cronbach's alpha reliabilities for MSS subscales that ranged from .76 to .93. High intercorrelations for MSS subscales have been reported in other studies (Greer & Chwalisz, 2007; Greer, 2008). Therefore, a total MSS scale score was computed to address the redundancy among the scales. The Cronbach's alpha reliability for the total MSS score was .93.

**General Perceived Stress.** The Perceived Stress Scale (PSS; Cohen, Karmarck, & Mermelstein, 1983) was used to measure participants' subjective appraisal of their overall experience of stress. The measure is comprised of 14 items that assess the degree to which respondents have perceived their lives to be stressful within the past month. Sample PSS items included, "In the past month, how often have you felt that you were unable to control the important things in your life?" and "How often have you felt difficulties were piling up so high that you could not overcome them?" Items are answered on a Likert-type scale, with response options that range from 0 (*never*) to 4 (*very often*). A total score was computed by reverse scoring positively worded items and summing across all items to produce a total scale score. High scores indicate severe levels of general stress. Cohen et al. (1983) reported test-retest reliabilities for PSS items as ranging from .84 to .86. The obtained Cronbach's alpha reliability for the current study was .70.

**Coping behaviors.** The COPE Inventory (Carver et al., 1989) was used to assess participant coping responses. The COPE is comprised of 60-items that capture 15 distinct coping strategies, and was designed to assess both situational and dispositional (i.e., stable) efforts (Carver et al., 1989). The dispositional version of the COPE was used in the current study to examine strategies that are commonly used by African American students to manage stress within their campus environments. Examples of subscale items include, "I concentrate my efforts on doing something about it" (active coping), "I try to come up with a strategy about what to do" (planning), "I get upset and am really aware of it" (focusing on and venting emotions), and "I try to get advice from someone about what to do" (instrumental social support). Items are answered on a Likert-type scale with response options that range from 1 (*I usu-*



ally don't do this at all) to 4 (*I usually do this a lot*). Scale scores are obtained by summing across items that correspond to each scale. Carver et al. (1989) reported Cronbach's alpha reliabilities for each scale that ranged from .45 to .92 for the dispositional version. An alternate structure of the COPE was used in the current study to meet the purpose of the investigation.

Greer (2007) examined the factor structure of the COPE by comparing the measure's original structure to an alternate structure that was derived from Africentric psychological theory and research findings on the coping behaviors of African Americans. The scales for the alternate model were created by combining specific COPE subscales together on the basis of culturally relevant theory (Greer, 2007). Specifically, the interconnectedness scale was a composite of three COPE subscales (i.e., venting of emotions, seeking support for emotional reasons, and seeking support for instrumental reasons), spirituality was a combination of four COPE subscales (i.e., planning, religion, restraint, and acceptance), problem-oriented coping was a composite of four COPE subscales (i.e., positive reinterpretation, active coping, suppression of competing activities, and humor), and disengagement was a combination of four COPE subscales (i.e., denial, mental disengagement, behavioral disengagement, and substance use). CFA results revealed that the original COPE structure marginally fit the data, while the alternate, culturally relevant model yielded an overall better fit to data (Greer, 2007). Cronbach's alpha reliabilities were reported as .88 for interconnectedness, .80 for spirituality, .80 for problem-oriented coping, and .74 for disengagement (Greer, 2007). For the current study, Cronbach's alpha reliabilities for interconnectedness, spirituality, problem-oriented coping, and disengagement scales were .87, .74, .77, and .80, respectively.

**Demographic information.** A demographic questionnaire was used to acquire information regarding the participants' age, sex, marital status, employment status, educational class level, self-reported cumulative GPA, and self-reported college entrance exam scores.

## Procedure

Participants from both campuses were recruited from introductory psychology courses and from courses in which African American

students were largely represented (e.g., African American Studies courses). Students received course credit for their participation. Before study participation, students received informed consent and were advised that their participation was voluntary. They were also informed that they could withdraw from the study at any time without the loss of course credit. Measures were administered in paper-pencil format in a psychology laboratory. The average completion time for all measures was 20 min.

## Analytic Strategy

Pearson's  $r$  correlations were conducted to examine relationships between the main study variables. Multivariate analysis of variance (MANOVA) was used to examine differences in scores by type of institution for minority status stress, perceived stress, and coping efforts. Analysis of Variance (ANOVA) was performed to examine significant differences in grade point average by type of institution. Moderated hierarchical regression analyses were conducted to test the role of coping efforts in understanding the relationships between minority status stress, general perceived stress, and academic performance. Before testing hypotheses, continuous predictors were centered to minimize the risk of multicollinearity among the variables (Aiken & West, 1991). The sex variable was dummy coded (men = 0 and women = 1). Employment status was also dummy coded (0 = no and 1 = yes), along with type of institution (0 = HBCU and 1 = PWCU). Age remained a continuous variable. Self-reported college entrance exam scores were comprised of Scholastic Aptitude Test (SAT) scores and American College Testing (ACT) scores. These scores were converted to  $z$  scores before conducting the regression analyses for these scores to be expressed in similar units (Greer & Chwalisz, 2007).

## Results

### Intercorrelations

Correlations for the main study variables are displayed in Table 1. The analyses revealed significant and positive associations between minority status stress, general perceived stress, and disengagement. These findings suggested

Table 1

*Intercorrelations for Minority Status Stress, Coping Strategies, General Perceived Stress, and Academic Performance (N = 202)*

	1	2	3	4	5	6	7
1. Minority Status Stress	—						
2. Interconnectedness	-.13	—					
3. Problem-oriented coping	-.03	.51**	—				
4. Disengagement	.30**	.14*	.22**	—			
5. Spirituality	-.17*	.49**	.70**	-.08	—		
6. General Perceived Stress	.15*	-.05	-.15*	.11	-.05	—	
7. Academic performance	-.21**	.24*	.27**	-.27**	.31**	-.04	—

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

that increased minority status stress was related to an increase in overall levels of stress and avoidant or passive coping efforts. Significant, inverse relationships were found between minority status stress, interconnectedness, and spirituality. These results indicated that these coping efforts decreased as minority status stress increased. Academic performance was also significantly associated with minority status stress. The inverse relationship between these variables suggested that grade point average decreased as minority status stress increased. Correlation analyses further revealed significant, positive relationships among between the coping scales, with the highest correlation observed between spirituality and problem-oriented coping. Lastly, academic performance was significant and positively correlated with all coping efforts, with the exception of disengagement. The inverse relationship between disengagement and academic performance sug-

gested that grade point average decreased as passive and avoidant efforts increased.

### Multivariate Analyses

The results of the MANOVA analyses are displayed in Table 2. The overall  $F$  value for the effect of type of institution on coping efforts was significant,  $F(4, 198) = 3.01, p < .05$ . Follow-up univariate tests revealed significant differences by school for problem-oriented efforts and spirituality. HBCU participants reported higher mean utilization of these efforts than their counterparts at the PWCU. Participants did not significantly differ by school for the use of interconnectedness and disengagement strategies. Regarding minority status stress and general perceived stress, the overall  $F$  value for the MANOVA procedure was significant,  $F(2, 200) = 11.59, p < .001$ . Follow-up

Table 2

*Analysis of Differences in Scores for Minority Status Stress, General Perceived Stress, Coping Efforts, and Academic Performance By Institution (N = 202)*

Measure	PWCU <sup>a</sup> <i>n</i> = 99		HBCU <sup>b</sup> <i>n</i> = 103		<i>F</i> (1, 201)
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Minority Status Stress <sup>c</sup>	60.38	27.52	44.63	18.41	23.01***
General Perceived Stress	26.93	3.62	26.76	6.99	.05
Interconnectedness	27.89	4.12	30.97	7.86	1.07
Problem-oriented coping	37.84	6.17	41.48	6.67	11.87**
Disengagement	36.71	6.88	26.99	6.50	.54
Spirituality	33.08	4.85	39.78	6.51	6.67*
Academic performance <sup>d</sup>	2.49	.54	3.05	.52	11.58***

<sup>a</sup> PWCU = Predominantly White college and University. <sup>b</sup> HBCU = Historically Black College and University. <sup>c</sup> Minority Status Stress Total Score. <sup>d</sup> Self-reported grade point average.

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

univariate tests revealed significant differences by school for minority status stress, with PWCU participants reporting more severe stress appraisals related to minority status than their HBCU counterparts. No significant differences were found between PWCU and HBCU participants for general levels of perceived stress. The ANOVA procedure for differences in academic performance by type of institution is also displayed in Table 2. The results of this procedure revealed significant differences in grade point average. The overall  $F$  value was significant,  $F(1, 201) = 11.58, p < .001$ . HBCU participants reported a higher mean grade point average than participants at the PWCU.

### Moderated Regression Analyses

A power analysis was calculated before conducting the study analyses using *G\*Power 3.1.2* statistical software (Faul, Erdfelder, Buchner, & Lang, 2009). Alpha was set to .05, with an effect size of .35. Power was set to 80%. A sample size of 152 was needed to conduct the study analyses, critical  $F(14, 137) = 1.76$ . Thus, the current study had sufficient power to detect changes in criterion variables.

Type of institution, age, sex, employment status, and college entrance exam scores were included as control variables given previous research that suggests that these variables contribute to overall levels of stress for African Americans (e.g., Williams, Yu, Jackson, & Anderson, 1997). For each step of the regression analyses, background variables were entered first, followed by minority status stress scores on the second step. Coping strategies were entered on the third step, followed by interaction variables on the last step (i.e., Minority Status Stress  $\times$  Interconnectedness, Minority Status Stress  $\times$  Disengagement, Minority Status Stress  $\times$  Spirituality, and Minority Status Stress  $\times$  Problem-oriented Coping).

The results of the hierarchical regression analyses are displayed in Tables 3 and 4. All steps of the regression analyses are depicted; however, the final step reflects the test of study hypotheses. In predicting general levels of perceived stress, study variables accounted for significant increments in  $R^2$  for steps one through four (see Table 3). The overall model, with all variables included, accounted for 25% of variance,  $F(14, 188) = 4.46, p < .001$ . For the final

step, significant main effects were found for age and minority status stress. Minority status stress was the strongest predictor of this outcome, followed by problem-oriented coping. The significant effects of minority status stress and problem-oriented coping were explained by the significant interaction for these variables. The plot of the interaction between minority status stress and problem-oriented coping is depicted in Figure 1. The interaction was plotted at high (+1  $SD$ ), low (-1  $SD$ ), and mean (0  $SD$ ) levels of problem-focused efforts. The effect of minority status stress on perceived stress was greater for participants who engaged in high problem-focused strategies compared to those at mean and low levels of problem-focused efforts. In particular, the effect of minority status stress on perceived stress increased as problem-focused efforts increased. A similar pattern was observed at mean levels of problem-focused efforts. Increases in minority status stress were related to slightly lower levels of perceived stress for participants who engaged in low levels of problem-focused coping. Simple slope analyses (Aiken & West, 1991) were conducted to further explore significant interaction effects. The results revealed that the slope for high problem-focused coping was statistically significant from zero ( $\beta = .09, t(199) = 3.39, p = .00$ ), and was higher than the slope for mean problem-focused coping, which was also significantly different from zero ( $\beta = .04, t(199) = 2.51, p = .01$ ). The slope for low problem-focused efforts was not significant ( $\beta = -.00, t(199) = -.14, p = .89$ ). These results suggested that the effects of minority status stress on perceived stress were greater for persons who engaged in higher levels of problem-focused efforts, and that no effect was present for persons who engaged in low problem-focused efforts.

In addition, the final step of the analyses revealed a significant effect for the interaction between minority status stress and disengagement (see Figure 2). The interaction was plotted at high (+1  $SD$ ), mean (0  $SD$ ), and low (-1  $SD$ ) levels of disengagement. As depicted in Figure 2, increased minority status stress was associated with decreased perceived stress for participants who engaged in high, mean, and low levels of disengagement. Simple slope analyses (Aiken & West, 1991) revealed that the effect of disengagement efforts was statistically signifi-

Table 3

*Moderated Regression Analyses Predicting Perceived Stress From Background Variables, Minority Status Stress, and Coping Strategies (N = 202)*

Step	Variables	B	SE B	$\beta$	R <sup>2</sup>	$\Delta R^2$
		Perceived stress				
1	Institution	.58	.96	.05	.09**	
	Age	-.30	.09	-.24**		
	Sex	.37	.82	.08		
	Employment	-1.42	.82	-.12*		
	Entrance scores	-.00	.00	-.11		
2	Institution	1.03	.97	.09	.11**	.02
	Age	-.30	.09	-.24**		
	Sex	1.26	.82	.11		
	Employment	.30	.81	-.11		
	Entrance scores	-.00	.00	-.09		
	Minority Status Stress	.04	.02	.17*		
3	Institution	.82	.21	.25*	.17**	.06
	Age	-.24	.09	-.19**		
	Sex	1.56	.82	.13		
	Employment	-1.08	.80	-.09		
	Entrance scores	.00	.01	-.05		
	Minority Status Stress	.04	.02	.16*		
	Interconnectedness	-.04	.07	-.04		
	Problem-oriented	-.24	.09	-.29**		
	Disengagement	.18	.07	.26**		
	Spirituality	.09	.09	.11		
4	Institution	.20	.25	.11	.25***	.08
	Age	-.22	.08	-.17*		
	Sex	-.14	.79	.09		
	Employment	-.14	.77	-.10		
	Entrance scores	.00	.00	.11		
	Minority Status Stress	.07	.02	.31***		
	Interconnectedness	.02	.07	.02		
	Problem-oriented	-.17	.08	-.21*		
	Disengagement	.09	.07	.14		
	Spirituality	.06	.08	.07		
	Minority Status Stress $\times$ interconnectedness	-.00	.00	-.03		
	Minority Status Stress $\times$ problem-oriented	.01	.00	.22*		
	Minority Status Stress $\times$ disengagement	-.01	.01	-.26**		
	Minority Status Stress $\times$ spirituality	.00	.01	.12		

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

cant from zero at high levels ( $\beta = .21$ ),  $t(199) = 3.55$ ,  $p = .00$ , and at low levels, ( $\beta = .18$ ),  $t(199) = 2.44$ ,  $p = .01$ . The slope for low disengagement efforts was not significant ( $\beta = .07$ ),  $t = -.31$ ,  $p = .75$ . Overall, these results suggested that the influence of minority status stress on perceived stress decreased at high and mean levels of disengagement.

In predicting academic performance, study variables accounted for significant variance in steps one through four (see Table 4). The overall model, with all variables included, accounted for 28% of variance in academic performance,  $F(14, 188) = 5.26$ ,  $p < .001$ . Regres-

sion analyses revealed that type of institution was the only significant predictor of this outcome. The direction of the effect for institution suggested that HBCU students possessed higher grade point averages than PWCU students. No significant main effects were observed for minority status stress in predicting academic performance, nor were significant interactions found for this outcome.

## Discussion

The current study extends the results of previous investigations by providing evidence of



Table 4

*Moderated Regression Analyses Predicting Perceived Stress From Background Variables, Minority Status Stress, and Coping Strategies (N = 202)*

Step	Variables	B	SE B	$\beta$	R <sup>2</sup>	$\Delta R^2$
Academic performance						
1	Institution	.56	.09	-.47***	.25***	
	Age	.01	.01	.07		
	Sex	.15	.08	.12		
	Employment	.06	.08	.04		
	Entrance scores	.43	.00	-.00		
2	Institution	.54	.09	-.46***	.25***	.00
	Age	.01	.01	.07		
	Sex	.14	.08	.11		
	Employment	.05	.00	.04		
	Entrance scores	.40	.01	-.01		
3	Minority Status Stress	-.00	.00	-.05	.28***	.03
	Institution	.45	.12	-.38***		
	Age	.01	.01	.04		
	Sex	.12	.08	.09		
	Employment	.05	.08	.04		
	Entrance scores	.37	.00	-.03		
	Minority Status Stress	-.00	.01	-.06		
	Interconnectedness	.01	.00	.08		
	Problem-oriented	.02	.01	.18		
	Disengagement	-.01	.00	-.08		
Spirituality	-.00	.01	-.05			
4	Institution	.51	.36	-.43***	.28***	.00
	Age	.01	.13	.04		
	Sex	.13	.01	.10		
	Employment	.05	.08	.04		
	Entrance scores	.36	.08	-.09		
	Minority Status Stress	-.00	.00	-.08		
	Interconnectedness	.01	.01	.08		
	Problem-oriented	.02	.01	.17		
	Disengagement	-.01	.01	-.07		
	Spirituality	-.00	.01	-.04		
	Minority Status Stress $\times$ interconnectedness	.00	.02	.08		
	Minority Status Stress $\times$ problem-oriented	-.06	.00	-.02		
	Minority Status Stress $\times$ disengagement	.07	.03	.00		
Minority Status Stress $\times$ spirituality	.00	.00	-.10			

\*\*\*  $p < .001$ .

the moderating role of coping efforts in understanding the effect of minority status stress on academic performance and overall levels of stress for African American students at both types of institutions. The results of this investigation also extend the findings previously reported by Greer and Chwalisz (2007) in which the authors found null results for the influence of coping efforts in their test of the relationships between minority status stress, general perceived stress, and academic performance. A strength of the current investigation was the use of a culturally relevant structure of the COPE

inventory offered by Greer (2007), which also served to address a major limitation noted by Greer and Chwalisz (2007) in their study.

Multivariate analyses revealed significant differences by school for minority status stress, with students at the PWCU reporting higher mean levels of minority status stress than their HBCU counterparts. This finding is consistent with previous investigations regarding frequent and distressing exposure to race-related incidents for African American students at PWCUs (e.g., Feagin, Vera, & Imani, 1996; Fries-Britt & Turner, 2001; Greer & Chwalisz, 2007). Stu-

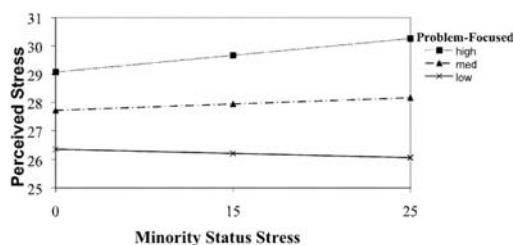


Figure 1. Plotted interaction between problem-oriented efforts and minority status stress for general perceived stress.

dents at the HBCU reported moderate levels of minority status stress. This result supports the findings reported by Greer (2008), and provides further evidence that African American students at HBCUs also experience difficulties associated with their race and ethnicity on campus. There were no significant differences by institution for overall levels of perceived stress. Multivariate analyses further revealed that students from both campuses did not significantly differ in their use of interconnectedness and disengagement. PWCUs students engaged in significantly higher use of problem-oriented coping and spirituality than students at the HBCU. However, the results of the current study suggest some similarities in coping strategies for students at both campuses, despite previous findings of differences in the use of coping efforts by type of institution (e.g., Allen, 1992; Fleming, 1984). Additional research investigations are needed to pinpoint further similarities and differences in coping efforts for African American students attending PWCUs and HBCUs.

In testing study hypotheses, regression analyses revealed that institutional type was the strongest predictor of academic performance. Minority status stress was not a significant predictor of academic performance, nor were significant interactions found in predicting this outcome. These findings were inconsistent with those reported in previous investigations (Greer & Chwalisz, 2007; Prillerman et al., 1989) and suggested that HBCU campuses may foster nurturing environments that lead to academic achievement, as has been discussed in previous literature (Allen, 1992; Greer, 2008). In predicting overall levels of perceived stress, main effects were observed for minority status stress,

age, and problem-focused efforts on the final step of the analyses; however, interaction effects were also revealed on this step. Specifically, a significant interaction was found for minority status stress and problem-oriented coping in predicting general levels of perceived stress. This finding was inconsistent with study hypotheses, and suggested that higher use of problem-oriented efforts to address minority status stressors increased overall levels of stress as opposed to alleviating stress. Minority status stressors generally entail difficulties that are persistent and pervasive (e.g., racial discrimination, intragroup challenges) and are likely to be perceived as beyond one's ability to control. Existing stress models suggest that persons often rely on emotion-focused strategies when faced with incidents that are perceived as uncontrollable (e.g., Lazarus & Folkman, 1984). However, findings in the current study were inconsistent with these models, and suggest that African American students who increase their efforts to master racial and ethnic-related challenges within their campus environments may be at considerable risk for high levels of stress and other adverse psychological consequences.

An additional unexpected finding was the direction of the interaction between minority status stress and disengagement efforts. This finding suggested that the effects of minority status stress on perceived stress decreased at higher levels of disengagement. The disengagement scale assessed efforts that generally included mental and behavioral attempts to deny the existence of the stressor, and efforts to distract one from thinking of the stressor (e.g., sleeping, daydreaming, immersion in TV viewing). Alcohol and substance use were also

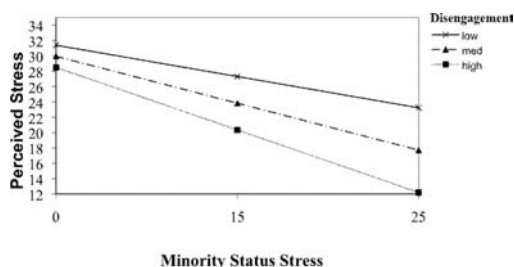


Figure 2. Plotted interaction between disengagement efforts and minority status stress for general perceived stress.

among the behaviors that were assessed as forms of disengagement. Previous literature has suggested that African American students who initially avoid or downplay race-related issues during their first year of college yield better overall psychological outcomes (Prillerman et al., 1989). The results of the current study support this finding and suggests that African American students who do not mentally or emotionally attend to minority status stressors experience less stress overall.

The extant literature on stress and coping indicate some benefit to initial attempts to withdraw or minimize a stressor, as these responses can reduce stress while simultaneously enabling one to resume daily functions and activities (e.g., Carver et al., 1989; Lazarus & Folkman, 1984). However, denial strategies are effective only if the stressor can be ignored in ways that do not lead to distress or other adverse mental health consequences (Carver et al., 1989). Racial and ethnic stressors often occur daily on college campuses, and are likely difficult for students to effectively ignore or minimize. As such, there are potential long-term mental health consequences of denial strategies. Future research should include longitudinal investigations to determine the beneficial and detrimental psychological effects of African American students' use of disengagement efforts to cope with racial and ethnic-related stressors in college.

## Implications

The overall findings of this study suggest that improvements in racial climate and race-relations are needed on college campuses. If African American students experience increased stress in their attempts to resolve race-related difficulties on campus, then interventions that target overall campus environments may alleviate the burden of stress for African American students and other students of color. In particular, student affairs and other administrative entities should engage in active efforts to increase awareness regarding cultural and diversity-related issues among students, faculty, and staff. Diversity awareness programs have been advocated as effective ways to address cultural conflict and to improve racial and ethnic relations in college. Some evidence suggests that requiring students to enroll in diversity education courses helps to promote prejudice reduc-

tion and enhances cultural awareness among college students (Hogan & Mallot, 2005). However, additional effort is needed to evaluate the effectiveness of diversity training programs, particularly in light of concerns that the content of such programs may foster feelings of exclusion rather than inclusion among members of culturally diverse groups (Stewart, Crary, & Humberd, 2008). The content of diversity education programs should incorporate activities that address emotional components of racial biases and prejudice to facilitate self-awareness regarding internalized biases toward various cultural groups (Hogan & Mallot, 2005). In addition, these programs should emphasize both cross-cultural and multicultural issues to promote an understanding of how cultural factors generally influence behaviors along with an understanding of unique societal realities that are experienced by members of racial and ethnic minority groups. Furthermore, student affairs and administrative personnel should disseminate information in academic journals to promote an awareness among campuses across the nation regarding best practices in reducing prejudice and stereotypes on college campuses (Greer & Chwalisz, 2007).

The findings of this investigation hold further implications for mental health professionals in their work with African American college students. The results of the current study suggest that denial and avoidant strategies may be effective in reducing levels of stress, and may be an initial strategy to manage emotional responses related to racial and ethnic-related challenges. Some scholars have noted that therapists can help African American students form an understanding of the history and pervasiveness of discrimination in society, the sociopolitical context of discrimination, and the institutional processes involved in maintaining and reinforcing discriminatory behaviors as ways to help manage race-related stressors (e.g., Constantine & Greer, 2003). This process is empowering and helps to alleviate feelings of personal responsibility for discrimination experiences. Overall, college counselors should work collaboratively with African American students to explore ways to handle minority-related stressors that lead to improved psychological health and well-being.

## Limitations

A number of limitations should be noted for this investigation. First, a cross-sectional design was used in this study; therefore, longitudinal effects of minority status stress on perceived stress and academic performance could not be examined. The longitudinal effects of coping strategies also could not be explored. In addition, the participants for this study were recruited from the Midwest and Eastern regions of the United States. It is possible that African American students from other geographic locations encounter college experiences that differ from the students in the current study. Future research investigations should include African American students from several geographic locations to determine whether similar results would be found. Lastly, the majority of the participants were African American women. Thus, the findings may be not fully applicable to African American male college students. Future studies should include larger numbers of African American men to acquire a more accurate understanding of their college experiences.

## Conclusion

African American college students are faced with a number of stressors within their college environments that influence their overall psychological well-being and academic progress. The findings of the current study emphasize coping efforts as important factors that influence general levels of stress for students attending PWCUs and HBCUs. Future research endeavors should continue to pinpoint the influence of coping efforts on psychological health and academic achievement for African American students.

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