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Positive Affect and Adjustment to Perceived Racism

Anthony D. Ong
Cornell University

Lisa M. Edwards
Marquette University, lisa.edwards@marquette.edu

POSITIVE AFFECT AND ADJUSTMENT TO PERCEIVED RACISM

ANTHONY D. ONG
Cornell University

LISA M. EDWARDS
Marquette University

This research provided the first empirical investigation of the role of positive affect in moderating the relationship between perceived racism and depressive symptoms. A sample of 215 racial and ethnic minority young adults completed measures of perceived racism, daily race-related stress, positive affect, optimism, and depressive symptoms. Hierarchical regression analyses revealed that positive affect and perceived racism accounted for a significant portion of the variance in depressive symptoms. Most notably, above and beyond the effects of optimism, positive affect interacted with perceived racism to weaken its influence on depression. Implications for future research directions that build on these initial findings are discussed.

In an effort to understand the contextual salience, breadth, and malleability of psychosocial stressors that operate across racial and ethnic minority populations, there has been a shift from studying factors that intensify differences between racial and ethnic groups (George & Lynch, 2003; Jackson, Brown, & Kirby, 1998; Neff, 1985) to factors that exert strong effects across groups (Garcia Coll, Akerman, & Cicchetti, 2000; Garcia Coll, Crnic, Lamberty, Wasik, and et al., 1996). Although it is well established that stressful life

Anthony D. Ong, Ph.D., Department of Human Development, Cornell University. Lisa M. Edwards, Ph.D., Department of Counseling & Educational Psychology, Marquette University.

Correspondence concerning this article should be addressed to: Anthony D. Ong, Department of Human Development, G77 Martha Van Rensselaer Hall, Cornell University, Ithaca, NY 14853-4401.

events are associated with a variety of maladaptive outcomes (McEwen, 1998), growing empirical evidence suggests that adjustment difficulties to race-related stressors may be especially pronounced because of the distinctively harmful ways in which perceptions of racism may uniformly disrupt quality of life, progressively eroding the structure and continuity of daily routines (e.g., Harrell, 2000), perpetuating the expansion and diffusion of stressors to other life domains (e.g., Williams, Neighbors, & Jackson, 2003), exacerbating psychiatric symptoms (e.g., Klonoff, Landrine, & Ullman, 1999), and foreclosing opportunities for purposeful living (e.g., Ryff, Keyes, & Hughes, 2003; Utsey, Chae, Brown, & Kelly, 2002). Over time the strains of attempting to regulate the intensity of racism-related life experiences may place burdens on coping resources and lead to stable elevations in psychological distress (Kessler, Price, & Wortman, 1985; Ulbrich, Warheit, & Zimmerman, 1989; Williams et al., 2003).

Despite an emerging literature on the impact of racism and discrimination on health and well-being (Landrine & Klonoff, 1996; Szalacha, Erkut, Coll, Alarcon, Fields, & Ceder, 2003; Utsey, 1998), relatively little empirical attention has been given to exploring the role of resilience resources in averting exposure to race-related stressors (Turner & Avison, 2003; Williams et al., 2003; Wright & Masten, 2005) or altering the perceived experience of racism itself (Lee, 2005; Phinney, Madden, & Santos, 1998; Romero & Roberts, 2003; Sellers, Caldwell, Schmeelk-Cone, & Zimmerman, 2003). The purpose of this study was to examine the role of positive affect in moderating the relationship between perceived racism and psychological distress in a sample of racial and ethnic minority young adults.¹

RESEARCH ON PERCEIVED RACISM AND PSYCHOLOGICAL DISTRESS

Although exposure to racism can have serious consequences for

1. Although we use the terms *race* and *ethnicity* to distinguish group membership, we recognize that the sociocultural meanings ascribed to such constructs may vary both within and across groups (see Betancourt & Lopez, 1993; Phinney, 1996).

mental health, clearly not everyone exposed to race-related adversity is equally affected. One mechanism by which racism may confer vulnerability to psychological distress is through heightened reactivity to *perceived racism*, defined here as “the subjective experience of prejudice and discrimination” (Clark, Anderson, Clark, & Williams, 1999, p. 808). The theoretical underpinnings of perceived racism as a vulnerability factor are four fold: First, persons high in race-related stress report greater numbers of stressful life events, implying greater exposure to stressful situations (Harrell, 2000; Utsey, 1998). Second, individuals with high levels of race-related stress may be more likely to appraise stressful events as threats instead of challenges, increasing the probability of negative emotional responses (Sellers et al., 2003; Utsey & Ponterotto, 1996). Third, when under stress, individuals high in perceived racism tend not to engage in active, problem-focused coping behaviors (Clark, 2000; Utsey, Ponterotto, Reynolds, & Cancelli, 2000). Finally, chronic perceptions of racism may, over time, be etiologically implicated in heart disease, precipitating acute coronary events (Brondolo, Rieppi, Kelly, & Gerin, 2003; Williams et al., 2003). The foregoing studies document the inimical influence of perceived racism on health and well-being. Yet researchers are only beginning to examine the psychological factors that may moderate the underlying effects occasioned by perceived racism (Lee, 2005; Phinney et al., 1998; Romero & Roberts, 2003; Sellers et al., 2003).²

Previous research on ethnic and racial minority perceptions of racism has focused largely on the role of ethnic and racial identity as potential moderators (see Neblett, Shelton, & Sellers, 2004). An overview of the emerging literature that deals with these research spheres reveals important achievements mixed with certain discontinuities and limitations. A number of studies, for instance, have examined the stress-moderating effect of ethnic identity on mental health. The results of these studies have indicated contradictory findings, with some studies showing that ethnic identity

2. Our concern in this paper is with the phenomenological experience of ethnic and racial discrimination and not with the more invisible, but no less potent, impact of institutional racism on minority health and well-being (for a review, see Rollock & Gordon, 2000).

buffers the effects of perceived racism on discrimination (Lee, 2005; Phinney & Chavira, 1992), some showing that ethnic identity intensifies the effects of perceived racism (Noh, Beiser, Kaspar, Hou, & Rummens, 1999), and still others showing that there is no moderating effect of ethnic identity on perceived racism at all (Lee, 2003). The pattern of results is similar when one considers the influence of racial identity on individuals' perceptions of and reported experiences with racism (Sellers et al., 2003; Sellers & Shelton, 2003; Thompson, 1996). The available evidence, thus, points to the complex roles that ethnic and racial identity can play in shaping the perception and experience of racism in the United States (cf. Phinney & Ong, 2007; Sellers & Shelton, 2003).

Although ethnic and racial identity research has enhanced our understanding of the racism–distress relationship among members of ethnic and racial minorities, research to date has given surprisingly little attention to role of affect. There are several reasons why it may be important to examine the influence of affect on perceptions of racism. For one, the experience of racism is itself predominantly affective in nature. Thus, individuals' feelings about how others view and act toward them (as well as members of their social group) may be an important aspect of motivated responses to racism and discrimination (Gill & Matheson, 2006). Second, previous research has demonstrated the robust impact that mood has on judgments that people make in general (see Schwarz & Clore, 2003, for a review), and on attributions of discrimination in particular (Sechrist, Swim, & Mark, 2003). Finally, and perhaps most relevant to the current research, there is strong reason to believe that positive affect may have important adaptive benefits (see Fredrickson, 1998; Pressman & Cohen, 2005, for reviews), particularly in the context of stressful life events (Fredrickson, Tugade, Waugh, & Larkin, 2003; Ong, Bergeman, & Bisconti, 2004).

RESEARCH ON THE ROLE OF POSITIVE AFFECT IN THE STRESS PROCESS

More than two decades ago, Lazarus, Kanner, and Folkman (1980) suggested that under intensely stressful conditions, positive affect may provide an important psychological time–out, sustain contin-

ued coping efforts, and restore vital resources that had been depleted by stress. Until recently, there has been little empirical support for these ideas. Foundational evidence for the adaptive function of positive affect is beginning to accrue, however (e.g., Bonanno & Keltner, 1997; Folkman, 1997; Fredrickson et al., 2003; Tugade & Fredrickson, 2004; Zautra, Johnson, & Davis, 2005). Reich, Zautra, and Davis (2003) reviewed a number of studies showing that positive affect, when present during times of stress, appear maximally effective at strengthening resistance. The finding that positive affect reduces vulnerability to stress has now been documented in different laboratory and field studies (e.g., Ong & Bergeman, 2004; Zautra, Reich, Davis, Potter, & Nicolson, 2000), under different stressful contexts (Ong, Bergeman, Bisconti, & Wallace, 2006; Zautra et al., 2005), and with different indices of health and well-being (e.g., Davis, Zautra, & Smith, 2004; Ong & Allaire, 2005).

Fredrickson's (2001) *broaden-and-build theory* of positive emotions suggests that positive affect functions to broaden the scope of attention and, over time, builds lasting personal resources. In addition to enhancing cognitive processing of information (see Isen, 1999, 2002, for reviews), positive affect has also been posited to have a restorative health function, *undoing* the autonomic arousal generated by negative emotions. In a series of studies in which positive and negative emotions were experimentally induced, Fredrickson and colleagues (Fredrickson & Levenson, 1998; Fredrickson, Mancuso, Branigan, & Tugade, 2000) demonstrated that positive emotions (i.e., mild joy and contentment) were linked to faster cardiovascular recovery following negative mood induction. Taken as a whole, the extant evidence suggests that positive affective states may have both protective and restorative functions, guarding individuals from negative emotions, as well as speeding recovery from such emotions (Fredrickson, 2001).

THE PRESENT RESEARCH

Despite increasing evidence that positive affect may serve an adaptive function in the face of stress, little attention has been paid to how these processes operate in racial and ethnic minority groups.

The purpose of this study was to extend research on the role of positive affect in the stress process by focusing on a specific stressor that may be especially relevant for racial and ethnic minorities. Specifically, we focus on perceived racism and probe the ways in which positive affect may moderate individual reactivity to perceptions of racism. Importantly, we conceptualized and analyzed stress reactivity in ways that go beyond earlier studies. First, we statistically control for background variables (e.g., exposure to race-related stressors) that are thought to influence mental health and well-being. Second, we examine both main and interaction effects of positive affect and perceived racism. Third, given that positive affect has been linked with optimism (e.g., Marshall, Wortman, Kusulas, Hervig, et al., 1992), any observed associations with perceived racism and depressive symptoms may be due to this shared optimism component rather than any actual adaptive benefits of positive affect. Thus, we also examine whether positive affect has incremental effects, above and beyond related personality characteristics (i.e., optimism) in promoting adjustment to perceived racism. Based on findings from previous research (e.g., Bennett, Merritt, Edwards, & Sollers, 2004; Thompson, 1996), we hypothesized that individuals high in perceived racism would report greater levels of psychological distress. We further hypothesized that over and above the effect of optimism, positive affect would incrementally moderate the effect of perceived racism on depressive symptoms.

METHOD

PARTICIPANTS

The sample consisted of 215 college students between the ages of 17 and 32, with an average age of 19 ($SD = 1.93$). Participants were recruited from two mid-size, private Midwestern universities. The participant pool was 27% African American (23 male and 36 female), 49% Latino (32 male and 73 female), and 24% Asian American (21 male and 30 female). Overall, 35% of the sample was male and 65% female.

MATERIALS

Demographic Information. Participants were asked to provide the following sociodemographic information: age, gender, year in school, major, GPA, religious affiliation, racial/ethnic identification, and estimates of personal and family income.

Perceived Racism. Perceived racism was assessed using the Racism Experiences (EXP) subscale of the Racism and Life Experiences Scales (RaLES; Harrell, 1997, 2000). The measure includes 16 items that assess the level of reactivity to specific experiences of racism, racial prejudice, and ethnic discrimination. Respondents are asked to indicate the degree of stressfulness of a given racism-related event in the past six months (0 = *no stress*, 1 = *a little*, 2 = *somewhat*, 3 = *very stressful*, and 4 = *extremely*). Exemplar events include, "A racially hostile atmosphere at your job, school, or neighborhood," "Others saying or inferring that you are oversensitive or paranoid about racism," and "Witnessing discrimination or prejudice directed toward someone else." Scores on the perceived racism scale are derived by summing across items. For this sample, the alpha reliability was .87.

Daily Race-Related Stress. Daily race-related stress was measured with the Daily Life Experiences (DLE) subscale of the Racism and Life Experiences Scales (RaLES; Harrell, 1997, 2000). Participants were asked to indicate the frequency with which 20 daily race-related events (e.g., "Being treated rudely or disrespectfully," and "Being insulted, called a name, or harassed") had occurred on a 5-point scale (0 = *never*, 1 = *less than once a year*, 2 = *a few times a year*, 3 = *about once a month*, 4 = *a few times a month*, and 5 = *once a week or more*). Scores on the daily race-related experiences subscale are derived by summing across items to obtain a final frequency score. The internal reliability estimate for this sample was .94.

In the process of scale validation, Harrell (1997) administered the RaLES with three samples of adults from Latino, Asian, African American, and Biracial backgrounds.

Support for criterion-related validity was provided by positive relationships between scores from RaLES subscales and perceived stress, psychological symptomatology, and trauma-related symptoms, and negative relationships with well-being.

Optimism. Optimism was assessed with The Life Orientation Test–Revised (LOT–R; Scheier, Carver, & Bridges, 1994). This measure was developed to assess individual differences in generalized optimism versus pessimism and includes six items that ask respondents to rate the extent of their agreement to items using a 5–point Likert scale, ranging from 1 (*strongly disagree*) to 4 (*strongly agree*). A sample item is “I’m always optimistic about my future.” Psychometric properties for the LOT–R have been found to be acceptable (Scheier & Carver, 1992). In the development sample, internal reliability estimates for the LOT–R were .78, and the test–retest reliability over a 4–week interval was .79. For this sample, the alpha reliability was .80.

Depressive Symptoms. Depression was chosen as an indicator of psychological distress because it is one of the most prevalent mental health problems in the United States (Kessler, 1997, 2002) and because of its well–established association with perceived racism and discrimination (Landrine & Klonoff, 1996; Noh & Kaspar, 2003). Depressive symptoms were measured using the Center for Epidemiological Studies Depression Scale (CES–D; Radloff, 1977). The CES–D is a 20–item measure of current depressive symptomatology. Items represent the major components of depression: depressed mood, feelings of guilt and worthlessness, feelings of helplessness and hopelessness, psychomotor retardation, loss of appetite, and sleep disturbance. Responses are based on a 4–point Likert–like scale (0 = *rarely or none of the time* and 4 = *most or all of the time*). The scale has been shown to be internally consistent, with coefficient alphas of .85 in the general population and .90 in the patient sample (Radloff, 1977). The internal reliability estimate for this sample was .87.

Positive Affect. Positive affect was measured using the positive affect subscale of the *Positive and Negative Affect Schedule* (PANAS; Watson, Clark, & Tellegen, 1988). Participants were asked to indicate the extent to which they generally experience a range of positive affect states (e.g., “Indicate to what extent you feel this way in general”). Ratings were made on a 5–point scale, ranging from 1 (*very slightly or not at all*) to 5 (*extremely*). The original PANAS consists of 10 items from the Positive Activation (PA) subscale (active, alert, attentive, determined, enthusiastic, excited, inspired, inter-

ested, proud, strong). In addition to the original PANAS items, we included four additional low-arousal items (cheerful, satisfied, relaxed, self-assured) from selected octants of the mood circumplex (Larsen & Diener, 1992). The final 14-item positive affect measure represents a broad range of prototypical pleasant affect states. In the current study, alpha reliability was .88.

PROCEDURE

Participants were recruited from a variety of settings, including psychology courses, student clubs and campus organizations. Individuals were informed that their participation was completely voluntary and that they were free to withdraw from the study at any time, without penalty. Students who agreed to participate were administered a packet of measures in small groups, and in a few cases, individually, which took approximately 40 minutes to complete. All measures were presented in English and were counterbalanced to control for instrumentation effects. Participants received either course credit or \$5.00 in return for their participation.

RESULTS

DESCRIPTIVE FINDINGS

Preliminary analyses were conducted to obtain descriptive statistics and correlations among the major predictor and outcome variables. Table 1 shows correlations among the key study variables, along with their means and standard deviations. Overall, depressive symptom scores were inversely correlated with positive affect ($r = -.46, p < .01$) and trait optimism ($r = -.42, p < .01$), but showed positive and significant associations with daily race-related stress ($r = .27, p < .01$) and perceived racism ($r = .22, p < .01$), respectively.

Before testing our main hypothesis, we examined potential differences in the measured constructs across racial and ethnic groups. We first conducted an analysis of covariance (ANCOVA) of depressive symptoms for the entire sample, with racial and ethnic membership and gender as factors and socioeconomic status (SES) as a covariate. The analyses revealed that depressive symptom scores did not differ significantly across racial and ethnic

TABLE 1. Means, Standard Deviations, and Correlations among Variables

Variable	1	2	3	4	5
1. Depressive Symptoms	—	-.46**	.22**	.27**	-.42**
2. Positive Affect		—	-.21**	-.08	.52**
3. Perceived Racism			—	.67**	-.05
4. Daily Race-Related Experiences				—	-.07
5. Optimism					—
<i>M</i>	16.90	48.04	21.43	30.43	21.43
<i>SD</i>	9.76	8.58	13.93	19.41	4.76

Note. ** $p < .01$

groups, $F(2, 204) = .80$, *ns* or gender, $F(1, 204) = .01$, *ns*. To examine racial and ethnic group differences among the predictors of depressive symptoms, a multivariate analysis of variance (MANOVA) of all the predictor variables (i.e., perceived racism, positive affect, daily race-related stress, and optimism) was conducted, with racial and ethnic membership as a factor and SES as covariate. This analysis revealed a significant overall effect for race and ethnicity, Wilks's $\lambda = .95$, $F(2, 185) = 4.51$, $p < .05$ on perceived racism. Tukey-Kramer post-hoc multiple comparison tests revealed that Asian American participants reported significantly lower levels of perceived racism ($M = 14.59$, $SD = 10.58$) than either African American ($M = 25.39$, $SD = 14.62$), $F(2, 96) = 17.27$, $p < .001$ or Latino ($M = 22.39$, $SD = 13.71$), $F(2, 96) = 11.28$, $p < .001$, participants, respectively.

MAIN AND INTERACTIVE EFFECTS

The main and interactive effects of positive affect and perceived racism on depressive symptoms were assessed using hierarchical multiple regression procedures outlined by Cohen, West, and Aiken (2003) and Lubinski and Humphreys (1990). Scales were standardized before forming cross-product terms and before running the regression to reduce possible multicollinearity (Dunlap & Kemery, 1987; Jaccard, Wan, & Turrisi, 1990). Lubinski and Humphreys (1990) outlined procedures for the detection of spurious moderator effects. They argued that moderator effects and qua-

dratic trends are likely to share a large proportion of the variance. That is, a significant interaction between two variables may be observed only because the effect is correlated substantially with quadratic trends of the component variables. Entering quadratic trends (i.e., variable squared) into the regression equation reduces the possibility of observing such spurious moderators.

In Lubinski and Humphreys's recommended procedure, main effects are entered first into the regression equation; after this a priori entry, quadratic trends are entered. Our only modification of this procedure is that we entered a number of control effects that were not part of our primary hypotheses. Specifically, we examined the extent to which the correlations between perceived racism and depressive symptoms existed independently of their mutual associations with daily race-related stress and ethnic and racial status. In the first step, daily race-related stress and ethnic and racial status were entered as control variables. To test for ethnic and racial differences, contrast codes were created.³

Next, the main effects of perceived racism and positive affect were entered. To clarify the unique effects of positive affect over and above optimism, we also entered optimism in Step 2. In the third step, quadratic terms of the main effect variables were entered to control for spurious moderator effects (Lubinski & Humphreys, 1990). Next, the two-way interaction of positive affect and perceived racism and optimism and perceived racism was entered. Finally, we entered the three-way interactions between ethnic and racial status and the product of positive affect and perceived racism, as well as the interactions between ethnic and racial status and the product of optimism and perceived racism, respectively.

Table 2 provides the results of the multiple regressions involving our predictor variables. After covarying individual differences in daily race-related stress and ethnic and racial status (Step 1), Table 2 shows that the main effects of positive affect ($\beta = -.39, p < .001$) and perceived racism ($\beta = .19, p < .05$) were significant, accounting for 28% of the variance in depressive symptoms (Step 2). Importantly, after controlling for optimism (Step 2) and quadratic trends (Step

3. In all analyses of ethnic and racial differences, contrast codes were created in which the contrast category was the Asian American group.

TABLE 2. Hierarchical Regression Analysis Predicting Depressive Symptoms

Variable	Adj ΔR^2	B	β	t
Step 1 (Control Effects)	0.09**			
DRRS		2.79	0.30	4.06***
Latino		1.43	0.12	1.56
AA		2.32	0.17	2.20*
Step 1 (Main Effects)	0.28***			
PR		1.73	0.19	2.15*
Optimism		-0.47	-0.23	-3.37**
PA		-5.45	-0.39	-5.56***
Step 3 (Quadratic Effects)	0.02			
PR		-0.77	-0.16	-1.68
Optimism		0.73	0.14	1.52
PA		-0.23	0.03	0.54
Step 4 (Interaction Effects)	0.17**			
PR \times Latino		1.31	0.14	1.48
PR \times AA		1.81	0.15	1.69
PR \times Optimism		-1.06	-0.11	-1.08
PR \times PA		-2.98	-0.27	-2.62*
PR \times Optimism \times Latino		0.63	0.06	0.54
PR \times Optimism \times AA		2.42	0.19	1.88
PR \times PA \times Latino		1.19	0.11	1.12
PR \times PA \times AA		-3.14	-0.32	-2.78*

Note. DRRS = Daily race-related stress; AA = African-American; PR = Perceived racism; PA = Positive Affect; * $p < .05$. ** $p < .01$. *** $p < .001$.

3), the significant interaction between perceived racism and positive affect ($\beta = -.27, p < .05$) revealed incremental utility by adding an additional 17%, resulting in a total R^2 of .56 (Step 4). To further probe the form of the interaction, we used Aiken and West's (1991) procedures to generate separate perceived racism-depressive symptom regression lines for individuals high (one standard deviation above the mean) and low (one standard deviation below the mean) on positive affect. The simple slope of perceived discrimination at low levels of positive affect was .33 ($t = 4.93, p < .01$); the simple slope at the mean of positive affect was .26 ($t = 3.28, p < .01$); the simple slope at high levels of positive affect was .12 ($t = 2.09, p < .05$). Thus, although the slope between perceived racism and depressive symptoms was significantly different from zero at each of these three levels of positive affect, the positive association between perceived racism and depressive symptoms was significantly weaker at higher levels of positive affect than at lower levels (see Figure 1), thus providing evidence for the hypothesized moderating effect.

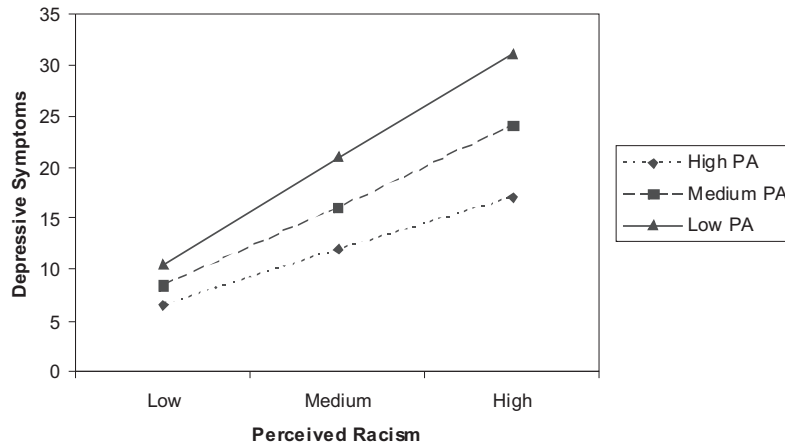


FIGURE 1. Relationship between perceived racism and depressive symptoms as a function of positive affect. High and low values were defined as one standard deviation from the mean.

Interestingly, Table 2 also reveals a significant three-way interaction with ethnicity and racial status. At low levels of positive affect, the relationship between perceived discrimination and depressive symptoms was much stronger for African Americans than for Asian Americans. However, for each unit increase in positive affect, the racism–distress link decreased $-.24$ ($t = -3.07, p < .01$) units for African Americans, but only $-.02$ ($t = -1.13, ns$) units for Asian Americans. No such moderating effect was observed for Latino or Asian American participants in the current study.

DISCUSSION

We began this article by asking what factors place individuals at greater or lesser risk for psychological distress. Our guiding assumption was that the search for conditions that affect psychological functioning inevitably leads to questions about the ecological and sociocultural circumstances of people's lives. As a point of departure, we focused on perceived racism as a chronic life stressor that may be particularly significant in the lives of racial and ethnic minorities. Although prior research has documented how chronic perceptions of racism can impose stressful changes in the ongoing

organization of people's lives (Brondolo et al., 2003; Clark et al., 1999; Harrell, 2000), we posited a need for greater attention to protective mechanisms. To address this need, we asked whether the association between perceived racism and depressive symptoms would be moderated by positive affect. In particular, we tested the hypothesis that individuals high in positive affect would display diminished stress reactivity.

The results clearly indicate that the undue effects of perceived racism on depressive symptoms are not uniform; under certain conditions they are distinctly negative; under others they may actually serve to build resilience. Our findings suggest that a relative deficit in positive affective resources may intensify the relation between perceived racism and depressive symptoms. In contrast, our results are also consistent with the interpretation that high levels of positive affect characterize those who are resilient in the face of major life stressors and mounting negative affect (Fredrickson et al., 2003; Ong et al., 2004). Noteworthy was our finding that positive affect moderated the effects of perceived discrimination to varying degrees across different ethnic and racial groups. In particular, the moderating effect of positive affect was found to be strongest among African American participants, who also reported higher levels of day-to-day racism-related experiences compared with their Latino and Asian American peers, respectively. These results are consistent with findings from the adolescent ethnic and racial minority literature suggesting that African American adolescents report more discrimination in general compared with their Latino and Asian American peers (Phinney & Chavira, 1995; Romero & Roberts, 1998; Taylor & Turner, 2002). More fine-grained and extensive investigations of the source (e.g., institutional, peer) and settlement patterns (e.g., voluntary vs. involuntary migration) associated with racism and discrimination are necessary to both pinpoint the putative effects we have observed, as well as suggest interventions that might be useful in bolstering resilience to these influences.

What accounts for the moderating influence of positive affect on the relationship between perceived racism and depressive symptoms? One possibility is that the broadened mindsets sparked by positive affect may function as important psychological resources

that may be drawn upon during times of stress (Fredrickson et al., 2003). Our results suggest that positive affect may function to moderate chronic perceptions of racism. That these relationships held even after controlling for variables thought to influence these processes (i.e., frequency of daily race-related stress, ethnic/racial status, optimism) is noteworthy. The results, thus, provide additional empirical footing for the *broaden-and-build model* of positive emotions (Fredrickson, 2001) by providing an important conceptual link to previous laboratory studies with young, predominantly European-American, adults. Specifically, the current work provides a model of how positive affect serves to moderate the emotional consequences of perceived racism in a sample of racial and ethnic minority young adults.

Our findings are subject to a number of limitations. First, from a social policy perspective (Luthar & Cicchetti, 2000), it is important to clarify that our interest in resilience among racial and ethnic minorities is not to diminish the existence of racism in American society (Clark et al., 1999) or the serious risk conditions that are built into the warp and weave of enduring sociostructural inequalities (Lynch, Kaplan, & Shema, 1997), but rather to examine how, in the face of such challenges, some racial and ethnic minority young adults manage to do remarkably well (Lee, 2005; Szalacha, Erkut, Garcia Coll, Fields, Alarcon, & Ceder, 2003). Seen from this perspective, perceptions of racism may compromise emotional well-being, not just because they increase the likelihood of psychological distress, but also because they restrict access to vital opportunity structures that may create and support positive emotional experience (Ryff et al., 2003). Our data reveal that particularly for African Americans, the presence of positive emotions may function, in part, to offset the effects of perceived racism on depressive symptoms.

Second, we note that maintaining emotional functioning is difficult enough under ordinary circumstances; to do so in the face of ongoing stressors such as perceived racism and discrimination is clearly remarkable and must eventuate from additional positive influences. The larger literature on resilience suggests that resilient qualities do not emerge without the scaffolding of family support (Rutter, 2002; Werner & Smith, 2001). Although the importance of

family is well recognized in ethnic minority research (Edwards & Lopez, 2006; Rodriguez & Kosloski, 1998; Vazquez Garcia, Garcia Coll, Erkut, Alarcon, & Tropp, 2000), we underscore the need for richer formulation, both conceptually and empirically, of the familial routes through which positive adaptation occurs. Thus, it will be important for future studies to determine the unique ways in which perceived racism interacts with culturally relevant factors to influence the health and well-being of racial and ethnic minorities.

Finally, given the cross-sectional nature of our analyses, we have no basis for inferring a temporal or causal relationship between experiences of racism and discrimination and mental health. We thus highlight the need to study racial and ethnic minority mental health as a dynamic process. For certain racial and ethnic minorities, trajectories of health and well-being may be anchored in conditions that long antecede the decades in which these trajectories take shape. Does early-life advantage, in the form of positive affective states, serve to modify the potent effects of later-life adversity? Does the accumulation of positive affective experiences in later life serve to avert or forestall trajectories of negative outcomes that otherwise would emanate from early-life challenges? Including longitudinal assessments of positive affect would significantly strengthen understanding of the long-term sequelae, as well as developmental significance, of early resources and intervening processes among racial and ethnic minority groups.

Against the noted limitations, we juxtapose the strengths of the current study, namely our focus on positive affect as a moderator of perceived racism. Taken together, the results suggest that the study of positive affect can be meaningfully connected to the experiential quality of resilient lives. In particular, our data demonstrate that individual differences in positive affect represent an important predictive marker of adaptive adjustment to perceived racism. This finding poses both methodological and conceptual challenges and raises a wide variety of questions that await future investigation.

REFERENCES

- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Thousand Oaks, CA: Sage.
- ▶ Bennett, G. G., Merritt, M. M., Edwards, C. L., & Sollers, J. J., III. (2004). Perceived racism and affective responses to ambiguous interpersonal interactions among African American men. *American Behavioral Scientist, 47*, 963–976.
- ▶ Betancourt, H., & Lopez, S. R. (1993). The study of culture, ethnicity, and race in American psychology. *American Psychologist, 48*, 629–637.
- ▶ Bonanno, G. A., & Keltner, D. (1997). Facial expressions of emotion and the course of conjugal bereavement. *Journal of Abnormal Psychology, 106*, 126–137.
- ▶ Brondolo, E., Rieppi, R., Kelly, K. P., & Gerin, W. (2003). Perceived racism and blood pressure: A review of the literature and conceptual and methodological critique. *Annals of Behavioral Medicine, 25*, 55–65.
- Clark, R. (2000). Perceptions of interethnic group racism predict increased vascular reactivity to a laboratory challenge in college women. *Annals of Behavioral Medicine, 22*, 214–222.
- ▶ Clark, R., Anderson, N. B., Clark, V. R., & Williams, D. R. (1999). Racism as a stressor for African Americans: A biopsychosocial model. *American Psychologist, 54*, 805–816.
- Cohen, J., West, S. G., & Aiken, L. S. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences (3rd ed.)*. Mahwah, NJ: Lawrence Erlbaum Associates.
- ▶ Davis, M. C., Zautra, A. J., & Smith, B. W. (2004). Chronic pain, stress, and the dynamics of affective differentiation. *Journal of Personality, 72*, 1133–1159.
- ▶ Dunlap, W. P., & Kemery, E. R. (1987). Failure to detect moderating effects: Is multicollinearity the problem? *Psychological Bulletin, 102*, 418–420.
- ▶ Edwards, L. M., & Lopez, S. J. (2006). Perceived family support and life satisfaction in Mexican American youth: A mixed methods exploration. *Journal of Counseling Psychology, 53*, 279–287.
- ▶ Folkman, S. (1997). Positive psychological states and coping with severe stress. *Social Science and Medicine, 45*, 1207–1221.
- ▶ Fredrickson, B. L. (1998). What good are positive emotions? *Review of General Psychology, 2*, 300–319.
- ▶ Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *American Psychologist, 56*, 218–226.
- ▶ Fredrickson, B. L., & Levenson, R. W. (1998). Positive emotions speed recovery from the cardiovascular sequelae of negative emotions. *Cognition and Emotion, 12*, 191–220.
- ▶ Fredrickson, B. L., Mancuso, R. A., Branigan, C., & Tugade, M. M. (2000). The undoing effect of positive emotions. *Motivation and Emotion, 24*, 237–258.
- ▶ Fredrickson, B. L., Tugade, M. M., Waugh, C. E., & Larkin, G. R. (2003). What good are positive emotions in crisis? A prospective study of resilience and

- emotions following the terrorist attacks on the United States on September 11th, 2001. *Journal of Personality and Social Psychology*, 84, 365–376.
- ▶ Garcia Coll, C., Akerman, A., & Cicchetti, D. (2000). Cultural influences on developmental processes and outcomes: Implications for the study of development and psychopathology. *Development and Psychopathology*, 12, 333–356.
 - ▶ Garcia Coll, C., Crnic, K., Lamberty, G., Wasik, B. H., et al. (1996). An integrative model for the study of developmental competencies in minority children. *Child Development*, 67, 1891–1914.
 - ▶ George, L. K., & Lynch, S. M. (2003). Race differences in depressive symptoms: A dynamic perspective on stress exposure and vulnerability. *Journal of Health and Social Behavior*, 44, 353–369.
 - ▶ Gill, R., & Matheson, K. (2006). Responses to discrimination: The role of emotion and expectations for emotional regulation. *Personality and Social Psychology Bulletin*, 32, 149–161.
- Harrell, S. P. (1997). The Racism and Life Experiences Scales (RaLES). *Unpublished manuscript*.
- ▶ 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.
- Isen, A. M. (1999). Positive affect. In M. J. Power & T. Dalgeish (Eds.), *Handbook of cognition and emotion* (pp. 521–539). New York: John Wiley & Sons.
- Isen, A. M. (2002). Missing in action in the AIM: Positive affect's facilitation of cognitive flexibility, innovation, and problem solving. *Psychological Inquiry*, 13, 57–65.
- ▶ Jaccard, J., Wan, C. K., & Turrisi, R. (1990). The detection and interpretation of interaction effects between continuous variables in multiple regression. *Multivariate Behavioral Research*, 25, 467–478.
- Jackson, J. S., Brown, K. T., & Kirby, D. C. (1998). International perspectives on prejudice and racism. In S. T. Fiske & J. L. Eberhardt (Eds.), *Confronting racism: The problem and the response* (pp. 101–135). Thousand Oaks, CA: Sage.
- ▶ Kessler, R. C. (1997). The effects of stressful life events on depression. *Annual Review of Psychology*, 48, 191–214.
- Kessler, R. C. (2002). Epidemiology of depression. In C. L. Hammen & I. H. Gotlib (Eds.), *Handbook of depression* (pp. 23–42). New York: Guilford.
- ▶ Kessler, R. C., Price, R. H., & Wortman, C. B. (1985). Social factors in psychopathology: Stress, social support, and coping processes. *Annual Review of Psychology*, 36, 531–572.
 - ▶ Klonoff, E. A., Landrine, H., & Ullman, J. B. (1999). Racial discrimination and psychiatric symptoms among Blacks. *Cultural Diversity and Ethnic Minority Psychology*, 5, 329–339.
 - ▶ Landrine, H., & Klonoff, E. A. (1996). The Schedule of Racist Events: A measure of racial discrimination and a study of its negative physical and mental health consequences. *Journal of Black Psychology*, 22, 144–168.
- Larsen, R. J., & Diener, E. (1992). Promises and problems with the circumplex

- model of emotion. In M. S. Clark (Ed.), *Emotion* (pp. 25–59). Thousand Oaks, CA: Sage.
- Lazarus, R. S., Kanner, A. D., & Folkman, S. (1980). Emotions: A cognitive–phenomenological analysis. In R. Plutchik & H. Kellerman (Eds.), *Theories of emotion* (pp. 189–217). New York: Academic Press.
- ▶ Lee, R. M. (2003). Do ethnic identity and other–group orientation protect against discrimination for Asian Americans? *Journal of Counseling Psychology, 50*, 133–141.
 - ▶ Lee, R. M. (2005). Resilience against discrimination: Ethnic identity and other–group orientation as protective factors for Korean Americans. *Journal of Counseling Psychology, 52*, 36–44.
 - ▶ Lubinski, D., & Humphreys, L. G. (1990). Assessing spurious “moderator effects”: Illustrated substantively with the hypothesized (“synergistic”) relation between spatial and mathematical ability. *Psychological Bulletin, 107*, 385–393.
 - ▶ Luthar, S. S., & Cicchetti, D. (2000). The construct of resilience: Implications for interventions and social policies. *Development and Psychopathology, 12*, 857–885.
 - ▶ Lynch, J. W., Kaplan, G. A., & Shema, S. J. (1997). Cumulative impact of sustained economic hardship on physical, cognitive, psychological, and social functioning. *New England Journal of Medicine, 337*, 1889–1895.
 - ▶ Marshall, G. N., Wortman, C. B., Kusulas, J. W., Hervig, L. K., & et al. (1992). Distinguishing optimism from pessimism: Relations to fundamental dimensions of mood and personality. *Journal of Personality and Social Psychology, 62*, 1067–1074.
- McEwen, B. S. (1998). Stress, adaptation, and disease: Allostasis and allostatic load. In J. M. Lipton & S. M. McCann (Eds.), *Annals of the New York Academy of Sciences: Neuroimmunomodulation: Molecular aspects, integrative systems, and clinical advances* (Vol. 480, pp. 33–44). New York: New York Academy of Sciences.
- Neblett, E. W. J. R., Shelton, J. N., & Sellers, R. M. (2004). The role of racial identity in managing daily racial hassles. In G. Philogene (Ed.), *Racial identity in context: The legacy of Kenneth B. Clark* (pp. 77–90). Washington, DC: American Psychological Association.
- ▶ Neff, J. A. (1985). Race and vulnerability to stress: An examination of differential vulnerability. *Journal of Personality and Social Psychology, 49*, 481–491.
 - ▶ Noh, S., Beiser, M., Kaspar, V., Hou, F., & Rummens, J. (1999). Perceived racial discrimination, depression, and coping: A study of Southeast Asian refugees in Canada. *Journal of Health and Social Behavior, 40*, 193–207.
- Noh, S., & Kaspar, V. (2003). Perceived discrimination and depression: Moderating effects of coping, acculturation, and ethnic support. *American Journal of Public Health, 93*, 232–238.
- ▶ Ong, A. D., & Allaire, J. C. (2005). Cardiovascular intraindividual variability in later life: The influence of social connectedness and positive emotions. *Psychology and Aging, 20*, 476–485.

- Ong, A. D., & Bergeman, C. S. (2004). The complexity of emotions in later life. *Journals of Gerontology: Psychological Sciences and Social Sciences, 59B*, P117–P122.
- Ong, A. D., Bergeman, C. S., & Bisconti, T. L. (2004). The role of daily positive emotions during conjugal bereavement. *Journals of Gerontology: Psychological Sciences and Social Sciences, 59B*, P168–P176.
- ▶ Ong, A. D., Bergeman, C. S., Bisconti, T. L., & Wallace, K. A. (2006). Psychological resilience, positive emotions, and successful adaptation to stress in later life. *Journal of Personality and Social Psychology, 91*, 730–749.
- ▶ Phinney, J. S. (1996). When we talk about American ethnic groups, what do we mean? *American Psychologist, 51*, 918–927.
- ▶ Phinney, J. S., & Chavira, V. (1992). Ethnic identity and self-esteem: An exploratory longitudinal study. *Journal of Adolescence, 15*, 271–281.
- ▶ Phinney, J. S., & Chavira, V. (1995). Parental ethnic socialization and adolescent coping with problems related to ethnicity. *Journal of Research on Adolescence, 5*, 31–53.
- ▶ Phinney, J. S., Madden, T., & Santos, L. J. (1998). Psychological variables as predictors of perceived ethnic discrimination among minority and immigrant adolescents. *Journal of Applied Social Psychology, 28*, 937–953.
- ▶ Phinney, J. S., & Ong, A. D. (2007). Measurement and conceptualization of ethnic identity: Current status and future directions. *Journal of Counseling Psychology, 54*, 271–281.
- ▶ Pressman, S. D., & Cohen, S. (2005). Does positive affect influence health? *Psychological Bulletin, 131*, 925–971.
- ▶ Radloff, L. S. (1977). The CES-D Scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement, 1*, 385–401.
- ▶ Reich, J. W., Zautra, A. J., & Davis, M. C. (2003). Dimensions of affect relationships: Models and their integrative implications. *Review of General Psychology, 7*, 66–83.
- ▶ Rodriguez, J. M., & Kosloski, K. (1998). The impact of acculturation on attitudinal familism in a community of Puerto Rican Americans. *Hispanic Journal of Behavioral Sciences, 20*, 375–390.
- ▶ Rollock, D., & Gordon, E. W. (2000). Racism and mental health into the 21st century: Perspectives and parameters. *American Journal of Orthopsychiatry, 70*, 5–13.
- ▶ Romero, A. J., & Roberts, R. E. (1998). Perceptions of discrimination and ethnocultural variables in a diverse group of adolescents. *Journal of Adolescence, 21*, 641–656.
- ▶ Romero, A. J., & Roberts, R. E. (2003). The impact of multiple dimensions of ethnic identity on discrimination and adolescents' self-esteem. *Journal of Applied Social Psychology, 33*, 2288–2305.
- Rutter, M. (2002). Family influences on behavior and development: Challenges for the future. In W. S. Grolnick & J. P. McHale (Eds.), *Retrospect and pros-*

pect in the psychological study of families (pp. 321–351). Mahwah, NJ: Lawrence Erlbaum Associates.

- ▶ Ryff, C. D., Keyes, C. L., & Hughes, D. L. (2003). Status inequalities, perceived discrimination, and eudaimonic well-being: Do the challenges of minority life hone purpose and growth? *Journal of Health and Social Behavior, 44*, 275–291.
- ▶ Scheier, M. F., & Carver, C. S. (1992). Effects of optimism on psychological and physical well-being: Theoretical overview and empirical update. *Cognitive Therapy and Research, 16*, 201–228.
- ▶ Scheier, M. F., Carver, C. S., & Bridges, M. W. (1994). Distinguishing optimism from neuroticism (and trait anxiety, self-mastery, and self-esteem): A reevaluation of the Life Orientation Test (LOT). *Journal of Personality and Social Psychology, 67*, 1063–1078.
- ▶ Schwarz, N., & Clore, G. L. (2003). Mood as Information: 20 Years Later. *Psychological Inquiry, 14*, 296–303.
- ▶ Sechrist, G. B., Swim, J. K., & Mark, M. M. (2003). Mood as information in making attributions to discrimination. *Personality and Social Psychology Bulletin, 29*, 524–531.
- ▶ Sellers, R. M., Caldwell, C. H., Schmeelk-Cone, K. H., & Zimmerman, M. A. (2003). Racial identity, racial discrimination, perceived stress, and psychological distress among African American young adults. *Journal of Health and Social Behavior, 44*, 302–317.
- ▶ Sellers, R. M., & Shelton, J. N. (2003). The role of racial identity in perceived racial discrimination. *Journal of Personality and Social Psychology, 84*, 1079–1092.
- ▶ Szalacha, L. A., Erkut, S., Coll, C. G., Alarcon, O., Fields, J. P., & Ceder, I. (2003). Discrimination and Puerto Rican children's and adolescents' mental health. *Cultural Diversity and Ethnic Minority Psychology, 9*, 141–155.
- ▶ Szalacha, L. A., Erkut, S., Garcia Coll, C., Fields, J. P., Alarcon, O., & Ceder, I. (2003). Perceived discrimination and resilience. In S. S. Luthar (Ed.), *Resilience and vulnerability: Adaptation in the context of childhood adversities* (pp. 414–435). New York, NY: Cambridge University Press.
- ▶ Taylor, J., & Turner, R. J. (2002). Perceived discrimination, social stress, and depression in the transition to adulthood. *Social Psychology Quarterly, 65*, 213–225.
- ▶ Thompson, V. L. (1996). Perceived experiences of racism as stressful life events. *Community Mental Health Journal, 32*, 223–233.
- ▶ Tugade, M. M., & Fredrickson, B. L. (2004). Resilient individuals use positive emotions to bounce back from negative emotional experiences. *Journal of Personality and Social Psychology, 86*, 320–333.
- ▶ Turner, R., & Avison, W. R. (2003). Status variations in stress exposure: Implications for the interpretation of research on race, socioeconomic status, and gender. *Journal of Health and Social Behavior, 44*, 488–505.
- ▶ Ulbrich, P. M., Warheit, G. J., & Zimmerman, R. S. (1989). Race, socioeconomic status, and psychological distress: An examination of differential vulnerability. *Journal of Health and Social Behavior, 30*, 131–146.

- ▶ Utsey, S. O. (1998). Assessing the stressful effects of racism: A review of instrumentation. *Journal of Black Psychology, 24*, 269–288.
- ▶ Utsey, S. O., Chae, M. H., Brown, C. F., & Kelly, D. (2002). Effect of ethnic group membership on ethnic identity, race-related stress and quality of life. *Cultural Diversity and Ethnic Minority Psychology, 8*, 366–377.
- ▶ Utsey, S. O., & Ponterotto, J. G. (1996). Development and validation of the Index of Race-Related Stress (IRRS). *Journal of Counseling Psychology, 43*, 490–501.
- Utsey, S. O., Ponterotto, J. G., Reynolds, A. L., & Cancelli, A. A. (2000). Racial discrimination, coping, life satisfaction, and self-esteem among African Americans. *Journal of Counseling and Development, 78*, 72–80.
- Vazquez Garcia, H. A., Garcia Coll, C., Erkut, S., Alarcon, O., & Tropp, L. R. (2000). Family values of Latino adolescents. In M. M.-S. F. A. Villarruel (Ed.), *Making invisible Latino adolescents visible* (pp. 239–263). New York: Falmer Press.
- ▶ Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology, 54*, 1063–1070.
- Werner, E. E., & Smith, R. S. (2001). *Journeys from childhood to midlife: Risk, resilience, and recovery*. Ithaca, NY: Cornell University Press.
- 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.
- Wright, M. O. D., & Masten, A. S. (2005). Resilience processes in development: fostering positive adaptation in the context of adversity. In R. B. Brooks & S. Goldstein (Eds.), *Handbook of resilience in children* (pp. 17–37). New York: Kluwer Academic/Plenum Publishers.
- ▶ Zautra, A. J., Johnson, L. M., & Davis, M. C. (2005). Positive affect as a source of resilience for women in chronic pain. *Journal of Consulting and Clinical Psychology, 73*, 212–220.
- ▶ Zautra, A. J., Reich, J. W., Davis, M. C., Potter, P. T., & Nicolson, N. A. (2000). The role of stressful events in the relationship between positive and negative affects: Evidence from field and experimental studies. *Journal of Personality, 68*, 927–951.