

# An Exploratory Examination of the Associations Among Racial and Ethnic Discrimination, Racial Climate, and Trauma-Related Symptoms in a College Student Population

Alex L. Pieterse  
University at Albany, State University of New York

Robert T. Carter  
Teachers College, Columbia University

Sarah A. Evans and Rebecca A. Walter  
George Mason University

In this study, we examined the association among perceptions of racial and/or ethnic discrimination, racial climate, and trauma-related symptoms among 289 racially diverse college undergraduates. Study measures included the Perceived Stress Scale, the Perceived Ethnic Discrimination Questionnaire, the Posttraumatic Stress Disorder Checklist—Civilian Version, and the Racial Climate Scale. Results of a multivariate analysis of variance (MANOVA) indicated that Asian and Black students reported more frequent experiences of discrimination than did White students. Additionally, the MANOVA indicated that Black students perceived the campus racial climate as being more negative than did White and Asian students. A hierarchical regression analysis showed that when controlling for generic life stress, perceptions of discrimination contributed an additional 10% of variance in trauma-related symptoms for Black students, and racial climate contributed an additional 7% of variance in trauma symptoms for Asian students.

*Keywords:* college population, trauma symptoms, racial and/or ethnic discrimination

It is now generally accepted that experiences of discrimination based on race and ethnicity tend to be positively associated with negative psychological outcomes, such as anxiety, depression, emotional reactivity, and lowered self-esteem (Carter, 2007; Mossakowski, 2003; Williams, Neighbors, & Jackson, 2003). However, the extent to which psychological reactions to racial and ethnic discrimination might be associated with the symptoms characteristic of traumatic stress or posttraumatic stress disorder (PTSD) remains unclear. Given the well-documented history of racial oppression and ethnic discrimination in the United States (Feagin, 2001; Marger, 2008), some have argued that people of non-European descent, from here on referred to as *people of color*, might have higher levels and more frequent experiences of stress that could lead to traumatic stress reactions (Allen, 1996; Butts,

2002; Carter, 2007). Indeed, studies have documented higher rates of PTSD among Asian American, African American, and Native American Vietnam veterans (Norris, Friedman, Watson, Byrne, et al., 2002), as well as higher rates of PTSD in non-White civilian populations in the aftermath of natural disasters, such as Hurricane Andrew (Norris, 1992). Therefore, in the current investigation, we sought to examine the associations among racial and/or ethnic discrimination, racial climate, and trauma-related symptoms. In particular, in the study, we focused on whether perceptions of racial and/or ethnic discrimination and negative racial climate were associated with trauma-related symptoms in a college-aged population not necessarily exposed to a specific traumatic event. Whereas the suggestion that racial and/or ethnic discrimination could be viewed as a type of trauma has received increasing theoretical consideration, empirical examinations of this hypothesis in a racially diverse population not exposed to a specific traumatic event are lacking.

---

Alex L. Pieterse, Division of Counseling Psychology, University at Albany, State University of New York; Robert T. Carter, Department of Counseling and Clinical Psychology, Teachers College, Columbia University; Sarah A. Evans, Graduate School of Education, George Mason University; Rebecca A. Walter, Multicultural Research and Resource Center, George Mason University.

The research presented in this article was supported by a Loan Repayment Grant received by Alex L. Pieterse from the National Center on Minority Health and Health Disparities, National Institutes of Health. We would like to express our gratitude to the research participants.

Correspondence concerning this article should be addressed to Alex L. Pieterse, Division of Counseling Psychology, University at Albany, State University of New York, ED 220, 1400 Washington Avenue, Albany, NY 12203. E-mail: [apieterse@albany.edu](mailto:apieterse@albany.edu)

## Assessment of Racial and/or Ethnic Discrimination

The viewpoint that discrimination based on racial and/or ethnic group membership can be considered a specific type of life stressor has received much conceptual and empirical attention over the past few decades (see Contrada et al., 2000; Harrell, 2000; Landrine, Klonoff, Corral, Fernandez, & Roesch, 2006). The advent of instruments designed to assess the experience of racial and ethnic discrimination has resulted in a robust body of research focusing on the association between perceived racial and/or ethnic (terms used interchangeably) discrimination and varied aspects of psychological functioning (Landrine et al., 2006; Utsey, 1998; Wil-

liams & Mohammed, 2009). Research with racial discrimination questionnaires has yielded the same findings as research with ethnic discrimination questionnaires. In general findings indicate that experiences of discrimination are perceived as stressful and tend to be positively associated with psychological distress usually characterized by depression and anxiety (Carter, 2007; Cassidy, O'Conner, Howe, & Warden, 2004; Paradies, 2006; Williams et al., 2003; Williams & Mohammed, 2009). Although discrimination-related questionnaires were initially developed for use on Black Americans (Utsey, 1998), recently, measures such as the General Ethnic Discrimination Scale (Landrine et al., 2006) and the Perceived Ethnic Discrimination Questionnaire (PEDQ, Contrada et al., 2001) have been developed to apply to all racial and ethnic groups.

Research with measures of racial and/or ethnic discrimination consistently indicates that people of color endorse more frequent experiences of discrimination than do White populations. Sanders-Thompson (1996), using a racially diverse community sample, reported more frequent experiences of racial discrimination among non-White participants and higher levels of stress associated with these experiences. Brondolo, Kelly, et al. (2005), in a validation study of the PEDQ-Community measure, found that individuals reporting non-European racial or ethnic group heritage perceived more frequent experiences of discrimination based on their ethnic group membership. Carter, Forsyth, Mazzula, and Williams (2005) also examined self-reported experiences of racial discrimination in a racially diverse sample and found that Black and Latino respondents reported a significantly higher frequency of racial discrimination experiences than did biracial, Asian, or White participants. These findings suggest that racial and/or ethnic discrimination continues to affect the lives of people of color within American society. Although investigations of discrimination in the United States and internationally have primarily been focused on people of color, studies that include White people reveal that White people also endorse experiencing racial discrimination. However, the findings indicate that for White people, neither the frequency of discrimination nor the stress associated with discrimination match those reported by people of color (Brondolo, Kelly, et al., 2005; Richman, Kohn-Wood, & Williams, 2007; Turner & Avision, 2003; Williams et al., 2008).

### Racial and/or Ethnic Discrimination and Psychological Outcomes

The development of conceptual models identifying racism and racial and/or ethnic discrimination as psychological stressors (Carter, 2007; Clark, Anderson, Clark, & Williams, 1999; Contrada et al., 2000; Harrell, 2000) has also provided useful frameworks in which to examine and understand the complex association between experiences of racial and/or ethnic discrimination and psychological stress. The models collectively articulate an interactive process whereby an individual perceives events to be both reflective of discrimination and stress inducing. The extent to which the stress might be associated with psychological distress depends on a combination of individual-level and environmental factors (Clark et al., 1999). Although racial and/or ethnic discrimination or racism is thought to occur in various domains—individual, institutional, and cultural (see Jones, 1997)—the assessment of racial and/or ethnic discrimination in the current

literature focuses largely on individual experiences or individual perceptions of racial and/or ethnic discrimination and hostility, usually in interpersonal interactions.

Although race-related stress models have historically been based on the African American experience, models and empirical examinations of race-related stress and ethnic discrimination have now been extended to other populations, such as Asian Americans (Alvarez, Juang, & Liang, 2006). Recent investigations of discrimination have also focused on ethnic group membership as a potential source of stress (Cassidy et al., 2004; Landrine et al., 2006; Mossakowski, 2003).

An important discussion that has emerged from the race-related stress literature is the extent to which experiences of discrimination and racism can be viewed within the rubric of trauma (Carter, 2007; Ford, 2008). A decade ago, Sanchez-Hucles (1999) proposed that traditional conceptions of PTSD be enlarged to include aspects of trauma associated with racial and/or ethnic discrimination and oppression. The call to consider racial and/or ethnic discrimination as an etiological factor in traumatic symptoms or traumatic stress reactions challenges the somewhat narrow criteria for PTSD, as described in the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed., text rev.; *DSM-IV-TR*; American Psychiatric Association, 2000). In discussions of race and ethnicity as sources of psychological trauma, scholars have emphasized the need to understand that trauma associated with racial and/or ethnic discrimination can be viewed as cumulative in nature. To illustrate, Walters and Simonie (2002) and Shepard, O'Neill, and Guenette (2006) have argued that one cannot fully appreciate or effectively respond to the psychosocial needs of Native American women without recognizing the ongoing intergenerational trauma associated with loss of land, identity, and rights. In reference to people of African descent, scholars have also highlighted the need to take into account both current experiences of discrimination and historical legacies (e.g., slavery, colonization) on which those experiences are built, to gain an accurate understanding of the psychological responses to racial and ethnic discrimination (Bryant-Davis, 2007; Bulhan, 1985). Franklin and Boyd-Franklin's (2000) description of racial discrimination as a type of invisibility provides a useful illustration of the cumulative and recurring nature of discrimination and racism as experienced by Black men. According to these authors, the psychological response to discrimination and/or racism is predicated on numerous prior experiences of discrimination. As a coping strategy, some Black men have developed a sense of vigilance and therefore tend to consistently anticipate discrimination or racial hostility. Additionally, psychological reactivity (e.g., anger, hostility) displayed by some Black men could be viewed as a type of defense in response to, or in anticipation of, racial discrimination. The range of psychological responses noted by Franklin and Boyd-Franklin appear to be consistent with the common responses to trauma, including avoidance, identity confusion, difficulties in interpersonal relationships, and feelings of guilt and shame, as documented by Carlson (1997).

Though the focus of racial and/or ethnic discrimination is predominantly on experiences of interpersonal discrimination, the fact that an individual belongs to a racial and/or ethnic group that has been historically oppressed might also shape the manner in which individuals experience their environment. In this regard, the concept of racial climate has received increasing attention in the social science literature. Racial climate is thought to refer to the behav-

iors, practices, and attitudes that together reflect the level of acceptance or rejection of racial diversity in a given institution and therefore tend to influence the manner in which people may interact (Chavous, 2005; Reid & Radhakrishnan, 2003; Solórzano, Ceja, & Yosso, 2000). Research focusing on racial climate at college campuses has indicated that perceptions of racial climate often differ across racial and ethnic lines. Findings generally indicate that White students are more likely to perceive the racial climate as positive, whereas students of color are more likely to perceive the racial climate as negative (see Ancis, Sedlacek, & Mohr, 2000; Navarro, Worthington, Hart, & Khairallah, 2009). Additionally, research suggests that perceptions of racial climate on college campuses may be associated with persistence and degree completion (Museus, Nichols, & Lambert, 2008) and with sense of belonging (Johnson et al., 2007). Specifically, studies with students of color have found that negative perceptions of the campus racial climate are positively associated with poorer academic performance and are predictive of feelings of not belonging (Chavous, 2005). Finally, Holcomb-McCoy and Addison-Bradley (2005) surveyed a sample of African American counselor educators and found that a negative perception of racial climate was inversely related to job satisfaction. The literature therefore suggests that racial climate is a variable that might also be associated with self-reported psychological functioning. To illustrate, regardless of direct experiences of personal discrimination, people of color may perceive the environment in which they live or work as being racially negative or hostile. In turn, this perception could be associated with psychological distress, as evidenced by trauma-related symptoms.

Even though conceptual perspectives outline a potential association between racial discrimination and trauma-related symptoms, empirical support for this association has yet to be established (Carter, 2007). However, some studies do suggest that individuals of European and non-European racial and/or ethnic heritage might differ in how they express trauma-related symptoms. In an investigation of a nonclinical community sample of 617 African American adults living in an urban area, Alim et al. (2006) reported a 33% rate of individuals meeting criteria for PTSD. Whereas the authors attributed this finding to the particular environmental stressors encountered by their sample, authors of other studies have found rates of PTSD to be higher in samples of Black participants when compared with equivalent samples of White participants (Breslau et al., 1998). Trauma researchers have speculated that the higher rates of PTSD among populations of color could possibly be explained by prior experiences of prejudice and social neglect (Norris, Friedman, & Watson, 2002). Additionally, studies by Loo et al. (2003) and Ruef, Litz, and Schlenger (2000) suggest that racial and ethnic background could be associated with higher rates of PTSD in Asian and Hispanic combat veterans. Recently, Khaylis, Waelde, and Brice (2008) investigated the moderating influence of ethnic identity on race-related stress and PTSD symptoms in a multiracial sample of 91 undergraduate students. Their findings suggested that a strong ethnic identity was associated with higher levels of PTSD symptoms in association with race-related stress. However, given the fact that the data were analyzed as a single group, the role of racial and ethnic background was unclear.

In sum, although the actual constituents of psychological trauma in response to racial and/or ethnic discrimination remain unclear,

there is a general agreement that experiences of racial and ethnic discrimination have a deleterious psychological effect on their targets (Paradies, 2006; Williams & Mohammed, 2009). Consequently, scholars have suggested that the psychological response to racial and/or ethnic discrimination might not be fully captured by current approaches to understanding the impact of stressful life events (Carter, 2007). Specifically, existing models of trauma do not account for the recurring nature of racial and/or ethnic discrimination and might also be limited by the focus on a single traumatic event (Bryant-Davis, 2007; Sanchez-Hucles, 1999).

### Purpose of Study and Research Questions

Although current criteria for traumatic symptoms exclude general experiences of racial and/or ethnic discrimination, the notion of a positive association between trauma-related symptoms and racial and/or ethnic discrimination is plausible. Therefore, in the current investigation, we examined the associations among perceptions of racial and/or ethnic discrimination, racial climate, and trauma-related symptoms in a sample of racially diverse college students. Our primary research question focused on whether racial and/or ethnic discrimination would be predictive of trauma-related symptoms. Given the nature of race relations in the United States, we believed it was important, first, to establish whether perceptions of discrimination differed across racial and/or ethnic groups and, second, to examine whether negative racial and/or ethnic experiences were, in fact, associated with trauma symptoms. We expected students of color to report more frequent experiences of racial and/or ethnic discrimination than the White students did. We also expected that for students of color, perceived racial and/or ethnic discrimination and negative racial climate would be positively associated with trauma-related symptoms.

### Method

#### Participants

The participants in the study were 289 undergraduate students enrolled at a large state institution in the mid-Atlantic region of the United States. Participants' ages ranged from 18 years to 53 years ( $M = 20.06$ ,  $SD = 4.41$ ). In terms of self-reported racial group membership, 170 students (55%) identified as White and/or European American, 47 identified (15%) as Black and/or African American, and 71 identified (23%) as Asian and/or Asian American. There were 114 male (39%) and 173 female (61%) students. For socioeconomic status, 41 participants (14%) self-reported as working class, 203 (70%) self-reported as middle class, and 43 (15%) self-reported as upper class. According to standing in college, participants were divided into 165 (57%) freshmen, 65 (23%) sophomores, 27 (9%) juniors, and 26 (9%) seniors. Students were predominantly Christian (65%); among the rest, 7% were Muslim, 4% were Buddhist, 8% were nonreligious, and 13% did not specify a religion. Due to the self-report nature of the data, the study group reported 37 ethnicities and nationalities, with total participants for the individual ethnic groups ranging from 1 (e.g., Lebanese) to 50 (Irish). Examples of other ethnic groups listed were Italian, Vietnamese, Bolivian, Ethiopian, German, Sudanese, Jamaican, and Filipino; however, 76 participants failed to respond to this category. Ethnic group data were consistent with racial group mem-

bership in that White participants reported a European-based ethnicity, and the next largest cohort were students reporting an Asian-based ethnicity (Vietnamese, Chinese, Korean, etc.).

## Measures

**The Perceived Stress Scale–10 (PSS; Cohen, Kamarck, & Mermelstein, 1983; Cohen & Williamson, 1988).** The 10-item single score version of the PSS was used to assess the degree to which individuals perceive their lives as stressful, with higher scores reflecting higher perceptions of life stress. Psychometric data reported by Cohen and Williamson (1998) indicated Cronbach's alpha values from .74 for the 14-item version and .78 for the 10-item version. Cohen and Williamson have suggested that the 10-item version be used due to improvements in factor structure and internal consistency. For the current samples, Cronbach's alpha reliability coefficients were as follows: .84 for Asian and/or Asian American students, .87 for White and/or European American students, and .87 for Black and/or African American students. Evidence for construct validity with college samples has been noted by studies revealing significant positive associations among scores on the PSS, variables such as depression and lower levels of self-esteem, and four Symptom Checklist–90 (SCL-90) subscales—Somatization, Obsessive Compulsive, Depression, and Paranoid Ideation (Chambers et al., 1998).

**The Posttraumatic Stress Disorder Checklist—Civilian Version (PCL-C; Weathers, Litz, Herman, Juska, & Keane, 1993).** The PCL-C is a 17-item self-report measure designed to assess the presence of various stress-related symptoms that are associated with diagnostic criteria for PTSD, as outlined in the *DSM*. Respondents are asked to rate the extent to which they have experienced various stress-related problems over the past month. The response scale ranges from 1 (*not at all*) to 5 (*extremely*). The measure derives a single score by summing the responses to all 17 items. Note that the items only assess psychological symptoms and do not focus on other criteria, such as being exposed to a life-threatening event. The PCL-C has been used in a wide range of studies exploring trauma in varying contexts, such as the experience of cancer, natural disasters, and other disasters (Murphy, Wismar, & Freeman, 2004; Smith, Redd, DuHamel, Vickberg, & Ricketts, 1999). Providing a single score, the PCL-C is designed to capture experiences of hyperarousal and, to a lesser degree, emotional numbing (Weathers et al., 1999). The checklist's authors reported a reliability coefficient of .97 in their initial study. For the current sample, reliability with Cronbach's alpha was calculated to be .91 for Asian and/or Asian American students, .93 for White and/or European American students, and .88 for Black and/or African American students. The findings are consistent with other studies with the PCL-C in college-aged populations. Ruggiero, Ben, Scotti, and Rabalais (2003) examined the psychometric properties of the PCL-C in a multiracial sample of 392 college undergraduates. Findings indicated a Cronbach's alpha for the total score of .93. Validity for the PCL-C has been established by strong and positive correlations between scores on the PCL-C and scores on the Impact of Events Scale and the Mississippi PTSD scale (Ruggiero et al., 2003; Weathers et al., 1999).

**The PEDQ (Contrada et al., 2001).** The PEDQ is a 22-item self-report measure designed to assess the frequency of various acts of ethnic discrimination. Although the measure references

ethnic discrimination, initial construction of the measure involved analysis undertaken according to racial groupings. The terminology used in the PEDQ, therefore, is consistent with the manner in which race and ethnicity are used interchangeably in the discrimination-related literature (see Brondolo, Thompson, et al., 2005; Landrine et al., 2006; Williams et al., 2003). Participants are asked to reflect on the previous 3 months and indicate how often certain events have occurred, such as being called a name that is an ethnic slur or receiving unfair treatment based on their ethnicity. Examples of the items are "How often have you been subjected to nonverbal harassment because of your ethnicity?" "How often have you been exposed to offensive comments because of your ethnic group?" and "How often have you received unfair treatment from service people (e.g., waiters, bank tellers, security guards) because of your ethnicity?" Participants respond using a fully anchored response format, with 1 equal to *never* and 7 equal to *very often*. The PEDQ comprises four subscales—Disvaluation, Avoidance, Verbal Rejection, and Threat Aggression—as well as a full-scale score. Scores are derived by summing the responses to the individual items such that higher scores represent more of the experience being measured. The PEDQ was initially developed on an undergraduate population and was constructed for use across all racial and/or ethnic groups. The authors reported reliability for the four subscales ranging from .74 (Avoidance) to .84 (Disvaluation). For the current investigation, the full-scale score was used, in view of the high correlations between the subscales. The reliability coefficient with Cronbach's alpha was calculated at .92 for the Asian and/or Asian American students, .79 for the White/European American students, and .86 for the Black and/or African American students. In a community version of the PEDQ, reliability for the full-scale score was calculated at .89 (Brondolo, Thompson, et al., 2005). Evidence for construct validity has been provided through inverse correlations with measures of psychological well-being and positive correlations with other measures of discrimination and prejudice, such as the stereotype confirmation concern (Broudy et al., 2007; Contrada et al., 2001).

**The Racial Climate Scale (RCS; Reid & Radhakrishnan, 2003).** The RCS is an eight-item self-report measure that assesses perceptions of racial climate on college campuses. The measure was initially constructed on an undergraduate and graduate college population; the measure comprises two subscales. The subscales include Racial Experiences (RE), a five-item scale that assesses the extent to which students view the racial climate as negative, and University Perceptions, a three-item scale assessing the extent to which students view the university environment as welcoming to people of all racial groups. The authors of the scale reported reliability coefficients of .70 for RE and .74 for University Perceptions in an undergraduate population. In the current investigation, we used the RE subscale. Participants were asked to respond to statements such as "This campus is more racist than most," using a 5-point full-response scale ranging from 1, meaning *strongly disagree*, to 5, meaning *strongly agree*. Reliability coefficients as calculated by Cronbach's alpha were .81 for Asian students, .76 for White students, and .66 for Black students. Validity of the RCS has been established through positive associations with a general campus climate scale as well as significant racial group differences on the measure, with White students reporting fewer negative racial experiences than did students of color (Reid & Radhakrishnan, 2003).

**Procedure**

After obtaining approval from the institutional review board, the researchers compiled a packet that included a cover letter, a consent form, and all survey instruments. Participants were instructed that they would be part of a research study examining discrimination and stress. Participation in the project allowed students to fulfill a research requirement associated with their program; however, they could participate in a range of other research projects instead, and participants were instructed that there was no penalty associated with either not participating or not completing the survey. All participants were drawn from the Department of Communication. Upon completion of the survey, students were given a debriefing form providing additional information on the purpose of the investigation. They were also directed to the college counseling center for additional support and referral in case they experienced any discomfort as a result of completing the survey.

**Results**

An initial review of the data indicated that for the White and Asian groups, the PEDQ and PCL-C were significantly and positively skewed. Therefore, to proceed with parametric analysis, all outliers (values greater than 3 standard deviations from the mean) were deleted, resulting in the removal of 6 participants from the original participant pool. Subsequently, the data more closely fit a normal distribution while retaining a small positive skew.

**Preliminary Analysis**

To examine racial group differences in mean scores on all the study variables (PSS, PCL-C, PEDQ, and RE), we conducted a one-way MANOVA (see Table 1). The full model was significant as assessed with Wilkes' lambda (.71,  $p < .000$ ). Test of between-subjects effects indicated that the groups differed on perceived discrimination (PEDQ),  $F(2, 283) = 49.70, p < .01, \eta^2 = .26$ , and racial climate (RE),  $F(2, 283) = 49.70, p = .010, \eta^2 = .03$ . Follow-up Tukey's honestly significant difference comparisons for perceived discrimination mean scores differed significantly across all racial groups, with Black students reporting higher levels of discrimination ( $M = 35.02$ ) than did White students ( $M = 21.05$ ) and Asian students ( $M = 26.31$ ). Asian students reported higher levels of discrimination than did White students and lower levels

than did Black students. White students reported the lowest levels of discrimination, in comparison with both Asian students and Black students. All comparisons were statistically significant at  $p < .001$ . For the racial climate comparisons, Black students perceived the racial climate as more negative ( $M = 8.97, p = .007$ ) than did White students ( $M = 7.42$ ) and Asian students ( $M = 7.64$ ). There were no other significant differences on racial climate.

**Primary Research Question**

To examine whether racial and/or ethnic discrimination was predictive of trauma-related symptoms, we ran two separate hierarchical regression analyses (see Table 2). Scores on the PCL-C served as the criterion variable, with scores on the PSS, PEDQ, and RE serving as the predictor variables. Given that we were interested in examining the unique variance in trauma symptoms over and above that accounted for by general stress, we included the PSS in the analysis. Subsequently, the variables were entered in the following order: general life stress (PSS) was entered on Step 1, perceived ethnic discrimination (PEDQ) was entered on Step 2, and racial climate was entered on Step 3. We believed that the racial climate would be representative of discrimination-related stress associated with the environment and therefore might be distinct from the more individual nature of discrimination as assessed by the PEDQ.

For the Asian student group, after controlling for general stress, both perceived ethnic discrimination ( $\Delta R^2 = .04, p = .047$ ) and racial climate ( $\Delta R^2 = .07, p = .005$ ) contributed additional variance in trauma-related symptoms ( $\Delta R^2 = .04, p = .005$ ). For the Black students, after controlling for general stress, perceived ethnic discrimination contributed an additional 10% of variance in trauma-related symptoms ( $\Delta R^2 = .10, p = .020$ ), and racial climate did not contribute any additional variance. In sum, the findings indicated that racial and/or ethnic discrimination was a significant and positive predictor of trauma-related symptoms for Black students. For Asian students, perceived discrimination and racial climate both had a significant, positive, bivariate association with trauma-related symptoms. However, the final step of the multiple regression analysis suggested that after controlling for general distress, racial climate and not perceived discrimination was a unique predictor of trauma-related symptoms.

Table 1  
Means, Standard Deviations, and MANOVA for Effects of Racial Group on Perceived Trauma Symptoms, Perceived Stress, Ethnic Discrimination, and Racial Experiences

Measure	White racial group		Asian racial group		Black racial group		Between subjects		
	M	SD	M	SD	M	SD	F(2, 284)	p	$\eta^2_p$
PCL-C	31.77	12.29	34.71	12.21	31.76	9.45	1.65	.194	.01
PSS	18.81	6.84	19.54	6.49	20.45	6.06	1.31	.270	.01
PEDQ	21.05	5.95	26.31	10.21	34.71	10.33	50.58	.000	.25
RE	7.42	2.97	7.60	3.22	8.93	3.22	4.67	.010	.03

Note. Multivariate analysis of variance (MANOVA) Wilkes' lambda = .72,  $p < .01$ . White group  $n = 170$ ; Asian group  $n = 69$ ; Black group  $n = 47$ . PCL-C = Posttraumatic Stress Disorder Checklist—Civilian Version; PSS = Perceived Stress Scale; PEDQ = Perceived Ethnic Discrimination Questionnaire; RE = Racial Experiences.

This document is copyrighted by the American Psychological Association or one of its allied publishers. This article is intended solely for the personal use of the individual user and is not to be disseminated broadly.

Table 2  
*Hierarchical Regression of Trauma Symptoms on Perceived Stress, Ethnic Discrimination, and Racial Experiences*

Variable	$\Delta R^2$	<i>F</i>	<i>df</i>	<i>p</i>	<i>B</i>	SEB	$\beta$	<i>p</i>
Black student group								
Step 1	.16	8.57	1, 46	.005				
PSS					0.74	.25	.40	.005
Step 2	.10	5.87	1, 45	.001				
PSS					0.56	.245	.31	.030
PEDQ					0.26	.11	.33	.020
Step 3	.00	0.031	1, 44	.86				
PSS					0.56	.25	.31	.032
PEDQ					0.27	.12	.34	.022
RE					-0.08	.45	.02	.860
Asian student group								
Step 1	.36	37.88	1, 68	.000				
PSS					1.12	.18	.59	.000
Step 2	.04	4.08	1, 67	.000				
PSS					1.06	.18	.57	.000
PEDQ					0.23	.11	.19	.047
Step 3	.07	8.31	1, 66	.005				
PSS					0.94	.17	.5	.000
PEDQ					0.12	.12	.1	.298
RE					1.08	.38	.29	.005

Note. Black student group  $n = 47$ ; Asian student group  $n = 69$ . PSS = Perceived Stress Scale; PEDQ = Perceived Ethnic Discrimination Questionnaire; RE = Racial Experiences.

## Discussion

A consistent finding in the discrimination-related stress literature has been the positive association between reports of psychological distress and perceived experiences of racism and ethnic discrimination. In view of the increasing calls to view the psychological response to racial and/or ethnic discrimination in the context of trauma (Carter, 2007; Ford, 2008; Sanchez-Hucles, 1999), in the current investigation, we looked at the association among perceived racial and/or ethnic discrimination, negative racial climate, and trauma-related symptoms. The findings offer tentative support for the suggestion that experiences of racial and/or ethnic discrimination can be viewed from the perspective of psychological trauma (Butts, 2002; Franklin, Boyd-Franklin, & Kelly, 2006).

There is clear evidence in the literature that people of color exhibit higher rates of PTSD subsequent to experiencing military combat or natural disasters (Norris et al., 2002; Loo et al., 2001). Although the finding of the current investigation cannot be used to explain disparities in PTSD across racial and ethnic lines, it could be that for people of color, the ensuing psychological response to a life-threatening event might be indirectly influenced by prior experiences of racial and/or ethnic discrimination or negative racial experiences. Currently, acute stress disorder and PTSD are thought to be associated situations in which individuals have experienced or witnessed a life-threatening event. Based on these criteria, stress associated with racial and/or ethnic discrimination does not easily fit within the rubric of PTSD unless the actual incident of discrimination is consistent with a life-threatening event. However, conceptual models of racial and/or ethnic-related stress suggest that the stress associated with discrimination can be both acute and cumulative (Sanchez-Hucles, 1999). Scholars have argued that a traumatic response not only might be reflective of a

single event but also might be associated with patterns of discrimination that are both accumulative, recurring, and intergenerational in nature (Bryant-Davis, 2007; Cross, 1998; Ford, 2008). Participants in the current study were therefore asked about their perceptions of discrimination; they were not asked to reflect on a specific event but rather were instructed to reflect on their day-to-day experiences. Yet, it is important to note that the discrimination measure used in the current study does not rule out a single event that might have happened in, or prior to, the 3-month period on which participants were asked to reflect. As such, the findings do not necessarily exclude a single event as the source of trauma; rather, the possibility does exist that current experiences of discrimination might build on, or be understood in the context of, a prior single event.

Although the findings do support an association between racial and/or ethnic discrimination and trauma-related symptoms, it is important to note that scholars have cautioned against overpathologizing the psychological response to discrimination and have argued against the adoption of a disease model per se. Carter et al. (2005) proposed an alternative concept for understanding the traumatic effects of racial discrimination and harassment, namely race-based traumatic stress. Drawing on work by Carlson (1997), Carter (2007) argued that much of the trauma associated with racial and/or ethnic discrimination is related to the perception of an event as emotionally painful (negative), sudden, and out of one's control, criteria that are consistent with Carlson's definition of trauma. Thus, Carter proposed that race-related trauma be viewed as an emotional and/or psychological injury and not necessarily as a mental disorder, such as PTSD. Regardless of the current findings, the tension that exists between those who have called for the inclusion of racism and experiences of racial and/or ethnic dis-

crimination in the criteria for traumatic stress (Sanchez-Hucles, 1999) and those who are calling for an elaboration of the concept of psychological trauma to include racial and/or ethnic discrimination (Carter, 2007) will need further attention before it is resolved. Additionally, recent work examining PTSD in the absence of a single traumatic event (Elhai et al., 2009) might provide additional insights into the nature of racial and/or ethnic-related trauma and could shed further light on the association between racial and/or ethnic discrimination and traumatic stress.

A final finding that deserves attention relates to the influence racial climate. Recall that for the Asian group, perception of the racial climate as negative was significantly associated with trauma-related symptoms; however, the same pattern did not apply to the Black students. An understanding of this finding could rest in well-established patterns of racial socialization and historical oppression within the United States. The stereotypical view of Asian Americans as the “model minority” is an insidious and pervasive phenomenon that has been understood as an indirect form of racism (Alvarez, Juang, & Liang, 2006; Lee, Wong, & Alvarez, 2009). As such, the exposure to racism and discrimination might be qualitatively different for Asians/Asian Americans than the more aggressive and direct experiences of racism that individuals of African descent have tended to report (Feagin, 2001). For the current sample, it could be that a negative and unwelcoming climate is more distressing for Asian people because it runs counter to their expectations associated with being viewed as a model minority (Lee, Wong, & Alvarez, 2009). Black Americans however, having come to expect racial climates to be negative, might be less likely to be impacted at the level of psychological distress or trauma-related symptoms. Furthermore, literature indicates that racial socialization processes among Black Americans include the anticipation of negative racial climates and therefore might act as a psychological buffer against stress-associated racism and discrimination (Bynum, Burton, & Best, 2007). Although the extent to which these constructs are relevant to the current sample cannot be known, it is plausible to believe that group-level variables (e.g., racial and/or ethnic stereotypes) and individual-level variables (e.g., racial socialization and racial identity) might well influence the association between perceptions of racism and trauma-related symptoms across racial groups.

Though the findings of the current study appear to be consistent with findings from racism and ethnic-related stress research (Bron-dolo, Kelly, et al., 2005; Mossakowski, 2003; Williams et al., 2003), it is important to acknowledge limitations that might restrict the generalizability and interpretation of the findings. Due to the cross-sectional nature of the data, we were not able to control for experiences associated with traumatic stress that participants might have had in the past. Although the participants were asked to reflect on the previous 3 months, there was no way to control for other events that might have occurred during this period and that might have represented a significant confound for the current study. A second limitation applies to the sample size. A post hoc power analysis for the Black participants and Asian participants indicated powers of .74 and .73, respectively, with the  $R^2$  statistic (see Soper, 2010). This level of power is lower than conventionally accepted levels of .80–.85. Furthermore, it is known that within-group variability is an important consideration when examining the perception and experience of racial and ethnic discrimination (see Hall & Carter, 2006). The size of the sample, however, might

have been insufficient to capture these factors. These limitations do suggest that the interpretation and generalizability of the current findings be treated with caution. Yet, given the exploratory nature of the current investigation, we do believe that the study represents an important initial development, one that might allow for a more robust examination of the phenomena with larger samples and with the inclusion of additional variables.

### Implications, Future Directions, and Concluding Thoughts

Of critical importance in the racial and/or ethnic discrimination literature is an understanding of the mechanism by which the stress associated with discrimination might evolve to a response consistent with traumatic stress, emotional injury, or psychopathology (see Carter, 2007; Williams & Mohammed, 2009). Although the current findings identify the presence of an association between racial and/or ethnic discrimination and trauma, the actual pathway from discrimination to stress and, subsequently, to trauma has yet to be articulated. Thus, an examination of variables that might moderate the association between discrimination and trauma-related symptoms would be an important undertaking. The constructs of spirituality (Hunter & Lewis-Coles, 2005), resilience (Franklin, 2004), and racial socialization (Bynum et al., 2007) are examples of variables that could warrant further investigation when examining racial and/or ethnic discrimination and trauma-related symptoms.

Beyond implications for future research, it is also worth noting that the current findings might also provide practitioners with useful information when working with a college-aged population. Given the ubiquitous nature of racial and/or ethnic discrimination, when working with students of color, it might be helpful to incorporate an exploration of students' experiences with discrimination as part of a standard assessment procedure, similar to the manner in which we typically assess for trauma and abuse. Furthermore, when working with individuals who report having experienced racial and/or ethnic discrimination, it might be helpful to use the experience of trauma as a framework in which the client can begin to make sense of their psychological processes. At a minimum, recognition of potential experiences of racial and/or ethnic discrimination might serve to facilitate the therapeutic relationship with students of color while offering other potential benefits (e.g., accurate assessment of psychological stressors; appreciation of coping style and resilience) for the counseling and/or therapeutic process.

The negative impact of racial and/or ethnic discrimination on the psychological functioning of people of color is now widely acknowledged. In current research, researchers seek to provide a more precise articulation of the manner in which racial and/or ethnic discrimination influences psychological distress and to categorize the psychological outcomes associated with racism and discrimination. To this end, the present investigation offers tentative support for the notion that the psychological response to racial and/or ethnic discrimination can be understood from the perspective of trauma and traumatic stress and suggests that continued empirical efforts in this area are worth pursuing.

## References

- Alim, T. N., Graves, E., Mellman, T. A., Aigbogun, N., Gray, E., Lawson, W., & Charney, D. S. (2006). Trauma exposure, posttraumatic stress disorder and depression in an African-American primary care population. *Journal of the National Medical Association, 98*, 1630–1636.
- Allen, I. M. (1996). PTSD among African Americans. In A. J. Marsella, M. J. Friedman, E. T. Gerrity, & R. M. Scurfield (Eds.), *Ethnocultural aspects of posttraumatic stress disorder* (pp. 209–238). Washington, DC: American Psychological Association.
- Alvarez, A. N., Juang, L., & Liang, C. T. H. (2006). Asian Americans and racism: When bad things happen to “model minorities.” *Cultural Diversity and Ethnic Minority Psychology, 12*, 477–472. doi:10.1037/1099-9809.12.3.477
- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.). Washington, DC: Author.
- Ancis, J., Sedlacek, W., & Mohr, J. (2000). Student perceptions of campus cultural climate by race. *Journal of Counseling & Development, 78*, 180–185.
- Breslau, N., Kessler, R. C., Chilcoat, H. D., Schultz, L. R., Davis, G. C., & Andreski, P. (1998). Trauma and posttraumatic stress disorder in the community: The 1996 Detroit area survey of trauma. *Archives of General Psychiatry, 55*, 626–632.
- Brondolo, E., Kelly, K. P., Coakely, V., Gordon, T., Thompson, S., Levy, E., . . . Contrada, R. J. (2005). The perceived ethnic discrimination questionnaire: Development and preliminary validation of a community version. *Journal of Applied Social Psychology, 35*, 335–365.
- Brondolo, E., Thompson, S., Brady, N., Appel, R., Cassells, A., Tobin, J., & Sweeney, M. (2005). The relationship of racism to appraisals and coping in a community sample. *Ethnicity and Disease, 15*, 14–19.
- Broudy, R., Brondolo, E., Coakley, V., Brady, N., Cassells, A., Tobin, J. T., & Sweeney, M. (2007). Perceived ethnic discrimination in relation to daily moods and negative social interactions. *Journal of Behavioral Medicine, 30*, 31–43. doi:10.1007/s10865-006-9081-4
- Bryant-Davis, T. (2007). Healing requires recognition: The case for race-based traumatic stress. *Counseling Psychologist, 35*, 135–143. doi:10.1177/0011000006295152
- Bulhan, H. A. (1985). *Franz Fanon and the psychology of oppression*. New York, NY: Springer.
- Butts, H. (2002). The black mask of humanity: Racial/ethnic discrimination and posttraumatic stress disorder. *Journal of the American Academy of Psychiatry and the Law, 30*, 336–339.
- Bynum, M. S., Burton, T. E., & Best, C. (2007). Racism experiences and psychological functioning in African American college freshmen: Is racial socialization a buffer? *Cultural Diversity and Ethnic Minority Psychology, 13*, 64–71. doi:10.1037/1099-9809.13.1.64
- Carlson, E. B. (1997). *Trauma assessments: A clinician's guide*. New York, NY: Guilford.
- Carter, R. T. (2007). Racism and psychological and emotional injury: Recognizing and assessing race-based traumatic stress. *Counseling Psychologist, 35*, 13–105. doi:10.1177/0011000006292033
- Carter, R. T., Forsyth, J. M., Mazzula, S. L., & Williams, B. (2005). Racial discrimination and race-based traumatic stress: An exploratory investigation. In R. T. Carter (Ed.), *Handbook of racial-cultural psychology and counseling: Training and practice* (Vol. 2, pp. 447–476). Hoboken, NJ: Wiley.
- Cassidy, C., O'Conner, R. C., Howe, C., & Warden, D. (2004). Perceived discrimination and psychological distress: The role of personal and ethnic self-esteem. *Journal of Counseling Psychology, 51*, 329–339. doi:10.1037/0022-0167.51.3.329
- Chambers, J. W., Kambon, K., Birdson, B. D., Brown, J., Dixon, P., & Robbins-Brinson, L. (1998). Africentric cultural identity and the stress experience of African American college students. *Journal of Black Psychology, 24*, 368–396. doi:10.1177/00957984980243007
- Chavous, T. M. (2005). An intergroup contact-theory framework for evaluating racial climate on predominantly White college campuses. *American Journal of Community Psychology, 36*, 239–257. doi:10.1007/s10464-005-8623-1
- Clark, R., Anderson, N., Clark, V. R., & Williams, D. R. (1999). Racism as a stressor for African Americans: A biopsychosocial model. *American Psychologist, 54*, 805–816.
- Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior, 24*, 385–396.
- Cohen, S., & Williamson, G. (1988). Perceived stress in a probability sample of the U.S. In S. Spacapan & S. Oskamp (Eds.), *The social psychology of health: Claremont Symposium on Applied Social Psychology* (pp. 31–67). Newbury Park, CA: Sage.
- Contrada, R. J., Ashmore, R. D., Gary, M. L., Coups, E., Egeth, J. D., Sewell, A., . . . Chasse, V. (2000). Ethnicity-related sources of stress and their effects on well-being. *Current Directions in Psychological Science, 9*, 136–139.
- Contrada, R. J., Ashmore, R. D., Gary, M. L., Coups, E., Egeth, J. D., Sewell, A., . . . Chasse, V. (2001). Measures of ethnicity-related stress: Psychometric properties, ethnic group differences, and associations with well-being. *Journal of Applied Social Psychology, 31*, 1775–1820.
- Cross, W. E. (1998). Black psychological functioning and the legacy of slavery: Myths and realities. In Y. Danielli (Ed.), *International handbook of multigenerational legacies of trauma* (pp. 387–400). New York, NY: Plenum Press.
- Elhai, J. D., Engdahl, R. M., Palmieri, P. A., Naife, J. A., Schweinle, A., & Jacobs, G. A. (2009). Assessing posttraumatic stress disorder with or without reference to a single, worst traumatic event: Examining differences in factor structure. *Psychological Assessment, 21*, 629–634. doi:10.1037/a0016677
- Feagin, J. R. (2001). *Racist America: Roots, current realities, and future directions*. New York, NY: Routledge.
- Ford, J. D. (2008). Trauma, posttraumatic stress disorder and ethnoracial minorities: Toward diversity and cultural competence in principles and practices. *Clinical Psychology: Science and Practice, 15*, 62–67.
- Franklin, A. J. (2004). *From brotherhood to manhood: How Black men rescue their relationships and dreams from the invisibility syndrome*. Hoboken, NJ: Wiley.
- Franklin, A. J., & Boyd-Franklin, N. (2000). Invisibility syndrome: A clinical model towards understanding the effects of racism upon African American males. *American Journal of Orthopsychiatry, 70*, 33–41.
- Franklin, A. J., Boyd-Franklin, N., & Kelly, S. (2006). Racism and invisibility: Race-related stress, emotional abuse and psychological trauma for people of color. *Journal of Emotional Abuse, 6*, 9–30.
- Hall, S., & Carter, R. T. (2006). The relationship between racial identity and perceptions of racial discrimination in an Afro-Caribbean sample. *Journal of Black Psychology, 32*, 155–175. doi:10.1177/0095798406287071
- Harrell, S. P. (2000). A multidimensional conceptualization of racism-related stress: Implications for the well-being of people of color. *American Journal of Orthopsychiatry, 70*, 42–57.
- Holcomb-McCoy, C., & Addison-Bradley, C. (2005). African American counselor educators' job satisfaction and perceptions of departmental racial climate. *Counselor Education and Supervision, 45*, 2–15.
- Hunter, C. D., & Lewis-Coles, M. E. (2004). Coping with racism: A spirit-based psychological perspective. In J. L. Chin (Ed.), *The psychology of prejudice and discrimination: Vol. 1. Race and ethnicity in America* (pp. 207–222). Westport, CT: Greenwood.
- Johnson, D. R., Soldner, M., Leonard, J. B., Patty, A., Inkelas, K. K., Rowan-Kenyon, & Longerbeam, S. (2007). Examining sense of belonging among first-year undergraduates from different racial/ethnic groups. *Journal of College Student Development, 48*, 525–542.
- Jones, J. (1997). *Prejudice and racism* (2nd ed.). New York, NY: McGraw Hill.
- Khaylis, A., Waelde, L., & Brice, E. (2007). The role of ethnic identity in

- the relationship of race-related stress to PTSD symptoms among young adults. *Journal of Trauma and Dissociation*, 8, 91–105. doi:10.1300/J229v08n04\_06
- Landrine, H., Klonoff, E. A., Corral, I., Fernandez, S., & Roesch, S. (2006). Conceptualizing and measuring ethnic discrimination in health research. *Journal of Behavioral Medicine*, 29, 79–94. doi:10.1007/s10865-005-9029-0
- Lee, S. J., Wong, N. A., & Alvarez, A. N. (2009). The model minority and the perpetual foreigner: Stereotypes of Asian Americans. In N. Tewari & A. N. Alvarez (Eds.), *Asian American psychology: Current perspectives* (pp. 69–84). New York, NY: Routledge/Taylor & Francis Group.
- Loo, C. M., Fairbank, J. A., Scurfield, R. M., Ruch, L. O., King, D. W., Adams, L. J., & Chemtob, C. M. (2001). Measuring exposure of racism: Development and validation of a race-related stressor scale (RRSS) for Asian American Vietnam veterans. *Psychological Assessment*, 13, 503–520. doi:10.1037/1040-3590.13.4.503
- Marger, M. N. (2008). *Race and ethnic relations: American and global perspectives* (8th ed.). Belmont, CA: Wadsworth.
- Mossakowski, K. N. (2003). Coping with perceived discrimination: Does ethnic identity protect mental health? *Journal of Health and Social Behavior*, 44, 318–331.
- Murphy, R. T., Wismar, K., & Freeman, K. (2004). Stress symptoms among African American college students after the September 11, 2001 terrorist attacks. *Journal of Nervous and Mental Disease*, 191, 108–114.
- Museus, S. D., Nichols, A. H., & Lambert, A. D. (2008). Racial differences in the effects of campus racial climate on degree completion: A structural equation model. *The Review of Higher Education*, 32, 107–134.
- Navarro, R. L., Worthington, R. L., Hart, J., & Khairallah, T. (2009). Liberal and conservative political ideology, experiences of harassment, and perceptions of campus climate. *Journal of Diversity in Higher Education*, 2, 78–90. doi:10.1037/a0015174
- Norris, F. (1992). Epidemiology of trauma: Frequency and impact of different potentially traumatic events on different demographic groups. *Journal of Consulting and Clinical Psychology*, 60, 409–418.
- Norris, F., Friedman, M., & Watson, P. (2002). 60,000 disaster victims speak: Part II. Summary and implications of the disaster mental health research. *Psychiatry*, 65, 240–260.
- Norris, F., Friedman, M., Watson, P., Byrne, C., Diaz, E., & Kaniasty, K. (2002). 60,000 disaster victims speak: Part I. An empirical review of the empirical literature, 1981–2001. *Psychiatry*, 65, 207–239.
- Paradies, Y. (2006). A systematic review of empirical research on self-reported racism and health. *International Journal of Epidemiology*, 35, 1–14. doi:10.1093/ije/dyl056
- Reid, L. D., & Radhakrishnan, P. (2003). Race matters: The relation between race and general campus climate. *Cultural Diversity and Ethnic Minority Psychology*, 9, 263–275.
- Richman, L. S., Kohn-Wood, L. P., & Williams, D. R. (2007). The role of discrimination and racial identity for mental health service utilization. *Journal of Social and Clinical Psychology*, 26, 960–981.
- Ruef, A. M., Litz, B. T., & Schlenger, W. E. (2000). Hispanic ethnicity and risk for combat-related posttraumatic stress disorder. *Cultural Diversity and Ethnic Minority Psychology*, 6, 235–251.
- Ruggiero, K. J., Ben, K. D., Scotti, J. R., & Rabalais, A. E. (2003). Psychometric properties of the PTSD checklist—Civilian version. *Journal of Traumatic Stress*, 16, 495–502.
- Sanchez-Hucles, J. V. (1999). Racism: Emotional abusiveness and psychological trauma for ethnic minorities. *Journal of Emotional Abuse*, 1, 69–87.
- Sanders-Thompson, V. L. (1996). Perceived experiences of racism as stressful life events. *Community Mental Health Journal*, 32, 223–233.
- Shepard, B., O'Neill, L., & Guenette, F. (2006). Counselling with First Nations women: Considerations of oppression and renewal. *International Journal for the Advancement of Counselling*, 28, 227–240. doi:10.1007/s10447-005-9008-8
- Smith, M. Y., Redd, W., DuHamel, K., Vickberg, S. J., & Ricketts, R. (1999). Validation of the PTSD checklist—Civilian version in survivors of bone marrow transplantation. *Journal of Traumatic Stress*, 12, 485–499.
- Solórzano, D., Ceja, M., & Yosso, T. (2000). Critical race theory, racial microaggressions, and campus racial climate: The experiences of African American college students. *Journal of Negro Education*, 69, 60–73.
- Soper, D. (2010). Free post-hoc statistical power calculator for multiple regression [Software]. Retrieved from <http://www.danielsoper.com/statcalc/calc09.aspx>
- Turner, R. J., & Avison, W. R. (2003). Status variations in stress exposure: Implications for the interpretation of research on race, socio-economic status, and gender. *Journal of Health and Social Behavior*, 44, 488–505.
- Utsey, S. O. (1998). Assessing the stressful effects of racism: A review of instrumentation. *Journal of Black Psychology*, 24, 269–288. doi:10.1177/00957984980243001
- Walters, K. L., & Simonie, J. M. (2002). Reconceptualizing Native women's health: An "indigenist" stress-coping model. *American Journal of Public Health*, 92, 520–524.
- Weathers, F., Litz, B., Herman, D., Juska, J., & Keane, T. (1993). *The PTSD Checklist (PCL): Reliability, validity and diagnostic utility*. Poster session presented at the annual meeting of the International Society for Traumatic Stress Studies, San Antonio, TX.
- Williams, D. R., Gonzalez, H. M., Williams, S., Mohammed, S., Moomal, H., & Stein, D. J. (2008). Perceived discrimination, race and health in South Africa. *Social Science Medicine*, 67, 441–452. doi:10.1016/j.socscimed.2008.03.021
- Williams, D. R., & Mohammed, S. A. (2009). Discrimination and racial disparities in health: Evidence and needed research. *Journal of Behavioral Medicine*, 32, 20–47. doi:10.1007/s10865-008-9185-0
- Williams, D. R., Neighbors, H. W., & Jackson, J. S. (2003). Racial-ethnic discrimination and health: Findings from community studies. *American Journal of Public Health*, 93, 200–208.

Received March 5, 2009

Revision received April 30, 2010

Accepted April 30, 2010 ■