

Racist Experiences and Health Outcomes: An Examination of Spirituality as a Buffer

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The purpose of this study was to extend the research body, which implicates the insidious effects of racism on health outcomes. Specifically, this study tested the assumption that perception of racist experiences would predict differently for self-report symptoms (Symptom Checklist-90-Revised) compared to an objective measure of health (cardiovascular [CV] reactivity to standard laboratory stressors). It was also hypothesized that the cultural variable spirituality would moderate this relation. A total of 155 undergraduate students of African descent from a historical Black university in the mid-Atlantic region were recruited to participate in the current study. Perceived racist experiences and racial stress were commonly associated with negative health symptoms and showed an inverse relation to the CV responses. In addition, spirituality served as a significant moderator between racial stress and negative psychological health symptoms. Several implications are discussed in light of these findings.

Increasingly, racial/ethnic health disparities have become a major concern in the public health arena. Studies have repeatedly found that African Americans are overrepresented among those with chronic and preventable diseases. In efforts to understand the etiology of this global epidemic, the plethora of these investigations has focused on the importance of genetic and physiological differences (Armstead, Lawler, Gordon, Cross, & Gibbons, 1989; R. Clark, Anderson, Clark, & Williams, 1999; Cohen & Northridge, 2000). Fewer studies have taken into consideration the psychosocial implications of this social dilemma. Many people fail to realize that the social problems plaguing the African American community are symptomatic of a more general societal problem that emanates from generations of oppression

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(Semmes, 1995). African Americans are often faced with living in dilapidated housing conditions, inadequate health care treatment, and limited educational and job opportunity. Consequently, these conditions produce a type of stress that gnaws away at family life, interpersonal relationships, self-esteem, and eventually, the physical health of Black people (Billingsley, 1992; Harrell, 1999; A. P. Jackson & Sears, 1992; Krieger & Sidney, 1996; Landrine & Klonoff, 1996). Increasingly, scholars have come to recognize these ubiquitous forms of stress as outgrowths of racism.

The unparalleled health disparities that exist between African Americans and their White counterparts can fundamentally be understood within the context of racism and cultural hegemony (Harrell, 1999; C. P. Jones, 2000; Semmes, 1995). Several scholars have delineated a culturally sensitive model in understanding the pathogenic pathways in which racism affects the health status of African Americans (e.g., N. B. Anderson, McNeilly, & Myers, 1992; R. Clark et al., 1999; Harrell, Merritt, & Kalu, 1998; Taylor & Grundy, 1996). The underlying assumption of these models is the pervasive psychological stress of racism. Research has consistently shown that persistent exposure to chronic stress can lead to poor health outcomes (N. B. Anderson et al., 1992; J. S. Jackson et al., 1996; Krieger & Sidney, 1996). Subsequently, African Americans suffer disproportionately from stress-related diseases (i.e., high blood pressure, hypertension, stroke, and coronary heart disease).

Although researchers note the importance of examining the effects of racism on health, empirical investigations are sparse. The corpus of efforts includes both laboratory and field studies. The general findings of the laboratory investigations indicate that African Americans exhibit distinct patterns of physiological arousal and increases in negative affect when encountering racist stimuli (Armstead et al., 1989; D. R. Jones, Harrell, Morris-Prather, Thomas, & Omowale, 1996; Morris-Prather et al., 1996). Armstead and colleagues (1989) found significant increases in blood pressure during the film presentation of racist stimuli. Similar changes, however, were not evident for the anger-provoking and neutral situation. D. R. Jones and colleagues (1996) also reported significant changes in heart rate, digital blood flow, and electromyography when blatantly racist material was encountered via imagery or video modes. A Duke University study found pronounced increases in blood pressure and heart rate among a group of 30 healthy African American women when provoked in a racist debate with a White experimenter compared to the nonracial debate (McNeilly et al., 1995).

Empirical evidence from the field studies also corroborates the link between racist experiences and poor health outcomes (Bowen-Reid, Odera, Smalls, & Hayman, 2000; Krieger, 1990; Krieger & Sidney, 1996; Landrine

& Klonoff, 1996). Landrine and Klonoff (1996) found perceived racist encounters to be commonly associated with adverse health symptoms, such as depression, anxiety, hostility, and somatic complaints. Bowen-Reid and colleagues (2000) found supporting evidence when they surveyed a sample of Black college students. The results of this study showed perceived racial stress to be strongly related to poorer quality of life.

Previous studies have primarily focused on either self-reported measures of psychological and physical health symptoms (Bowen-Reid et al., 2000; Krieger, 1990; Krieger & Sidney, 1996; Landrine & Klonoff, 1996) or cardiovascular (CV) reactivity to racist stimuli via video mode or imagery (Armstead et al., 1989; D. R. Jones et al., 1996; Morris-Prather et al., 1996). A subjective measure of existing psychological and physical symptoms constitutes one measure of health status. The other index includes CV (i.e., blood pressure and cardiac) responses. The present investigation examines participants' physiological responses to a physical stressor (an isometric handgrip exercise) and a psychological stressor (a mirror tracer task) as a predictive marker of health outcome. Several prospective studies suggest that those prone to develop hypertension or heart disease show exaggerated cardiovascular reactivity to standard laboratory challenges (Boyce et al., 1995; Krantz & Manuck, 1984; Turner et al., 1994). The mirror tracer task requires active coping processes and tends to elicit cardiac beta adrenergic activity (Stephoe, 1995). The handgrip exercise primarily evokes blood pressure changes that include alpha adrenergic increases in total peripheral resistance (Allen, Stoney, Owens, & Matthews, 1993). Thus, these tasks represent predictors of later CV dysfunction and provide indices of the status of different CV regulatory mechanisms.

SPIRITUALITY AS A BUFFER

Several research investigations have suggested that coping responses to racially stressful situations can mitigate negative health consequences. Unfortunately, only a paucity of studies has emanated that examines culturally specific coping styles to racism (V. Clark & Harrell, 1992; Plummer & Slane, 1996; Utsey & Ponterotto, 2000). Most recently, Utsey and Ponterotto (2000) reported that African American women preferred the avoidance coping strategy for dealing with racist situations. Prior research by Krieger (1990) revealed that when African American women responded passively to racially stressful situations by denying the racist experience or suppressing emotional reactions to it, they were 4 times more likely to have high blood

pressure than those who actively coped with the acknowledged racist encounter. A follow-up study showed substantially higher systolic blood pressure (SBP) among African Americans that indicated they typically accepted unfair treatment and reported no personal occurrences of racist encounters compared to those who usually challenged unfair practices (Krieger & Sidney, 1996). These studies indicate that a suppressive or repressive coping response to racist stimuli may further exacerbate poor health conditions among African Americans.

Few studies, however, have explored the role culture plays in facilitating health (A. P. Jackson & Sears, 1992). Culture is very vital in the way a person responds and copes with psychological stress (Semmes, 1995). Cultural values such as spirituality, communalism, affectivity, and reciprocity play a significant role in the lives of persons of African descent (L. P. Anderson, 1991; Boykin, 1986; Kambon, 1999). Therefore, a viable model for understanding and reducing the adverse impact of racism should fundamentally incorporate an assessment of African worldview and culture (Kambon, 1999).

The present study explores the extent to which spirituality, as a measurable facet of personality, serves as a buffer between racism and stress-related health outcomes. Spirituality and religion are deeply rooted cultural values in the Black community. Spirituality represents the divine expression and belief of a higher power that governs one's existence. It acknowledges the connection between human life and the Creator (Ani, 1994). Converging research has shown a positive relationship between spiritual beliefs, religious practices, and health status (see Hill & Butler, 1995; Williams, Larson, Buckler, Heckmann, & Pyle, 1991). Certain studies have shown that people with a religious commitment may have fewer symptoms of mental and physical disorders and make fewer doctor visits than other nonreligious persons (Hill & Butler, 1995; Vanderpool & Levin, 1990). Other studies have discovered those persons with strong spiritual orientation or religious beliefs tend to have reduced risk of various diseases. For example, Vanderpool and Levin (1990) found a positive relationship between religion and hypertension. Individuals who regularly attended religious ceremonies were commonly associated with blood pressure within the normal ranges, whereas infrequent churchgoers were more often associated with hypertension.

RESEARCH AIMS AND HYPOTHESES

Given the prevalence of life-threatening illnesses and diseases among African Americans, it is important that scholars continue to investigate those factors that mitigate poor health outcomes. The research objectives of this study were twofold. First, the present investigation attempted to generalize

the effects of racist experiences to standard physiological and self-reported assessments of health. Past studies by Landrine and Klonoff (1996), Krieger (1990), and Kreiger and Sidney (1996) suggest that perceived racist discrimination may relate differently to self-report and physiological health measures. This study therefore tested the assumption that perception of racist experiences would predict differently for self-reported health symptoms (as measured by the Symptom Checklist-90-Revised) compared to an objective measure of health (CV reactivity to standard laboratory stressors). Based on previous research, it was hypothesized that perceived racist experiences would show a direct relationship with psychological and physical self-report symptoms (Landrine & Klonoff, 1996), whereby an inverse relationship was expected for the physiological findings (Krieger, 1990; Krieger & Sidney, 1996).

The secondary aim of the study was to determine the salutary effect of spirituality on health as a protective mechanism against racism. The operationalization of spirituality as a measurable facet of personality has not been extensively investigated. Most reports investigating this phenomenon tend to rely on religious commitment or affiliation. Thus, it is argued that one's spiritual beliefs in a divine intervention should prove to be more salient than religious dogma. The present study tested spirituality as a predictor of health outcomes. It was also tested for its function as a moderator in the relationship between racial stress and health status. It was hypothesized that spirituality would serve as a stress-reducing coping mechanism. Specifically, we expected that respondents with higher spirituality scores would be associated with better health symptoms and CV responses, whereas respondents with lower spirituality scores would show more negative health conditions.

METHOD

PARTICIPANTS

The participants in this study consisted of 155 Black undergraduate students from a historical Black college university located in the mid-Atlantic region of the United States. Seventy-nine percent of the sample were females ($n = 122$) and the remaining 21% were males ($n = 33$). Of the participants, 86 (56%) were freshmen, 47 (30%) were sophomores, 15 (10%) were juniors, and 6 (4%) were seniors. The participants' age ranged from 18 to 44, yielding a mean of 19.7.

MATERIALS

Schedule of racist events (SRE). The SRE (Landrine & Klonoff, 1996) was used to assess the prevalence of racism and perceived stressfulness of racist experiences. The measure consisted of 18 items that were rated on a 6-point Likert scale. The participants responded to each question three times: (a) frequency of racist event in the past year, (b) frequency of racist event during one's lifetime, and (c) perceived racial stress. Question 18 was not appraised. It asked respondents how different their life would be now if they had not been treated in a racist and unfair way in the past year and over their lifetime. The responses ranged from 1 = *same as now* to 6 = *totally different*. All three subscales yielded alpha coefficients of .87 or higher.

Spirituality Scale. The Spirituality Scale (Jagers, Boykin, & Smith, 1994) was used to assess spirituality. The Spirituality Scale is a 25-item scale designed to measure one's belief in and commitment to forces that transcend earthly bounds and to forces that serve as guideposts for one's life. The participants responded to their level of endorsement according to a 6-point scale that ranged from 1 = *completely false* to 6 = *completely true*. Also, the Spirituality Scale included five filler items, which were excluded from final computation. Validation studies using the Spirituality Scale have reported positive correlations with other religiosity measures (Jagers et al., 1994; Smith, 1994) and negative relations to mainstream orientation (Bowen, 1998; Hughes, 1995). The Spirituality Scale yielded an alpha coefficient of .78 in the present study.

Symptom Checklist-90-Revised (SCL-90-R). The SCL-90-R (Derogatis, 1994) was used to measure psychological and physical health outcomes. The SCL-90-R is a 90-item Likert-style self-report inventory. Response items are rated on a scale from 0 = *not at all* to 4 = *extremely*. The SCL-90-R is comprised of nine primary symptom dimensions (somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, psychoticism) and the Global Index of Psychological Distress. The 10 subscales were found to have reliable internal consistency, with alpha coefficients exceeding .70.

APPARATUS

Blood pressure monitor. An automated digital blood pressure monitor (Lafayette, Model UA-751) was used to measure SBP, diastolic blood

pressure (DBP), and heart rate at various intervals. The device is equipped with an inflatable cuff and small printer. The blood pressure cuff was attached to the left arm, which rested on a table in front of the participant.

Isometric handgrip (physical stressor). The handgrip (Lafayette, Model #78010) dynamometer is used as a physical stressor. It assesses an index of general body strength. The handgrip dynamometer can withstand pressures ranging from 0 to 100 kilograms. Prior to testing each participant, the experimenter provided a demonstration of the handgrip task. The handgrip was placed in the participant's right hand. If necessary, the handgrip could be adjusted to comfortably fit the size of the participant's hand. The participant positioned the handgrip at his or her side, holding it an approximately 20-degree angle from his or her body. The participant was then instructed by the experimenter to squeeze at maximum strength three times. The third time, the participant maintained the grip at 30% of his or her maximum voluntary contraction for approximately 1 minute.

Mirror tracer (psychological stressor). The mirror tracer (Lafayette, Model #58034) apparatus contains a mirror, which is mounted perpendicular to a six-pointed black star pattern. The star's inverted image is reflected in the mirror. A metal shield is connected to the device to block the direct view of the star. An attached stylus is used to trace along the star. The mirror tracer is also equipped with a signal device and counter to record error and rate. The mirror tracer apparatus was positioned on the table in front of the participant. It was adjusted accordingly to accommodate each participant's visibility. Each participant was instructed that he or she had approximately 1 minute to successfully trace the star as shown in the mirror.

PROCEDURES

In preparation for the study, a sign-up sheet was posted adjacent to the introductory psychology classrooms soliciting male and female students of African descent to participate in a study on psychological stress and health outcomes. A prerequisite for participating in the study included the participant's refraining from eating and/or drinking caffeine substance (i.e., soda, coffee, tea, or chocolate) and alcohol at least 2 hours before the experiment. Upon arrival, each participant was escorted to the laboratory setup. The experimenter read a standard script delineating the nature of the study and obtained consent from the participant. At least one other research assistant was present to witness the signing of the consent form. Next, the participant was queried about consumption intake (i.e., food, drinks, medication) taken

within the past 2 hours. Only 1 person reported drinking coffee, and another person reported smoking at least 2 hours before the experiment. Participants violating the request were excluded from data analysis.

Each participant engaged in two laboratory stressors, the mirror tracer task and the handgrip exercise, in random order. Participants assigned order A performed the mirror tracer task first; those participants assigned order B engaged in the handgrip exercise first. Cardiovascular responses were taken at five intervals: (a) pretask rest period (3 minutes), (b) mirror tracer stressor, (c) posttask rest period (3 minute), (d) handgrip stressor, and (e) final rest period (3 minutes). The last part of the study consisted of the participant filling out a battery of questionnaires in an adjacent room. Participants were debriefed and received two credit points for their participation.

PHYSIOLOGICAL DATA REDUCTION

The cardiovascular measures served as our objective indices of health. Scores were obtained for SBP, DBP, and heart rate during the two laboratory tasks and three rest periods. The physiological data for blood pressure were converted to mean arterial pressure (MAP) scores for each laboratory task. MAP serves as the closest index of a medium between SBP and DBP. MAP was calculated as $DBP + 1/3 (SBP - DBP)$. CV reactivity scores were computed as the difference between the MAP score on the task and the MAP for the final resting condition. Heart rate reactivity was also calculated using the final resting condition. The CV reactivity scores for the physical and psychological stressors represented the dependent variables used in the final regression computations.

STATISTICAL ANALYSES

Pearson's correlation was executed to determine the associations between self-reported measures of psychological and physical health symptoms as measured by the SCL-90-R to racist experiences (past year, lifetime, and perceived racial stress). Hierarchical multiple regression analyses were the central statistical method used to determine whether spirituality would buffer the relation between the racist stressor and adverse health outcomes. To test for moderator effects, procedures outlined by Baron and Kenny (1986) were implemented. An additive model was used where the predictor variable (perceived racial stress) was entered first into the equation. Step 2 included the additive effects of the moderator variable (spirituality). Finally, at Step 3, the multiplicative effects of the predictor and moderator (e.g., perceived racial stress \times spirituality) were added into the model. The moderator effect was

TABLE 1
Psychometric Properties for Self-Report Measures (N = 154)

	M	SD	α
Racist encounters in the past year	29.67	10.38	.87
Racist encounters in lifetime	38.21	13.49	.90
Perceived racial stress	39.15	16.82	.90
Somatization	7.69	6.74	.85
Obsessive-compulsive	10.88	7.30	.84
Interpersonal sensitivity	7.71	6.71	.86
Depression	12.32	9.68	.89
Anxiety	5.60	6.41	.88
Hostility	4.80	4.61	.83
Phobic anxiety	2.01	3.54	.81
Paranoid ideation	6.05	4.68	.75
Psychoticism	5.83	6.46	.84
Global index	61.29	49.21	.98
Spirituality	85.25	10.36	.72

assessed by comparing the R^2 change, following Step 2, for incremental validity over Step 1 (Baron & Kenny, 1986). A moderator effect is evident when the interaction term in Step 3 produces a significant increment in R^2 .

RESULTS

Psychometric properties of the SRE, SCL-90-R, and Spirituality Scale are found in Table 1. According to the SRE, 95% of the sample reported they experienced some form of racism within the past year. The most frequently reported incidents (74%) occurred from persons in the service industry (i.e., store clerks, waiters, bank tellers, etc.) or by strangers (68%). More than half of the sample (64%) indicated that at one point during the past year "they wanted to tell someone off for being racist but didn't say anything." Only 2 of the 154 respondents reported never experiencing any occurrence of racism in their lifetime. The participants nearly unanimously agreed (97.4%) they felt some degree of stress from the racist encounters.

Table 2 includes the results of the correlation analysis between perceived racist encounters and self-reported health symptoms. Several of the psychological and physical health symptoms significantly correlated with the SRE subscales. Respondents who indicated frequent racist encounters and greater

TABLE 2
Pearson's Correlation of Perceived Racist Encounters and
Self-Reported Health Symptoms (N = 154)

<i>Symptom Checklist-90-Revised</i>	<i>Racist Encounters in the Past Year</i>	<i>Racist Encounters in Lifetime</i>	<i>Perceived Racial Stress</i>
Somatization	.1382	.1810*	.2513**
Obsessive-compulsive	.1975*	.1909*	.2984**
Interpersonal sensitivity	.0644	.0750	.1598
Depression	.1579	.1376	.2298**
Anxiety	.1539	.1860**	.2435**
Hostility	.2122**	.2888**	.3237**
Phobic anxiety	.1034	.0680	.0882
Paranoid ideation	.2539**	.2455**	.2984**
Psychoticism	.1725*	.1591	.2578**
Global index	.1832**	.1919**	.2738**

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

perceived racial stress were more apt to report negative health symptoms. Phobic Anxiety and Interpersonal Sensitivity were the only two subscales that did not significantly correlate with at least one of SRE dimensions.

PREDICTIVE UTILITY OF PERCEIVED RACIST ENCOUNTERS TO CV REACTIVITY

Independent multiple regression analyses were conducted to determine the relationship between perceived racist experiences and CV reactivity. It was postulated that perceived racist encounters (past year, lifetime, and perceived racial stress) would significantly predict exaggerated CV responses to the psychological (mirror tracer) and physical (handgrip) stressors. This hypothesis was only partially supported. Preliminary analyses showed the physical (handgrip) stressor to generate more pronounced CV reactivity than the psychological (mirror tracer) stressor. The psychological (mirror tracer) stressor, however, proved to be a more robust predictor of perceived racist experiences. As shown in Table 3, inverse relations were evident for perceived racist experiences and CV responsivity to the psychological (mirror tracer) stressor. Past-year racist experiences negatively predicted blood pressure responses, $R^2 = .03$; $F(1, 147) = 3.99$, $p < .05$. Lifetime racist experiences and perceived racial stress negatively predicted heart rate reactivity, $R^2 = .06$; $F(1, 146) = 9.33$, $p < .005$, and $R^2 = .07$; $F(1, 146) = 10.36$, $p = .002$, respectively.

TABLE 3
Multiply Regression for Perceived Racist Experiences as
Predictors of Cardiovascular Responses to the Psychological Stressor
(Mirror Tracer Task)

	R ²	B	SE B	β	p value
Dependent variable: blood pressure reactivity					
Racist encounters in the past year	.03	-0.13	0.07	-0.16	.044
Racist encounters in lifetime	.01	-0.05	0.05	-0.09	.284
Perceived racial stress	.01	-0.04	0.04	-0.10	.245
Dependent variable: heart rate reactivity					
Racist encounters in the past year	.02	-0.16	0.10	-0.14	.091
Racist encounters in lifetime	.06	-0.23	0.07	-0.25	.003
Perceived racial stress	.07	-0.18	0.06	-0.26	.002

SPIRITUALITY AS A MODERATOR

Hierarchical multiple regression analyses were conducted to determine the extent to which spirituality moderates the relationship between the perceived racial stress and health outcomes (CV and self-report health measures). One specification for testing moderator effects is that the moderator variable itself should not be significantly correlated with the predictor variable nor the outcome variable (Baron & Kenny, 1986). This criterion was reasonably met. The Interpersonal Sensitivity subscale was the only variable negatively correlated with spirituality ($r = -.2440$; $p = .004$).

Separate hierarchical regression analyses were conducted for the CV measures (blood pressure and heart rate reactivity to the psychological (mirror tracer) and physical (handgrip) stressors). For each of the CV health indices, order of task administration and gender were entered into the model first as covariates due to their significant impact on the subsequent CV variables. As previously stated, successive blocks included the predictor variable perceived racial stress, followed by the moderator variable spirituality and the last block the interaction term. No evidence of moderator effects was revealed for any of the CV analyses.

The next set of hierarchical multiple regression analyses included the self-reported health symptoms as the dependent variables and perceived racial stress, spirituality, and the interaction term as the independent variables. As shown in Table 4, perceived racial stress significantly predicted these sets of health variables with the exception of phobic anxiety scores. The findings suggest that the more respondents perceived their racist encounter as being stressful, the higher their scores appeared for poor health conditions.

TABLE 4
The Moderator Effects of Spirituality Between Perceived
Racial Stress and Self-Reported Psychological Health Symptoms

<i>Dependent Variable</i>	<i>R²</i>	<i>B</i>	<i>SE B</i>	<i>β</i>	<i>Significance of t</i>
Somatization					
Step 1	.07	0.01	0.00	0.26	.001
Step 2	.07	-0.00	0.00	-0.07	.088
Step 3	.09	-2.83	2.10	-0.78	.180
Obsessive-compulsive					
Step 1	.08	0.01	0.00	0.29	.000
Step 2	.10	-0.01	0.00	0.31	.000
Step 3	.12	-4.43	2.63	-0.96	.094
Interpersonal sensitivity					
Step 1	.02	0.01	0.00	0.17	.040
Step 2	.09	-0.02	0.00	-0.26	.000
Step 3	.11	-4.51	2.70	-0.95	.098
Depression					
Step 1	.05	0.01	0.00	0.23	.006
Step 2	.07	-0.01	0.00	-0.15	.060
Step 3	.10	-5.33	2.75	-1.11	.054
Anxiety					
Step 1	.07	0.01	0.00	0.26	.001
Step 2	.09	-0.01	0.00	-0.15	.065
Step 3	.11	-3.82	2.39	-0.91	.117
Hostility					
Step 1	.12	0.02	0.00	0.34	.000
Step 2	.15	-0.01	0.00	-0.18	.020
Step 3	.16	-3.15	2.71	-0.65	.246
Phobic anxiety					
Step 1	.01	0.00	0.00	0.09	.254
Step 2	.02	-0.00	0.00	-0.12	.146
Step 3	.02	-6.87	1.85	-0.22	.712
Paranoid ideation					
Step 1	.09	0.01	0.00	0.30	.000
Step 2	.11	-0.01	0.01	-0.16	.046
Step 3	.17	-8.35	2.77	-1.66	.003
Psychoticism					
Step 1	.08	0.01	0.00	0.28	.001
Step 2	.09	-0.01	0.00	-0.11	.154
Step 3	.13	-5.60	2.31	-1.37	.017
Global index					
Step 1	.08	0.01	0.00	0.29	.001
Step 2	.11	-0.01	0.00	-0.18	.027
Step 3	.14	-4.28	2.09	-1.15	.043

NOTE: In Step 1, the predictor variable perceived racial stress was entered into the first block; in Step 2, the moderator variable spirituality was added to the next block; and in Step 3, the product of the predictor and moderator was added in the final block. Significant R^2 change was assessed as each block was entered into the equation.

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

For several of the self-reported psychological health variables (e.g., the Global Index of Psychological Distress, psychoticism, depression, and paranoid ideation), significant incremental changes were evident when the multiplicative effects were added into the model, accounting for up to 17% of the variance. This provides support of a moderator effect. Figure 1 depicts the moderating effects of spirituality between perceived racial stress and the psychological health variables. To decompose the interaction effects, a median split of spirituality scores was used, dividing the sample into high and low spirituality groups. Separate regression analyses were implemented for the two groups. As much as 30% percent of the variance in symptom report was accounted for in these relationships. The findings repeatedly showed that when respondents in the high spirituality group perceived their racist encounters as being stressful, there was no significant relationship to their psychological health. On the other hand, those persons with lower spirituality scores tended to show a direct relationship between perceived racial stress levels and poor health outcomes.

DISCUSSION

The overarching purpose of this study was to assess the insidious effects of racism on health outcomes among Black college students. The present findings support the growing body of literature implicating the detrimental repercussions of this social disease. As shown, racism is still prevalent in the lives of persons of African descent. Ninety-nine percent of the Black college-aged sample reported that they had experienced some form of racism in their lifetime. Of these participants, 97% of the sample indicated they were stressed by their racist encounters. The high rate of exposure is particularly alarming given the harmful effects associated with stress such as hypertension, strokes, respiratory problems, and other social ills (e.g., alcoholism, substance abuse, homicides, and suicides). Current findings revealed that perceived racist encounters and stress appraisal of the event were positively correlated with somatic complaints (i.e., headaches, chest pains, nausea, etc.), negative affect (depression, anxiety, hostility, psychoticism, obsessive-compulsive, paranoia), and overall psychological distress. Landrine and Klonoff (1996) also reported similar findings in their investigation.

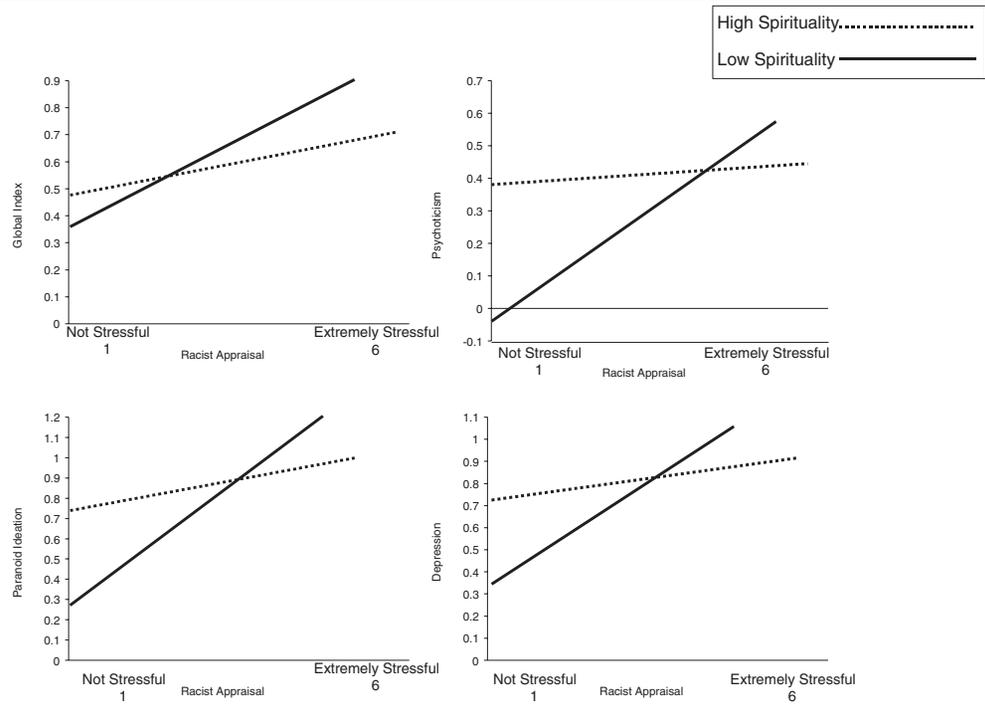


Figure 1: The Moderator Effects of Spirituality Between Perceived Racial Stress and Psychological Health Symptoms

CORRELATES OF CARDIOVASCULAR REACTIVITY

Another objective of this study was to investigate the effects of racist experiences and cognitive appraisal of racist events (perceived racial stress) on CV responsivity. One of the arguments posed in this study was that CV responses constitute a marker for negative health outcomes in the future (Boyce et al., 1995; Turner et al., 1994). Recent racist episodes and racial stress were negatively related to CV reactivity for the psychological stressor but not to the physical stressor. Paradoxically, individuals reporting few racist encounters were more apt to exhibit heightened CV responses to the psychological stressor. Krieger and Sidney (1996) also observed that the Black participants in their study who reported they had not experienced racial discrimination and generally accepted unfair treatment tended to have higher blood pressure as well. Such findings may lend credence to the notion that denial of racist experiences may be associated with elevated blood pressure (Krieger, 1990; Krieger & Sidney, 1996). Steptoe (1995) also argued that people who suppress negative emotions during stressful encounters may be at greater risk for CV diseases. The findings of this study and previous research suggest that those individuals who do not openly acknowledge their racist experiences may be at greater health risk than those who recognize and concertedly address its existence. Clearly, more research is warranted before this claim can be definitively asserted.

Several studies have looked at the effects of laboratory stressors and CV reactivity. Although some studies have postulated that psychological stressors such as the mirror tracer task are more generalizable to the real world, some researchers question the validity of this assumption (see Parati et al., 1986). The small percentage of variance accounted for in the relationship between racist experiences and physiological responses suggests that it is still premature to generalize laboratory CV reactivity to how an individual will respond in the real world. Certainly there is no basis for assuming that the responses to these tasks would predict real-world responses to racism. In fact, Burns and Katkin (1993) argued that many of the failures to generalize laboratory to real-life responses result from attempts to establish links between challenging situations that are dissimilar. Thus, more research is needed that specifically takes into account real-world experiences of racism. The optimal route would be to conduct ambulatory studies in which blood pressure responses are measured throughout the day, along with a written journal of activities to document racist incidents and CV responses (Kamarck et al., 1998).

IMPORTANCE OF A SPIRITUAL ETHOS

The other central aim of this study was to assess the buffering effects of spirituality. A converging body of research implicates the positive effects religious beliefs have on psychological and physical health outcomes (Hill & Butler, 1995; Larson, 1996). It has been found that individuals who have a strong spiritual orientation or religious beliefs tend to have fewer stress-related health problems (see Williams et al., 1991). The present findings support the positive impact of spiritual values on mental and physical well-being. The regression analyses revealed that spirituality significantly moderated or buffered the relationship between perceived racial stress and psychological health outcomes. Interestingly, the significant association between racial stress and negative health outcomes was only apparent among the participants in the low spirituality group. As respondents with lower spirituality scores perceived their racist encounters as being stressful, the more likely they were to report adverse health symptoms. This was not the case, however, for those in the high spirituality group.

The current findings suggest that although individuals may be exposed to similar stressors, the manner in which that stress is appraised may produce distinct outcomes. Although both spirituality groups appraised their racist encounters as being stressful, the disparity among the respondents perhaps can be attributed to the secondary appraisal process. Secondary appraisal is defined as the point at which an individual assesses whether or not they have the power to change the situation (Lazarus & Folkman, 1984). Individuals who are more spiritual in nature are more likely to pray, meditate, and trust in their faith in God to cope with racist or unpropitious situations. Consequently, those individuals in the low spirituality group are likely to have internalized the negative affect due to inadequate coping mechanisms, which in turn transfer into symptomatic problems.

CONCLUSION

Given the reality of racism and the stressful nature of this social disease, it is imperative that research endeavors continue to unearth combative approaches that would buffer the toxic nature of racism. Spirituality is emerging as a viable facet in Western science for improving the health status, lifestyle, and mental well-being of individuals. Spirituality has always played a central role in the Black community. The present study further supports how it serves as an effective coping mechanism and source of resiliency in the

lives of Black people. Although most work has focused on religious beliefs and ideologies, it is also important that efforts be directed toward understanding the underlying mechanisms of spirituality. Spirituality is a very complex phenomenon. It imperative that this domain be further explored to include a multidimensional approach that assesses what is likely to prove a multifaceted construct.

Moreover, as racism continues to change its face, it is important that more refined instruments be devised to detect its subtle nature. Most studies, including the present, have primarily focused on individual and institutional experiences of racism. It is essential, however, that future research also study the impact of cultural racism. Cultural racism represents a more global and pervasive stressor (J. M. Jones, 1997). In fact, cultural racism might prove to be an even greater risk factor because of its inconspicuous nature. By exposing and validating the various dimensions of racism, this would further strengthen the knowledge base regarding the etiology of certain stress-related diseases, hopefully with the prospects of offering policy implications.

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