Published in final edited form as:

Sociol Perspect. 2013 ; 56(1): 25–48.

Racial and Gender Discrimination in the Stress Process: Implications for African American Women's Health and Well-Being

Brea L. Perry, Kathi L. H. Harp, and Carrie B. Oser

University of Kentucky

Abstract

In recent decades, sociologists have increasingly adopted an intersectionality framework to explore and explain the complex and interconnected nature of inequalities in the areas of race, class, and gender. Using an inclusion-centered approach and a sample of 204 low-socioeconomic-status (SES) African American women, the authors theorize and explore the role of racial and gender discrimination in the stress process. Analyses examine relationships between social stressors (racial and gender discrimination) and individual stressors occurring in each of six distinct social contexts. Furthermore, the authors evaluate the effects of racial and gender discrimination as compared to individual stressors on three indicators of mental health and well-being. Findings suggest that racial and gender discrimination increases risk for poor health and low well-being, working both directly and indirectly through increased vulnerability to individual stressors. This research demonstrates the value of a more comprehensive study of stressors that influence the health of low-SES African American women and other multiply disadvantaged groups.

Keywords

African American; mental health; stress; discrimination; intersectionality

In recent decades, sociologists have increasingly adopted an intersectionality framework to explore and explain the complex and interconnected nature of inequalities in the areas of race, class, and gender (Collins 1998; Davis 2008; McCall 2005. Choo and Ferree (2010) argue that this concept has frequently served as a theoretical buzzword, but has not yet achieved its potential as a methodological approach. In particular, while intersectionality has become a prominent feature of the sociological study of gender, it is seldom applied to other areas of research. Choo and Ferree (2010:130) lay out a theoretical and methodological agenda describing how “intersectional analysis could be more widely used to inform understandings of core sociological issues.”

Using an inclusion-centered approach to intersectionality (Choo and Ferree 2010) and drawing on sociological theories of inequality and stress, we theoretically and methodologically integrate racial and gender discrimination experiences into social stress theory. Using data from 204 low-income African American women in the B-WISE (Black Women in a Study of Epidemics) project, we explore relationships between social stressors (racial and gender discrimination) and individual stressors occurring in each of six distinct social contexts (i.e., social network loss, motherhood, employment and finances, personal injury and accidents, adult victimization, and child victimization). Furthermore, we evaluate

the magnitude of the effects of racial and gender discrimination stressors as compared to individual stressors on three indicators of mental health and well-being. The goal of this research is to demonstrate the value of a more comprehensive study of stressors that influence the health of low-income African American women and other multiply disadvantaged groups that have often been at the margins of traditional stress research.

Intersectionality and the Stress Process

The intersectionality approach was developed in response to the observation that theories of gender and racial inequality had focused almost exclusively on the viewpoints and experiences of white women and African American men, respectively (e.g., hooks 1981; Hull et al. 1982). Kimberlé Crenshaw (1991) first employed the term *intersectionality* to describe the impact of multiple identities and forms of oppression on experiences of inequality. Focusing on African American women's location at the intersection of disadvantaged gender, racial, and class statuses, advocates of this perspective argue that the oppressions associated with each of these disadvantaged statuses combine to produce linked forms of injustice that are not captured in mainstream research (Collins 2000). According to Choo and Ferree (2010), an “inclusion-centered” intersectional analysis is one that focuses on social processes and patterns within groups that are multiple minorities, gaining insight from their unique standpoint into both majority power and minority disadvantage. This strategy reveals mechanisms of inequality operating in the lives of women of color, in particular turning the lens on processes occurring within race-gender subgroups and shifting their experiences from the margins to the focal point (Collins 1990).

An inclusion-centered study of the social stress process facilitates identification of risk factors that are influential among women of color, but may be imperceptible in studies of stress and mental health where minority and majority groups are aggregated and race and gender are employed as independent control variables. In addition, this strategy promotes an in-depth understanding of the domains of risk that pose the greatest threat for individuals in unique positions of disadvantage at the intersection of gender, race, and low socioeconomic status. An inclusion-centered approach also permits an examination of the various ways that stressors rooted in systems of racial and gender inequality are related to more traditional individual-level stressors (e.g., divorce, job strain, serious illness) that presumably impact members of both minority and majority groups.

Pearlin et al. (1981) developed the now-classic model of the stress process to explain the etiological role of social stressors in health and illness. Sources of stress may be either discrete adverse events or chronic strains, and these may work in conjunction such that major life events exacerbate preexisting strains or introduce new ones (Pearlin et al. 1981; Williams and Mohammed 2009). Most stress research focuses on these individual stressors, but there is growing concern with social stressors like racial and gender discrimination that are rooted in broader systems of inequality (Meyer 2003; Pearlin 1999). Recent research suggests that comprehensive conceptualizations of stress that include both individual and social stressors provide a more powerful explanation for racial/ethnic, gender, and socioeconomic health disparities (Turner and Avison 2003). Individual and social stressors are associated with psychological distress and other adverse health outcomes, particularly if stressors threaten self-concept or require adaptation. However, social support, mastery, and self-esteem are mediating resources that may neutralize the adverse effects of stressors or reduce their impact on health.

Because social inequality is a central aspect of the stress process, considering stressors from an intersectional viewpoint is a natural extension of existing theory. Sociologists argue that the organization of social life, systems of oppression, and political and economic

opportunity structures in the United States results in predictable patterns of risks and stressors that advantage powerful groups (Aneshensel, Rutter, and Lachenbruch 1991; McLeod and Owens 2004; Thoits 2010; Turner, Wheaton, and Lloyd 1995). Cultural values, behaviors, and attributes of less powerful groups are frequently undervalued or even at odds with the dominant culture, leading to persistent threats to the self-concept and identity of women, people of color, and those from low socioeconomic backgrounds (Walker 2007; Walker et al. 2008). Exposure to and internalization of stereotypes and prejudices may lead to low self-esteem, sense of mastery, and motivational deficits for individuals in low-status positions (Jang et al. 2003; Keyes 2009; Pearlin et al. 1981; Rosenberg and Pearlin 1978). Also, disadvantaged status groups often have limited access to resources for avoiding stressors and opportunities for managing emotional consequences of stress (Brondolo et al. 2009). Finally, social stressors like sexism and racism are experienced exclusively by women and members of minority groups, and these types of stressors may be more threatening and require greater adaptation than individual stressors (Grollman 2012; Meyer 2003; Thoits 2010).

Social Stressors: The Role of Racial and Gender Discrimination in the Stress Process

For African Americans, racism is often a source of chronic strain and psychological distress (Brown, Keith, Jackson, and Gary 2003; Williams 1999). At least three sources of racism-related stress have been identified: (1) Episodic stress derives from discrete and relatively infrequent experiences of direct racial discrimination; (2) daily hassles come in the form of racial microaggression, including more subtle and often unintentional degradations and exclusions; and (3) chronic strain operates through limited opportunities and unequal access to resources that reflect institutional discrimination and stereotypes that conceal the talents and contributions of African Americans (Franklin, Boyd-Franklin, and Kelly 2006; Harrell 2000; Sue 2010; Sue et al. 2008). These forms of stress can adversely affect mental health, operating through physiological, psychological, and behavioral pathways (Clark, Anderson, Clark, and Williams 1999; Harrell, Hall, and Tagliaferro 2003; Ocampo 2000; Pearlin 1999). Some argue that social stressors deriving from systems of inequality (e.g., racial or gender discrimination) may provoke a more severe psychological and physiological response than generic individual stressors because they are inherently personal and humiliating (Meyer 2003), though this comparison has rarely been tested empirically.

Many studies have documented that various forms of racism and discrimination influence mental health and well-being. For instance, perceived racism is significantly associated with subjective well-being, psychological distress, depression, and substance abuse among African Americans (see Brown et al. 2000; Brown et al. 2003; Buchanan and Fitzgerald 2008; Kessler, Mickelson, and Williams 1999; Schulz et al. 2000; Sellers, Caldwell, Schmeelk-Cone, and Zimmerman 2003). Similarly, discrimination events are linked to worse self-reported health and to increased risk for hypertension, infectious illnesses, and lifetime history of a range of physical diseases (Karlsen and Nazroo 2002; Krieger 1990; Kwate, Valdimarsdottir, Guevarra, and Bovbjerg 2003).

For African American women, racism-related stress may be compounded by experiences of sexism. Like racism, sexism is reflected in individual attitudes, collective ideology, and the structure of social institutions. Chronic and acute stressors associated with sexism are linked to women's mental and physical health outcomes. Recent studies indicate that gender discrimination predicts psychological distress, anxiety, anger, obsessive-compulsivity, somatic symptoms, and depression (Klonoff, Landrine, and Campbell 2000; Landrine, Klonoff, Gibbs, Manning, and Lund 1995; Moradi and Subich 2003). Although there is less research on physical health outcomes, studies do find a link to chronic conditions (e.g.,

hypertension, migraine headaches) and functional limitations (Goldenhar et al. 1998; Krieger 2000; Landrine and Klonoff 1994; Pavalko, Mossakowski, and Hamilton 2003).

Some researchers have examined racism and sexism through an intersectionality lens, arguing that African American women experience a unique form of oppression that is specific to this race-gender subgroup (Collins 1986; hooks and Mesa-Bains 2006; Thomas, Witherspoon, and Speight 2008). Racism and sexism are inextricably intertwined, combining into one hybrid force that is founded in the devaluing of women and racist perceptions of gender roles (Essed 1991). Throughout history, essentializing and contradictory images of African American women have pervaded U.S. culture (Collins 1986). Commonly held stereotypes and media images portray young African American women as dangerous, sexually promiscuous, and prone to violence. Alternatively, older African American women are viewed as “mammy figures”—nurturing, servile, and passive (Thomas et al. 2008). While all race-gender subgroups are susceptible to problematic sets of stereotypes, the confluence of representations of black womanhood create a system of oppression that works to silence African American women, making them vulnerable to sexual violence, discrimination, and sexism in ways that white women are not (Collins 2000; Sue 2010).

Existing findings underscore that racism and sexism are linked. At the simplest level, racial and gender discrimination are correlated (King 2003; Moradi and Subich 2003). More specifically, a recent study suggests that multiply disadvantaged individuals face greater exposure to different forms of discrimination than their advantaged or singly disadvantaged counterparts, and that experiencing multiple forms of discrimination is associated with poorer mental health relative to racial or gender discrimination alone (Grollman 2012). Also, instances of discrimination attributed to simultaneous racism and sexism are commonly reported among African American women and are associated with elevated stress levels and psychological distress, while events attributed to sexism alone are not (Thomas et al. 2008). For African American women, gendered racial identity has greater salience compared to the separate constructs of racial or gender identity, indicating that both of these social statuses simultaneously influence perceptions of self and psychological distress (Thomas, Hacker, and Hoxha 2011). This research underscores the inseparable nature of racism and sexism in the lives of African American women. As a result, it may be difficult for women to distinguish the impact of racism and sexism. Rather, discrimination experiences may be attributed equally to both ideologies (Collins 1998; Collins 2004; Essed 1991; King 2003).

Cumulative Disadvantage: Indirect Effects of Racial and Gender Discrimination

In addition to having direct adverse effects, racial and gender discrimination may also give rise to additional individual stressors, indirectly increasing risk for mental health problems through denial of opportunities and systematic stratification into stressful social roles and contexts (Brown 2003; Pearlin et al. 2005; Taylor and Turner 2002). This phenomenon—often called stress proliferation (Pearlin 1999; Pearlin et al. 2005)—reflects the tendency for early and chronic stressors to spread outward into other domains, causing secondary stressors (Turner and Avison 2003). Stress proliferation due to persistent racism and sexism may be one mechanism through which early structural inequalities associated with being a low-socioeconomic status (SES) African American woman widen over the life course, creating cumulative disadvantage among people at the intersection of multiple minority statuses (Geronimus, Hicken, Keene, and Bound 2006; Turner and Lloyd 1995; Walsemann, Geronimus, and Gee 2008).

Evidence suggests that African American women are more likely to be exposed to stressful events than other groups (Aneshensel et al. 1991; Hatch and Dohrenwend 2007; Pearlin 1999; Turner et al. 1995), and this process may be especially pronounced among women experiencing high levels of racial and gender discrimination. For example, discrimination can structure economic outcomes by channeling women and minorities into lower-status positions, blocking access to female and African American mentors and social networks that provide information and support, and hindering promotion and advancement (McCoy 1994; Pager and Shepherd 2008). In turn, economic deprivation forces many African American women to live in segregated neighborhoods with high crime rates, increasing the likelihood of being mugged, robbed, assaulted, or witnessing violent crimes (Aneshensel 2010; Sampson and Wilson 2005). Finally, African American women are disproportionately vulnerable to sexual and intimate partner violence because of racist and sexist stereotypes that portray them as promiscuous and emasculating (Essed 1991; Thomas et al. 2008). These attitudes promote victim-blaming and a tolerance for violence against African American women both within and outside their communities. While all African American women are probably more likely than their white and male counterparts to experience individual stressors, the principles of stress proliferation and cumulative disadvantage predict that these patterns are exacerbated among women who have been victims of persistent racial and gender discrimination.

Discrimination may also contribute to cumulative disadvantage by intensifying the stress response to subsequent negative incidents (Geronimus et al. 2006; Turner and Lloyd 1995). This process is closely related to the kindling hypothesis, which suggests that individuals exposed to high levels of stress or to particularly traumatic events become neurobiologically sensitized to future stressors via the hypothalamic-pituitary-adrenal (HPA) axis (Monroe and Harkness 2005). Subsequent to early chronic or traumatic stress, even minor negative experiences can induce mental health problems. Along the same lines, experiencing persistent racial and gender discrimination may color interpretations of both social and individual stressors, leading African American women to become sensitive to perceiving subtle biases and discriminatory acts. Patricia Hill Collins (1986:21) argues that this sensitivity derives from being “the outsider within,” noting that African American women have a unique standpoint on social inequality by virtue of their status working first as slaves and later as employees in the households of white families. As a result, “Black feminists who see the simultaneity of oppression affecting Black women appear to be more sensitive to how these same oppressive systems affect Afro-American men, people of color, women, and the dominant group itself.”

These explanations are consistent with research suggesting that African American women become more distressed in response to witnessing or experiencing discrimination than African American men (Greer, Laseter, and Asiamah 2009; Morris-Prather et al. 1996; Szymanski and Stewart 2010). Similarly, the association between racial discrimination and mental health has been found to be stronger in women than in men (Borrell et al. 2006). Indeed, women tend to be more sensitive in interpersonal interactions and relationships than men more generally, which social psychologists have attributed to the subordinate status of women in most societies (Snodgrass 1985). Thus, by virtue of their double (and often triple, in the case of women in poverty) status disadvantage, African American women who have been exposed to racism and sexism may be uniquely perceptive of and affected by others' behavioral motivations.

Experiencing persistent devaluation can also trigger social psychological processes that reduce African American women's resources for coping with stress (Meyer, Schwartz, and Frost 2008; Pearlin et al. 2005). Research suggests that racial and gender discrimination lead to low self-esteem, an external locus of control, cultural mistrust, and other characteristics

that increase vulnerability to mental health problems (Brown 2003; Brown et al. 2003; Krieger, Rowley, Herman, Avery, and Phillips 1993). Moreover, racial discrimination has been linked to low eudaimonic well-being—a concept that reflects engagement in life challenges, sense of purpose, self-acceptance, autonomy, and environmental mastery—but some research indicates that this effect is limited to women (Ryff, Keyes, and Hughes 2003). This suggests that the relationship between social stressors and coping resources may be particularly pronounced among low-SES African American women and others who face multiple status disadvantages, reducing one's capacity for avoiding stress or neutralizing its effects. Taken together, research on cumulative disadvantage suggests that African American women who have been exposed to high levels of racial and gender discrimination may be disproportionately sensitized to stressors through neurobiological and social psychological pathways, and may also possess fewer coping resources for avoiding the adverse mental health effects of individual and social stressors.

In sum, because the existing literature points to direct and indirect effects of racial and gender discrimination in the stress process, it is critical to more closely examine patterns of stressors among socioeconomically disadvantaged African American women, shifting their experiences from the margins to the center of analysis (Collins 1990). Indeed, social scientists have argued that stress research is not sufficiently comprehensive, and does not adequately represent the experiences of disadvantaged groups, including racial/ethnic minorities, women, and people in poverty (Pearlin et al. 2005; Thoits 1995; 2010; Turner and Avison 2003). This can lead to underestimating the prevalence of adverse life events and stressors in the lives of African American women and others with multiple status disadvantages, as well as the magnitude of their impact on mental health (Grollman 2012).

To improve our understanding of the role of social stressors in the stress process among multiply disadvantaged individuals and to demonstrate the value of inclusion-centered research, we examine the following questions in a sample of low-SES African American women: (1) Are racial and gender discrimination associated with individual stressors occurring in each of six distinct social contexts (e.g., social network loss, motherhood, employment and finances, personal injury and accidents, adult victimization, and child victimization)? (2) Does discrimination affect mental health and well-being, and what is the magnitude of these effects relative to individual stressors? And (3) do individual stressors mediate the relationships between racial and gender discrimination and mental health and well-being? This analysis contributes to theories of social inequality and the stress process by identifying linkages between social stressors, individual stressors, and mental health outcomes among multiply disadvantaged individuals. Moreover, consistent with a number of recent publications in *Sociological Perspectives* (Botchkovar and Hughes 2010; De Coster 2005; Lu 2011; Marcussen, Ritter, and Safron 2004), our research highlights the versatility of the stress process and the value of studying stress in diverse social groups and contexts.

Method

Sample

Data are from the B-WISE project, which seeks to identify risk and protective factors in the epidemiology of health problems in a nonrandom sample of African American women. Parallel data are being collected from prisoners and probationers to make comparisons across criminal justice status. However, only the community sample is used in these analyses. Because of the high rate of drug use among prisoners, drug users were oversampled.

Participants in the community sample were recruited using newspaper ads and fliers posted in various parts of the city with a large African American population (based on census data).

Eligibility criteria included (1) self-identifying as an African American woman, (2) being at least eighteen years old, and (3) not currently being involved in the criminal justice system. Women were recruited until the target sample of 200 was reached. Participants were paid \$20 for completing the baseline interview. All data were collected by African American female interviewers using Computer Assisted Personal Interviewing (CAPI) software. Interviews were face-to-face and lasted approximately three hours.

After deletion of missing data (two cases dropped), the analysis sample contains 204 African American women. These women report an average of 12.75 years of education and an average age of 36.39 years. The mean annual household income among respondents is \$20,850, and 13 percent of the women in the sample were married. Thus, women in the B-WISE sample are not representative of African American women nationally. The median household income in the sample (\$17,500) and the percent college educated (15 percent) are significantly different from national statistics for African American women (\$29,423, $z = -6.44$, $p < .001$ and 24%, $z = 2.57$, $p < .01$), but not significantly different from the median in the zip codes from which the sample was primarily drawn (2000 Census). Also, the percent currently married in the B-WISE sample (13 percent) is significantly different from both the national percentage and the percentage in the sampled zip codes (26%, $z = 3.71$, $p < .001$ and 29%, $z = 4.57$, $p < .001$, respectively; 2000 Census). In all, the results presented here are based on a nonrandom sample with a lower socioeconomic status and marriage rate than all African American women living in the United States.

In addition, about one-third of the sample had used illicit drugs in the past month. Since the high number of drug users could introduce bias, a dummy variable for any illicit drug use (1 = yes, 0 = no) is included in all models. However, controlling for past month drug use does not change substantive findings. Also, interaction terms multiplying drug use by all independent variables were nonsignificant, suggesting that drug use does not moderate the effects of other variables in our models. In addition, restricting the sample to nondrug users produced similar findings (full results available upon request).

Measures

Existential Well-Being Scale—This dependent variable is a subscale of the Spiritual Wellbeing Scale (SWBS; Paloutzian and Ellison 1991) that measures sense of life satisfaction and purpose. It contains twelve items measured on a six-point Likert-type scale, including “life is full of conflict and unhappiness” and “I feel good about my future.” Negative items are reverse coded and all items are summed to form a scale where higher values equal greater well-being. This scale is highly reliable ($\alpha = .85$) and has a potential range from 12 to 72.

Self-Reported Anxiety—This is a dummy variable computed using a single item from the Addiction Severity Index Lite–CF (ASIL–CF; McLellan, Cacciola, Carise, and Coyne 1999). Respondents are asked whether, in the past thirty days, and over a significant period of time, they experienced serious anxiety/tension, feeling uptight, unreasonably worried, and/or an inability to feel relaxed that was not due to alcohol or drug use. A dummy variable is coded 1 if yes and 0 if no.

Self-Reported Health Concerns—A single item in the B-WISE survey asks whether respondents have been worried about their health in the past year. It is intended to measure health anxiety and subjective health. A dummy variable is coded 1 if yes and 0 if no.

Sociodemographic Variables—Age and education are coded in years. Annual household income is coded in thousands of dollars. Finally, a dummy variable for marital

status is coded 1 if the respondent is currently married and 0 if unmarried at the time of the interview. Additional dummy variables representing divorce and widowhood were initially included and found to be nonsignificant. These were dropped from the final models.

Individual Stressors—Individual stressors are largely measured using the eighteen-item Traumatic Life Events Questionnaire (TLEQ; Kubany et al. 2000). The TLEQ is intended to capture an individual's "trauma history" and measures exposure to a broad range of events. The version of the TLEQ that appears in the B-WISE survey contains several modifications that are designed to capture the experiences of women and lower SES groups. Specifically, questions about relationships, employment, financial problems, and motherhood are added. For each item, respondents are asked how often they had experienced the event (never to six or more times) in their lifetime and in the past year.

A novel contribution of this study is the conceptualization of stressors as endemic to distinct social roles or contexts. This strategy permits an exploration of the relationships between gendered racism and risk across multiple domains. Accordingly, the events are separated into six subscales for the purposes of this study: employment and finances, personal illness and injury, social network loss, childbirth and motherhood, victimization in adulthood, and victimization in childhood (full list of items available upon request). The number of stressful events is calculated by summing the scores for all items in a subscale (higher values denote more experiences).

Social Stressors—Social stressors (racial and gender discrimination) are measured using the Schedule of Sexist Events (SSE; Klonoff and Landrine 1995) and the Schedule of Racist Events (SRE; Landrine and Klonoff 1996). These contain ten and twelve items, respectively, that ask whether respondents ever experienced adverse events "because you are a woman" or "because you are black" (see Table 1). These are combined into one scale of lifetime racial and gender discrimination experiences for both theoretical and methodological reasons: First, existing research suggests that it is often difficult to distinguish whether unfair treatment is due to race or gender, and that these are closely linked (e.g., Essed 1991; Thomas et al. 2008). Second, the racist and sexist life events scales are highly correlated ($r = .61, p < .001$) and contain numerous identical items that are strongly associated at a very low p value, causing multicollinearity when they are included as separate scales.¹ In addition, an iterated principle factor (IPF) exploratory factor analysis examining the twenty-two items from both the SSE and SRE indicates that a one-factor solution is appropriate, as evaluated using a scree plot and proportion of variance explained (Costello and Osborne 2005). For the one-factor solution, all items have factor loadings greater than .35, and seventeen of the twenty-two items have loadings greater than .50. Finally, the alphas for the individual SSE and SRE scales are .84 and .90, respectively, while the alpha for the combined scale is .88, suggesting that combining these indices does not compromise internal reliability. These results, coupled with research pointing to the a priori hypothesis that racial and gender discrimination are closely linked, lead us to scale racial and gender discrimination as one latent factor.

The SSE and SRE are measured on different Likert-type scales. The SSE is measured on a 4-point scale (never, rarely, sometimes, often), while the SRE is measured on a 6-point scale (never, once in a while, sometimes, a lot, most of the time, almost all of the time). The first

¹A limitation of this coding decision is that it is possible for a woman to experience very high levels of racial discrimination and low levels of gender discrimination, and still have only moderate scores on the scale. To assess this potential problem, we conducted a cross-tabulation of the SSE and SRE divided into quartiles. Over half of the sample falls within the same quartile on both scales, and an additional 40 percent fall within adjacent quartiles (one above or one below), reducing concerns about combining the SSE and SRE. Furthermore, when women who fall in the highest quartile on one scale and the lowest on another ($n = 4$, 2 percent of the sample) are dropped from analyses, this does not change any of the results.

three response categories of the SRE are conceptually similar to the first three categories of the SSE. Consequently, we truncated the SRE at a value of 4, combining a lot, most of the time, and almost all of the time. This recoding prevents racial discrimination from being overweighted. In addition, six items are identical across scales. These are averaged to prevent a single event, which may have been perceived as both racial and gender discrimination, from being overweighted. For instance, if a respondent reports “rarely” experiencing unfair treatment by people in service jobs due to being a woman and “sometimes” due to being black, that respondent would receive a mean of 2.5 on a metric with a potential range from 1 to 4. Additionally, because there is some overlap in the biographical circumstances captured by the individual stressor variables and the discrimination scale, items with potential for overlap are omitted from the latter scale. This is done to avoid overestimation of correlation between individual stressors and racial and gender discrimination. The combined items and the remaining unique items are summed to give a composite measure of discrimination. An IPF factor analysis of the items comprising this final scale also suggests a one-factor solution, with all items loading on a single factor.

Analysis

Analyses explore relationships between lifetime racial and gender discrimination, lifetime and past year individual stressors, and recent indicators of well-being using Stata 11. First, negative binomial regression is employed to examine the effects of lifetime discrimination experiences on past year individual stressors, controlling for demographic variables and drug use. Next, ordinary least squares (OLS) and binary logistic regression are used to determine the extent to which discrimination and other stressors predict health outcomes. The following process is repeated for each of three indicators of well-being: A series of regressions model the effects of four sociodemographic variables, a control variable measuring past month drug use, and one stressor (seven models for each of seven stressors, including the partial discrimination scale that omits items that overlap with individual stressors). These models are x-standardized to compare the magnitude of coefficients across models. Then, stressors with significant effects are entered into a regression model together and Wald tests are employed to assess the equality of coefficients. Additionally, measures of model fit and explained variance (i.e., F statistic or likelihood ratio X^2 , R^2 or pseudo- R^2 , and Bayesian Information Criterion) are used to compare models. Finally, a full model that includes all stressors is computed. If discrimination becomes nonsignificant in the full model, mediation models testing the extent to which the effects of discrimination are mediated by other stressors are performed. We use the `sgmediation` command in Stata with a bootstrapped estimation of the indirect effect (MacKinnon and Dwyer 1993)—a method that has been shown to produce less biased estimates than the Baron and Kenny (1986) and Sobel (1986) methods in simulation studies (MacKinnon, Warsi, and Dwyer 1995).

Results

Table 1 presents descriptive statistics. On average, women in the sample report a moderate sense of well-being and life satisfaction ($X = 55.56$). About 11 percent experienced severe anxiety in the past month, and 53 percent have worried about their health in the past year. With respect to stressors, the African American women in the sample report experiencing a mean of 4.65 events involving employment and finances, 6.04 involving adult victimization, and 10.59 involving social network loss in their lifetime. Relative to these stressors, African American women report fewer lifetime events pertaining to personal illness and injury ($X = 0.78$), childbirth and motherhood ($X = 1.32$), and childhood victimization ($X = 3.42$). Also, women in the sample indicate that they have experienced a moderate degree of racial and gender discrimination ($X = 11.68$).

Results from the regression of number of stressors in the past year on lifetime discrimination experiences suggest that discrimination is predictive of individual stressful events, even after controlling for sociodemographics and drug use (results not presented in a table; incidence rate ratios presented in text). Specifically, African American women who report higher levels of lifetime racial and gender discrimination also experience more past year employment and financial problems (incidence rate ratio [IRR] = 1.22, $p < .01$), social network loss (IRR = 1.27, $p < .001$), and adult victimization (IRR = 1.90, $p < .01$). Moreover, though the predicted effects of discrimination on personal illness and injury do not achieve statistical significance at the .05 level, they are marginally significant (IRR = 1.44, $p = .06$). In all, these results suggest that racial and gender discrimination is predictive of socioeconomic vulnerabilities and increase risk for other negative life events, including victimization.

Table 2 displays results from OLS regression models examining the effects of lifetime stressors in a given domain on existential well-being. Results in Model 1 indicate that experiencing a one standard deviation increase in stressors related to employment and finances is significantly related to a 0.29 standard deviation decrease in African American women's sense of well-being and life satisfaction ($p < .001$). Model 5 demonstrates a similar relationship, wherein an increase in number of events pertaining to adult victimization significantly predicts lower levels of well-being ($b = -.18$, $p < .01$). Finally, according to Model 7, higher levels of discrimination are also significantly associated with lower well-being ($b = -.17$, $p < .05$), consistent with previous research. Comparing across these models, employment and financial stressors have the largest impact on well-being, and the BIC indicates that this model provides the best fit. However, a Wald test indicates that this coefficient is not significantly different from the coefficients for adult victimization and discrimination.

In the full model, only employment and financial stressors remain significant, suggesting that this variable may mediate the effects of discrimination. Results from bootstrapped estimation support this, suggesting that there is a significant indirect effect ($b = -0.06$, $p < .05$) of racial and gender discrimination through employment and financial stressors. About 33 percent of the effect of discrimination on well-being is mediated by financial and employment problems.

Results from a binary logistic regression examining the effects of lifetime stressors on the likelihood of experiencing severe anxiety in the past month are presented in Table 3. Results in Models 6 and 7 suggest that a 1 standard deviation increase in childhood victimization and discrimination both significantly increase the odds of reporting severe anxiety (odds ratio [OR] = 1.57, $p < .05$ and OR = 1.65, $p < .05$, respectively). Of these, racial and gender discrimination has the largest effect, though these ORs are not significantly different at the .05 level and the BIC indicates that the model with childhood victimization provides a better fit. In the full model, both childhood victimization (OR = 1.81, $p < .05$) and discrimination (OR = 1.82, $p < .05$) remain significant. In addition, stressors related to personal illness and injury become significant in the full model such that higher levels are associated with a lower odds of anxiety (OR = 0.41, $p < .05$).

Table 4 presents findings from binary logistic regression models examining the effects of lifetime stressors on reporting health concerns in the past year. Results in Models 1 and 2 suggest that a 1 standard deviation increase in employment and financial stressors and personal illness and injury both significantly increase the predicted odds of reporting having had health concerns in the past year (OR = 1.46, $p < .05$ and OR = 1.69, $p < .05$, respectively). Additionally, higher levels of social network loss (OR = 1.82, $p < .001$) and adult victimization (OR = 1.45, $p < .05$) are associated with greater odds of reporting health

concerns. Finally, increasing discrimination is also predictive of larger odds of reporting health concerns ($OR = 1.58, p < .01$). Of these, social network loss has the largest effect and this model provides the lowest BIC, though these ORs are not significantly different at the .05 level.

In the full model, only personal illness and injury ($OR = 1.55, p < .05$) and social network loss ($OR = 1.51, p < .05$) remain significant, suggesting that these may mediate the effects of racial and gender discrimination on health concerns. Results from bootstrapped estimation support mediation, suggesting that there is a significant indirect effect ($b = 0.10, p < .01$) of discrimination through personal illness and injury and social network loss. About 35 percent of the effect of discrimination on health concerns may be mediated by these other stressors.

Discussion

Broadly, these findings suggest that racial and gender discrimination is a ubiquitous force in the lives of low-SES African American women. We find that there is a substantial and significant correlation between discrimination—a social stressor—and other lifetime individual stressors. Moreover, higher levels of lifetime racial and gender discrimination are predictive of experiencing more individual stressors in the past year across a range of social roles and contexts, even when controlling for sociodemographics and drug use. In short, low-SES African American women in our sample who face high levels of discrimination are also increasingly vulnerable to every other type of individual-level stressor measured here, with relationships to adult victimization and employment and financial stressors being the strongest.

As expected, we also find that both social and individual stressors are associated with indicators of mental health and well-being. Specifically, African American women who experience higher levels of racial and gender discrimination report lower levels of existential well-being, on average, and are more likely to report severe anxiety and health concerns. In addition, employment and financial stressors are negatively related to well-being, and higher levels of social network loss and personal illness and injury are predictive of reporting health concerns, after controlling for all covariates. Finally, victimization as a child is significantly related to the likelihood of experiencing severe anxiety. The magnitudes of the effects of individual stressors do not differ significantly from the influence of discrimination, suggesting that social stressors merit greater representation in stress process theory and measurement.

Also, mediation models indicate that individual stressors may mediate the effects of social stressors on health and well-being. Specifically, we find that discrimination is positively associated with employment and financial stressors, which in turn influence well-being. In all, about a third of the effect of discrimination on well-being may work indirectly through persistent unemployment, being fired or laid off, and financial crisis. Also, stress related to personal illness and injury and social network loss may partially mediate the impact of racial and gender discrimination on the likelihood of worrying about health. Again, about a third of the influence of discrimination may operate indirectly through increased vulnerability to divorce and unstable relationships, as well as accidents and illness in the lives of women and their loved ones.

Limitations

These B-WISE data have limitations that suggest a need for additional research in this area. First, the cross-sectional design of the study creates potential for endogeneity due to reverse causation. In other words, having mental health problems might increase perceptions of stressors rather than discrimination or negative life events leading to adverse health

outcomes and low levels of well-being. While we cannot determine for certain whether our results are influenced by endogeneity, our measures are time-ordered (albeit retrospectively) such that past year stressors are used to predict current or past month health and well-being. In addition, the possibility of reverse causation in the relationship between social stressors and health has been explicitly tested using longitudinal datasets. Results from these studies suggest that poor health does not predict subsequent reports of discrimination, but that racism, sexism, and other forms of discrimination do lead to later health problems (Gee and Walsemann 2009; Pavalko et al. 2003). While these findings lend confidence to the interpretations provided here, future research in this area should examine these relationships using longitudinal data.

Second, the data used here are not based on a nationally representative sample of African American women. Most notably, marriage rates, percent college educated, and household income are lower than national averages for African American women based on census reports. These differences are likely due to sampling procedures. Specifically, women were recruited in neighborhoods with a high proportion of African Americans. In addition, because the community sample was drawn to make comparisons to a sample of women in prison, about one-third of the women had used illicit drugs in the past month. Controlling for income, education, marital status, and drug use did not change the substantive findings, nor did the inclusion of interaction terms. However, readers should use caution when interpreting results and be aware that findings may not extend to African American women in higher socioeconomic strata.

Theoretical and Methodological Implications

Stress researchers have long argued that the organization of social life and the lack of opportunity structures available to African American women as a function of their social status result in predictable patterns of risks and stressors that affect health (Aneshensel et al. 1991; Brown 2003). Our results are consistent with social stress theory and the principles of stress proliferation and cumulative disadvantage (Pearlin 1999; Pearlin et al. 2005), suggesting that social stressors rooted in systems of inequality have both direct effects on health and well-being, as well as indirect effects through increasing vulnerability to individual stressors. An important goal going forward is to identify the complex pathways linking structural constraints and vulnerabilities, various forms of interpersonal discrimination, individual stressors, and health, illness, and health care—a task that may necessarily begin with a focus on groups most at risk.

In addition, these findings support existing research on intersectionality and health (e.g., Grollman 2012; Thomas et al. 2008), providing additional evidence that possessing multiple disadvantaged social statuses has adverse effects on well-being. Our research highlights the importance of an inclusion-centered intersectional approach where multiply disadvantaged groups and their unique sets of challenges and experiences are the central focus of the analysis. In shifting the critical lens to low-SES African American women, we extend our understanding of discrimination in the social stress process. Specifically, we find that multiple forms of discrimination may work both directly and through increased vulnerability to other negative life events and chronic stressors that impact health. Moreover, by comparing the magnitude of the influence of multiple forms of discrimination on health to that of traditional individual stressors with established detrimental effects, we have revealed information about the extent of the burden that this problem places on disadvantaged communities.

From a methodological standpoint, these findings suggest that the omission of racial and gender discrimination from standard measures of chronic and episodic stress is problematic. Here, we find that the impact of discrimination on the well-being of African American

women is comparable in magnitude to the effects of individual stressors that typically emerge as the strongest risk factors for adverse health outcomes, including childhood and adult victimization (Kessler and McLeod 1984). This suggests that research focusing exclusively on individual stressors may underestimate the prevalence of adverse events, chronic strains, and resultant psychological distress in the lives of low-SES African American women. We believe that this implication also extends to other minorities at the intersection of race, class, gender, sexual orientation, and disability. Moreover, because multiply disadvantaged groups typically constitute a small proportion of any probability sample, the import of social stressors for health, and their association with individual stressors, may be masked in pooled samples. In all, these findings highlight the need for stress research that is inclusion-centered and representative of the experiences of multiply marginalized groups.

In sum, given the methodological limitations discussed above, a key contribution of this study is to serve as a “call to arms” and a starting point for longitudinal, nationally representative research on the health consequences of multiple forms of discrimination. This research demonstrates the value of a more comprehensive study of social and individual stressors that may exclusively or more substantially affect minority groups. Likewise, it highlights the importance of an inclusion-centered approach that explicitly focuses on multiply disadvantaged groups who have often been at the margins of traditional stress research. Along these lines, future research should examine how multiple minority statuses operate simultaneously to place economic, political, and social constraints that maintain complex systems of social inequality.

Acknowledgments

This research was supported by the National Institute on Drug Abuse (R01-DA22967, PI: Oser; K01-DA021309, PI: Oser; and F31-DA030061, PI: Harp).

References

- Aneshensel, Carol S. Neighborhood as a Social Context of the Stress Process. In: Avison, WR.; Aneshensel, CS.; Schieman, S.; Wheaton, B., editors. *Advances in the Conceptualization of the Stress Process: Essays in Honor of Leonard I Pearlin*. New York: Springer; 2010. p. 35-52.
- Aneshensel, Carol S.; Rutter, Carolyn M.; Lachenbruch, Peter A. Social Structure, Stress, and Mental Health: Competing Conceptual and Analytic Models. *American Sociological Review*. 1991; 56:166–78.
- Baron, Reuben M.; Kenny, David A. Moderator-Mediator Variables Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations. *Journal of Personality and Social Psychology*. 1986; 51:1173–82. [PubMed: 3806354]
- Borrell, Luisa N.; Kiefe, Catarina I.; Williams, David R.; Diez-Roux, Ana; Gordon-Larsen, Penny. Self-Reported Health, Perceived Racial Discrimination, and Skin Color in African Americans in the CARDIA Study. *Social Science & Medicine*. 2006; 63:1415–27. [PubMed: 16750286]
- Botchkovar, Ekaterina V.; Hughes, Lorine A. Strain and Alcohol Use in Russia: A Gendered Analysis. *Sociological Perspectives*. 2010; 53:297–319.
- Brondolo, Elizabeth; Thompson, Simon; Brady, Nicholas; Appel, Roland; Cassells, Andrea; Tobin, Jonathan. The Relationship of Racism to Appraisals and Coping in a Community Sample. *Ethnicity and Disease*. 2005; 15:14–19.
- Brown, Diane R. A Conceptual Model of Mental Well-Being for African American Women. In: Brown, DR.; Keith, VM., editors. *In and Out of Our Right Minds*. New York: Columbia University Press; 2003. p. 1-19.
- Brown, Diane R.; Keith, Verna M.; Jackson, James S.; Gary, Lawrence D. (Dis)respected and (dis)regarded: Experiences of racism and psychological distress. In: Brown, DR.; Keith, VM., editors. *In and Out of Our Right Minds*. New York: Columbia University Press; 2003. p. 83-98.

- Brown, Tony N.; Williams, David R.; Jackson, James S.; Neighbors, Harold W.; Torres, Myriam; Sellers, Sherrill L.; Brown, Kendrick T. Being Black and Feeling Blue: The Mental Health Consequences of Racial Discrimination. *Race and Society*. 2000; 2:117–31.
- Buchanan, Nicole T.; Fitzgerald, Louise F. Effects of Racial and Sexual Harassment on Work and the Psychological Well-Being of African American Women. *Journal of Occupational Health Psychology*. 2008; 13:137–51. [PubMed: 18393583]
- Choo, Hae Yeon; Ferree, Myra Marx. Practicing Intersectionality in Sociological Research: A Critical Analysis of Inclusions, Interactions, and Institutions in the Study of Inequalities. *Sociological Theory*. 2010; 28:129–49.
- Clark, Rodney; Anderson, Norman B.; Clark, Vernessa R.; Williams, David R. Racism as a Stressor for African Americans: A Biopsychosocial Model. *American Psychologist*. 1999; 54:805–16. [PubMed: 10540593]
- Collins, Patricia Hill. Learning from the Outsider Within: The Sociological Significance of Black Feminist Thought. *Social Problems*. 1986; 33:14–32.
- Collins, Patricia Hill. Black Feminist Thought: Knowledge, Consciousness, and the Politics of Empowerment. Boston, MA: Unwin Hyman; 1990.
- Collins, Patricia Hill. It's All in the Family: Intersections of Gender, Race, and Nation. *Hypatia*. 1998; 13:62–82.
- Collins, Patricia Hill. Black Feminist Thought: Knowledge, Consciousness, and the Politics of Empowerment (Revised Tenth Anniversary Edition). 2. New York: Routledge; 2000.
- Collins, Patricia Hill. Black Sexual Politics: African Americans, Gender, and the New Racism. New York: Routledge; 2004.
- Costello, Anna B.; Osborne, Jason W. Best Practices in Exploratory Factor Analysis: Four Recommendations for Getting the Most Out of Your Analysis. *Practical Assessment, Research, and Evaluation*. 2005; 10:1–9.
- Crenshaw, Kimberlé. Mapping the Margins: Intersectionality, Identity Politics, and Violence Against Women of Color. *Stanford Law Review*. 1991; 43:1241–79.
- Davis, Kathy. Intersectionality as Buzzword: A Sociology of Science Perspective on What Makes a Feminist Theory Successful. *Feminist Theory*. 2008; 9:67–85.
- De Coster, Stacy. Depression and Law Violation: Gendered Responses to Gendered Stresses. *Sociological Perspectives*. 2005; 48:155–87.
- Essed, Philomena. Understanding Everyday Racism. Newbury Park, CA: Sage; 1991.
- Franklin, Anderson J.; Boyd-Franklin, Nancy; Kelly, Shalonda. Racism and Invisibility: Race-Related Stress, Emotional Abuse and Psychological Trauma for People of Color. *Journal of Emotional Abuse*. 2006; 6:9–30.
- Gee, Gilbert; Walsemann, Katrina. Does Health Predict the Reporting of Racial Discrimination or Do Reports of Discrimination Predict Health? Findings from the National Longitudinal Study of Youth. *Social Science and Medicine*. 2009; 68:1676–84. [PubMed: 19289253]
- Geronimus, Arline T.; Geronimus, Arline T.; Hicken, Margaret; Keene, Danya; Bound, John. 'Weathering' and Age Patterns of Allostatic Load Scores among Blacks and Whites in the United States. *American Journal of Public Health*. 2006; 96:826–33. [PubMed: 16380565]
- Goldenhar, Linda M.; Swanson, Naomi G.; Hurrell, Joseph J.; Ruder, Avima; Deddens, James. Stressors and Adverse Outcomes for Female Construction Workers. *Journal of Occupational Health Psychology*. 1998; 3:19–32. [PubMed: 9552269]
- Greer, Tawanda M.; Laseter, Adrian; Asiamah, Davis. Gender as a Moderator of the Relation between Race-Related Stress and Mental Health Symptoms for African Americans. *Psychology of Women Quarterly*. 2009; 33:295–307.
- Grollman, Eric A. Multiple Forms of Perceived Discrimination and Health among Adolescents and Young Adults. *Journal of Health and Social Behavior*. 2012; 53:199–214. [PubMed: 22588219]
- Harrell, Jules P.; Hall, Sadiki; Tagliaferro, James. Physiological Responses to Racism and Discrimination: An Assessment of the Evidence. *American Journal of Public Health*. 2003; 93:243–47. [PubMed: 12554577]

- Harrell, Shelly P. A Multidimensional Conceptualization of Racism-Related Stress: Implications for the Well-Being of People of Color. *American Journal of Orthopsychiatry*. 2000; 70:42–57. [PubMed: 10702849]
- Hatch, Stephanie L.; Dohrenwend, Bruce P. Distribution of Traumatic and Other Stressful Life Events by Race/Ethnicity, Gender, SES and Age: A Review of the Research. *American Journal of Community Psychology*. 2007; 40:313–32. [PubMed: 17906927]
- hooks, bell. *Ain't I a Woman: Black Women and Feminism*. Boston: South End Press; 1981.
- hooks, bell; Mesa-Bains, Amalia. *Homegrown: Engaged Cultural Criticism*. Cambridge: South End Press; 2006.
- Hull, Gloria; Scott, Patricia Bell; Smith, Barbara. *All the Women Are White, All the Blacks Are Men, But Some of Us Are Brave: Black Women's Studies*. New York: Feminist Press; 1982.
- Jang, Yuri; Borenstein-Graves, Amy; Haley, William E.; Small, Brent J.; Mortimer, James A. Determinants of a Sense of Mastery in African American and White Older Adults. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*. 2003; 58:S221–24.
- Karlsen, Saffron; Nazroo, James Y. Relation Between Racial Discrimination, Social Class, and Health Among Ethnic Minority Groups. *American Journal of Public Health*. 2002; 92:624–31. [PubMed: 11919063]
- Kessler, Ronald C.; McLeod, Jane D. Sex Differences in Vulnerability to Undesirable Life Events. *American Sociological Review*. 1984; 49:620–31.
- Kessler, Ronald C.; Michelson, Kristin D.; Williams, David R. The Prevalence, Distribution, and Mental Health Correlates of Perceived Discrimination in the United States. *Journal of Health and Social Behavior*. 1999; 40:208–30. [PubMed: 10513145]
- Keyes, Corey LM. The Black-White Paradox in Health: Flourishing in the Face of Social Inequality and Discrimination. *Journal of Personality*. 2009; 77(6):1677–1706. [PubMed: 19796064]
- King, Kimberly R. Racism or Sexism? Attributional Ambiguity and Simultaneous Membership in Multiple Oppressed Groups. *Journal of Applied Social Psychology*. 2003; 33:223–47.
- Klonoff, Elizabeth A.; Landrine, Hope. The Schedule of Sexist Events: A Measure of Lifetime and Recent Sexist Discrimination in Women's Lives. *Psychology of Women Quarterly*. 1995; 19:439–72.
- Klonoff, Elizabeth A.; Landrine, Hope; Campbell, Robin. Sexist Discrimination May Account for Well-Known Gender Differences in Psychiatric Symptoms. *Psychology of Women Quarterly*. 2000; 24:93–99.
- Krieger, Nancy. Racial and Gender Discrimination: Risk Factors for High Blood Pressure? *Social Science and Medicine*. 1990; 30:1273–81. [PubMed: 2367873]
- Krieger, Nancy. Discrimination and Health. In: Berkman, L.; Kawachi, I., editors. *Social Epidemiology*. New York: Oxford University Press; 2000. p. 36-75.
- Krieger, Nancy; Rowley, Diane L.; Herman, Allen A.; Herman, Allen A.; Avery, Byllye; Phillips, Mona Taylor. Racism, Sexism, and Social Class: Implications for Studies of Health, Disease, and Well-Being. *American Journal of Preventive Medicine*. 1993; 9:82–122. [PubMed: 8123288]
- Kubany, Edward S.; Haynes, Stephen N.; Leisen, Mary Beth; Owens, Julie A.; Kaplan, Aaron S.; Watson, Susan B.; Burns, Katie. Development and Preliminary Validation of a Brief Broad-Spectrum Measure of Trauma Exposure: The Traumatic Life Events Questionnaire. *Psychological Assessment*. 2000; 12:210–24. [PubMed: 10887767]
- Kwate, Naa Oyo A.; Valdimarsdottir, Heiddis B.; Guevarra, Josephine S.; Bovbjerg, Dana H. Experiences of Racist Events Are Associated with Negative Health Consequences for African American Women. *Journal of the National Medical Association*. 2003; 95:450–60. [PubMed: 12856911]
- Landrine, Hope; Klonoff, Elizabeth A. 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*. 1996; 22:144–68.
- Landrine, Hope; Klonoff, Elizabeth A.; Gibbs, Jeannine; Manning, Vickie; Lund, Marlene. Physical and Psychiatric Correlates of Gender Discrimination: An Application of the Schedule of Sexist Events. *Psychology of Women Quarterly*. 1995; 19:473–92.

- Lu, Alexander. Stress and Physical Health Deterioration in the Aftermath of Hurricanes Katrina and Rita. *Sociological Perspectives*. 2011; 54:229–50.
- MacKinnon, David P.; Dwyer, James H. Estimating Mediated Effects in Prevention Studies. *Evaluation Review*. 1993; 17:144–58.
- MacKinnon, David P.; Warsi, Ghulam; Dwyer, James H. A Simulation Study of Mediated Effect Measures. *Multivariate Behavioral Research*. 1995; 30:41–62. [PubMed: 20157641]
- Marcussen, Kristen; Ritter, Christian; Safron, Deborah J. The Role of Identity Salience and Commitment in the Stress Process. *Sociological Perspectives*. 2004; 47:289–312.
- McCall, Leslie. The Complexity of Intersectionality. *Signs: Journal of Women in Culture and Society*. 2005; 30:1771–1800.
- McCoy, Frank. Rethinking the Cost of Discrimination. *Black Enterprise*. 1994; 25:54–59.
- McLellan, Thomas; John, Cacciola; Deni, Carise; Coyne, Thomas H. Addiction Severity Index Life-Clinical Factors Version. Philadelphia, PA: The Treatment Research Institute; 1999.
- McLeod, Jane D.; Owens, Timothy J. Psychological Well-Being in the Early Life Course: Variations by Socioeconomic Status, Gender, and Race/Ethnicity. *Social Psychology Quarterly*. 2004; 67:257–78.
- Meyer, Ilan H. Prejudice, Social Stress, and Mental Health in Lesbian, Gay, and Bisexual Populations: Conceptual Issues and Research Evidence. *Psychological Bulletin*. 2003; 129:674–97. [PubMed: 12956539]
- Meyer, Ilan H.; Schwartz, Sharon; Frost, David M. Social Patterning of Stress and Coping: Does Disadvantaged Social Statuses Confer More Stress and Fewer Resources? *Social Science and Medicine*. 2008; 67:368–79. [PubMed: 18433961]
- Monroe, Scott M.; Harkness, Kate L. Life Stress, the ‘Kindling’ Hypothesis, and the Recurrence of Depression: Considerations from a Life Stress Perspective. *Psychological Review*. 2005; 112:417–45. [PubMed: 15783292]
- Moradi, Bonnie; Subich, Linda Mezydlo. A Concomitant Examination of the Relations of Perceived Racist and Sexist Events to Psychological Distress for African American Women. *The Counseling Psychologist*. 2003; 31:451–69.
- Morris-Prather CE, Jules P Harrell, Lorraine Collins R, Leonard KL, Boss M, Lee JW. Gender Differences in Mood and Cardiovascular Responses to Socially Stressful Stimuli. *Ethnicity and Disease*. 1996; 6:123–31. [PubMed: 8882841]
- Ocampo, Carlota. Psychophysiology and Racism. *American Psychologist*. 2000; 55:1164–65. [PubMed: 11080849]
- Pager, Devah; Shepherd, Hana. The Sociology of Discrimination: Racial Discrimination in Employment, Housing, Credit, and Consumer Markets. *Annual Review of Sociology*. 2008; 34:181–209.
- Paloutzian, Raymond F.; Ellison, Craig W. Manual for the Spiritual Well-Being Scale. Nyack, NY: Life Advance, Inc; 1991.
- Pavalko, Eliza K.; Mossakowski, Krysia N.; Hamilton, Vanessa J. Does Perceived Discrimination Affect Health? Longitudinal Relationships between Work Discrimination and Women's Physical and Emotional Health. *Journal of Health and Social Behavior*. 2003; 43:18–33. [PubMed: 12751308]
- Pearlin, Leonard I. Stress and Mental Health: A Conceptual Overview. In: Horwitz, AV.; Scheid, TL., editors. *A Handbook for the Study of Mental Health*. New York: Cambridge University Press; 1999. p. 161-75.
- Pearlin, Leonard I.; Menaghan, Elizabeth G.; Lieberman, Morton A.; Mullan, Joseph T. The Stress Process. *Journal of Health and Social Behavior*. 1981; 22:337–256. [PubMed: 7320473]
- Pearlin, Leonard I.; Schieman, Scott; Fazio, Elena M.; Meersman, Stephen. Stress, Health, and the Life Course: Some Conceptual Perspectives. *Journal of Health and Social Behavior*. 2005; 46:205–219. [PubMed: 16028458]
- Rosenberg, Morris; Pearlin, Leonard. Social Class and Self-Esteem Among Children and Adults. *American Journal of Sociology*. 1978; 84:53–77.

- Ryff, Carol D.; Keyes, Corey LM.; Hughes, Diane L. Status Inequalities, Perceived Discrimination, and Eudaimonic Well-Being: Do the Challenges of Minority Life Hone Purpose and Growth? *Journal of Health and Social Behavior*. 2003; 44:275–91. [PubMed: 14582308]
- Sampson, Robert J.; Wilson, William Julius. Toward a Theory of Race, Crime, and Urban Inequality. In: Gabbidon, SL.; Greene, HT., editors. *Race, Crime, and Justice*. New York: Routledge Press; 2005. p. 177-90.
- Schulz, Amy; Israel, Barbara A.; Williams, David; Parker, Edith; Becker, Adam; James, Sherman A. Social Inequalities, Stressors and Self Reported Health Status among African American and White Women in the Detroit Metropolitan Area. *Social Science and Medicine*. 2000; 51:1639–53. [PubMed: 11072884]
- Sellers, Robert M.; Caldwell, Cleopatra H.; Schmeelk-Cone, Karen H.; Zimmerman, Marc A. Racial Identity, Racial Discrimination, Perceived Stress, and Psychological Distress among African American Young Adults. *Journal of Health and Social Behavior*. 2003; 44:302–17. [PubMed: 14582310]
- Snodgrass, Sara E. Women's intuition: The Effect of Subordinate Role on Interpersonal Sensitivity. *Journal of Personality and Social Psychology*. 1985; 49:146–55.
- Sobel, Michael E. Some New Results on Indirect Effects and their Standard Errors in Covariance Structure Models. *Sociological Methodology*. 1986; 16:159–86.
- Sue, Derald W. *Microaggressions in Everyday Life: Race, Gender, and Sexual Orientation*. Hoboken, New Jersey: John Wiley and Sons; 2010.
- Sue, Derald W.; Nadal, Kevin; Capodilupo, Christina; Lin, Annie; Torino, Gina C.; Rivera, David P. Racial Microaggressions against Black Americans: Implications for Counseling. *Journal of Counseling and Development*. 2008; 86:330–38.
- Szymanski, Dawn M.; Stewart, Destin N. Racism and Sexism as Correlates of African American Women's Psychological Distress. *Sex Roles*. 2010; 63:226–38.
- Taylor, John; Turner, R Jay. Perceived Discrimination, Social Stress, and Depression in the Transition of Adulthood: Racial Contrasts. *Social Psychology Quarterly*. 2002; 65:213–25.
- Taylor, John; Turner, R Jay. Stress, Coping, and Social Support Processes: Where Are We? What Next? *Journal of Health and Social Behavior*. 1995:53–79. Extra Issue. [PubMed: 7560850]
- Taylor, John; Turner, R Jay. Stress and Health: Major Findings and Policy Implications. *Journal of Health and Social Behavior*. 2010; 51:41–53.
- Thomas, Anita Jones; Hacker, Jason D.; Hoxha, Denada. Gendered Racial Identity of Black Young Women. *Sex Roles*. 2011; 64:30–42.
- Thomas, Anita Jones; Witherspoon, Karen M.; Speight, Suzette L. Gendered Racism, Psychological Distress, and Coping Styles of African American Women. *Cultural Diversity and Ethnic Minority Psychology*. 2008; 14:307–14. [PubMed: 18954166]
- Turner, R Jay; Avison, William R. Status Variations in Stress Exposure among Young Adults: Implications for the Interpretation of Prior Research. *Journal of Health and Social Behavior*. 2003; 44:488–505. [PubMed: 15038145]
- Turner, R Jay; Lloyd, Donald. Lifetime Traumas and Mental Health: The Significance of Cumulative Adversity. *Journal of Health and Social Behavior*. 1995; 36:360–76. [PubMed: 8719054]
- Turner, R Jay; Wheaton, Blair; Donald A, Lloyd. The Epidemiology of Social Stress. *American Sociological Review*. 1995; 60:104–25.
- Walker, Rheeda L. Acculturation and Acculturative Stress as Indicators for Suicide Risk Among African Americans. *American Journal of Orthopsychiatry*. 2007; 77:386–91. [PubMed: 17696667]
- Walker, Rheeda L.; Wingate, LaRicka R.; Obasi, Ezemenari M.; Joiner, Thomas E. An Empirical Investigation of Acculturative Stress and Ethnic Identity as Moderators for Depression and Suicidal Ideation in College Students. *Cultural Diversity and Ethnic Minority Psychology*. 2008; 14:75–82. [PubMed: 18230003]
- Walsemann, Katrina M.; Geronimus, Arline T.; Gee, Gilbert C. Accumulating Disadvantage Over the Life Course: Evidence From a Longitudinal Study Investigating the Relationship Between Educational Advantage in Youth and Health in Middle Age. *Research on Aging*. 2008; 30:169–99.
- Williams, David. Race, Socioeconomic Status, and Health: The Added Effects of Racism and Discrimination. *Annals New York Academy of Science*. 1999; 896:173–88.

Williams, David R.; Mohammed, Selina A. Discrimination and Racial Disparities in Health: Evidence and Needed Research. *Journal of Behavioral Medicine*. 2009; 32:20–47. [PubMed: 19030981]

Table 1
Descriptive Sample Characteristics (B-WISE Community Sample, $n = 204$)

	<i>M</i>	<i>SD</i>	<i>Range</i>	<i>Proportion</i>
Sociodemographics and controls				
Education in years	12.75	2.26	3.00–20.00	
Household income in thousands of dollars	20.85	21.24	2.50–87.50	
Age in years	36.39	14.19	18.00–68.00	
Currently married				0.13
Drug use (past month)				0.33
Stressors (lifetime)				
Employment and finances	4.65	4.18	0.00–18.00	
Personal illness and injury	0.78	1.17	0.00–7.00	
Social network loss	10.59	5.20	0.00–27.00	
Childbirth and motherhood	1.32	1.55	0.00–7.00	
Victimization in adulthood	6.04	7.56	0.00–36.00	
Victimization in childhood	3.42	4.60	0.00–18.00	
Racial and gender discrimination	11.68	7.22	0.00–31.00	
Stressors (past year)				
Employment and finances	2.29	2.91	0.00–16.00	
Personal illness and injury	0.18	0.48	0.00–2.00	
Social network loss	1.36	1.49	0.00–8.00	
Victimization in adulthood	1.43	3.85	0.00–36.00	
Health outcomes				
Existential well-being	55.56	9.45	22.00–72.00	
Self-reported anxiety (past month)				0.11
Health concerns (past year)				0.53

Table 2
Standardized OLS Regression of Existential Well-being on Lifetime Stressors (B-WISE Community Sample, $n = 204$)

	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>
Sociodemographics				
Education	0.17 (2.56) *	0.17 (2.52) *	0.17 (2.50) *	0.16 (2.35) *
Household income	0.06 (0.78)	0.11 (1.54)	0.11 (1.50)	0.12 (1.58)
Age	-0.03 (-0.41)	-0.10 (-1.48)	-0.13 (-1.88)	-0.11 (-1.57)
Currently married ^a	0.01 (0.09)	0.02 (0.24)	-0.03 (-0.38)	0.01 (0.21)
Drug use ^b	-0.14 (-1.99) *	-0.24 (-3.56) ***	-0.24 (-3.51) ***	-0.23 (-3.39) ***
Stressors (lifetime)				
Employment and finances	-0.29 (-3.89) ***			
Personal illness and injury		-0.08 (-1.20)		
Social network loss			-0.10 (-1.28)	
Childbirth and motherhood				-0.04 (-0.57)
<i>R</i> ²	0.20	0.14	0.15	0.14
<i>F</i>	8.18 ***	5.54 ***	5.58 ***	5.32 ***
<i>BIC</i>	569.75	583.36	583.16	584.52
	<i>Model 5</i>	<i>Model 6</i>	<i>Model 7</i>	<i>Model 8</i>
Sociodemographics				
Education	0.17 (2.45) *	0.16 (2.38) *	0.19 (2.74) **	0.19 (2.75) **
Household income	0.10 (0.16)	0.11 (1.45)	0.09 (1.23)	0.04 (0.58)
Age	-0.08 (-1.24)	-0.12 (-1.80)	-0.07 (-1.04)	0.004 (0.08)
Currently married ^a	0.01 (0.05)	0.01 (0.20)	0.01 (0.16)	0.01 (0.19)
Drug use ^b	-0.20 (-2.83) **	-0.23 (-3.36) ***	-0.24 (-3.50) ***	-0.14 (-1.92)
Stressors (lifetime)				
Employment and finances				-0.25 (-3.11) **
Personal illness and injury				-0.06 (-0.89)
Social network loss				0.02 (0.25)
Childbirth and motherhood				0.02 (0.29)
Victimization as adult	-0.18 (-2.63) **			-0.07 (-0.77)
Victimization as child		-0.11 (-1.72)		-0.02 (-0.27)
Discrimination			-0.17 (-2.42) *	-0.09 (-1.16)
<i>R</i> ²	0.17	0.15	0.16	0.22
<i>F</i>	6.60 ***	5.83 ***	6.38 ***	4.49 ***
<i>BIC</i>	577.80	581.82	578.90	596.34

Note: Fully standardized coefficients are presented, with *t* in parentheses.

^aReference category is never married, separated, widowed, or divorced.

^bReference category is no past month drug use.

*
 $p < .05$;

**
 $p < .01$;

 $p < .001$ (two-tailed tests).

Table 3
Standardized Binary Logistic Regression of Self-Reported Past Month Anxiety on
Stressful Life Events (B-WISE Community Sample, $n = 204$)

	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>
Sociodemographics				
Education	0.55 (0.33–0.91) *	0.56 (0.34–0.94) *	0.55 (0.33–0.91) *	0.55 (0.33–0.91) *
Household income	0.72 (0.35–1.46)	0.58 (0.28–1.21)	0.61 (0.29–1.26)	0.62 (0.30–1.28)
Age	1.37 (0.80–2.34)	1.77 (1.07–2.94) *	1.57 (0.95–2.57)	1.59 (0.98–2.59)
Currently married ^a	0.98 (0.61–1.59)	0.98 (0.61–1.59)	0.93 (0.56–1.55)	0.96 (0.60–1.55)
Drug use ^b	1.17 (0.72–1.90)	1.34 (0.86–2.09)	1.35 (0.87–2.11)	1.35 (0.86–2.10)
Stressors (lifetime)				
Employment and finances	1.49 (0.94–2.36)			
Personal illness and injury		0.58 (0.29–1.13)		
Social network loss			0.90 (0.54–1.50)	
Childbirth and motherhood				1.08 (0.72–1.62)
<i>Pseudo-R</i> ²	0.12	0.13	0.10	0.10
<i>LRX</i> ²	17.56 **	18.13 **	14.89 *	14.88 *
<i>BIC</i>	163.37	162.81	166.04	166.06
	<i>Model 5</i>	<i>Model 6</i>	<i>Model 7</i>	<i>Model 8</i>
Sociodemographics				
Education	0.55 (0.33–0.90) *	0.57 (0.34–0.95) *	0.52 (0.31–0.88) *	0.55 (0.30–1.01)
Household income (thousands)	0.66 (0.32–1.34)	0.68 (0.34–1.38)	0.72 (0.35–1.48)	0.73 (0.34–1.56)
Age	1.50 (0.91–2.48)	1.64 (0.99–2.70)	1.41 (0.85–2.34)	1.49 (0.78–2.83)
Currently married ^a	0.99 (0.62–1.60)	1.00 (0.62–1.63)	0.93 (0.56–1.54)	0.93 (0.54–1.60)
Drug use ^b	1.27 (0.80–2.00)	1.28 (0.81–2.02)	1.36 (0.86–2.15)	1.08 (0.63–1.85)
Stressors (lifetime)				
Employment and finances				1.16 (0.66–2.06)
Personal illness and injury				0.41 (0.19–0.89) *
Social network loss				0.66 (0.35–1.24)
Childbirth and motherhood				1.02 (0.66–1.57)
Victimization as adult	1.30 (0.88–1.92)			1.10 (0.62–1.96)
Victimization as child		1.57 (1.06–2.32) *		1.81 (1.05–3.13) *
Discrimination			1.65 (1.03–2.63) *	1.82 (1.06–3.11) *
<i>Pseudo-R</i> ²	0.11	0.14	0.13	0.23
<i>LRX</i> ²	16.43 *	19.64 **	19.21 **	32.96 ***
<i>BIC</i>	164.50	161.29	161.72	179.88

Note: X-standardized odds ratios are presented, with confidence intervals in parentheses.

^aReference category is never married, separated, widowed, or divorced.

^bReference category is no past month drug use.

*
 $p < .05$;

**
 $p < .01$;

 $p < .001$ (two-tailed tests).

Table 4
Standardized Binary Logistic Regression of Self-Reported Health Concerns on Stressful Life Events (B-WISE Community Sample, $n = 204$)

	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>
Sociodemographics				
Education	0.84 (0.61–1.14)	0.79 (0.57–1.08)	0.81 (0.59–1.11)	0.86 (0.63–1.17)
Household income	1.15 (0.83–1.61)	1.11 (0.80–1.55)	1.12 (0.81–1.57)	1.07 (0.78–1.48)
Age	1.29 (0.94–1.75)	1.34 (0.99–1.82)	1.59 (1.17–2.17) **	1.39 (1.03–1.87) *
Currently married ^a	1.18 (0.87–1.62)	1.17 (0.86–1.61)	1.53 (1.07–2.18) *	1.16 (0.85–1.58)
Drug use ^b	1.13 (0.82–1.55)	1.30 (0.96–1.75)	1.29 (0.95–1.74)	1.25 (0.93–1.69)
Stressors (lifetime)				
Employment and finances	1.46 (1.03–2.07) *			
Personal illness and injury	1.69 (1.17–2.44) *			
Social network loss	1.82 (1.28–2.61) ***			
Childbirth and motherhood	1.15 (0.85–1.56)			
<i>Pseudo-R</i> ²	0.06	0.07	0.08	0.04
<i>LRA</i> ²	16.14 *	20.79 **	23.28 ***	12.19
<i>BIC</i>	302.93	298.28	295.79	306.88
	<i>Model 5</i>	<i>Model 6</i>	<i>Model 7</i>	<i>Model 8</i>
Sociodemographics				
Education	0.84 (0.62–1.15)	0.85 (0.62–1.15)	0.78 (0.56–1.08)	0.73 (0.52–1.03)
Household income	1.10 (0.79–1.52)	1.09 (0.79–1.51)	1.15 (0.83–1.61)	1.26 (0.88–1.79)
Age	1.35 (1.01–1.82) *	1.45 (1.08–1.94) *	1.29 (0.95–1.75)	1.28 (0.89–1.82)
Currently married ^a	1.19 (0.88–1.63)	1.17 (0.86–1.59)	1.19 (0.87–1.64)	1.45 (0.99–2.11)
Drug use ^b	1.18 (0.87–1.60)	1.23 (0.92–1.66)	1.27 (0.94–1.71)	1.18 (0.84–1.65)
Stressors (lifetime)				
Employment and finances	1.30 (0.88–1.91)			
Personal illness and injury	1.56 (1.05–2.31) *			
Social network loss	1.52 (1.03–2.24) *			
Childbirth and motherhood	1.00 (0.72–1.38)			
Victimization as adult	1.45 (1.04–2.01) *			
Victimization as child	1.23 (0.92–1.66)			
Discrimination	1.58 (1.15–2.17) **			
<i>Pseudo-R</i> ²	0.06	0.05	0.07	0.12
<i>LRA</i> ²	16.55 *	13.25 *	19.78 **	35.15 ***
<i>BIC</i>	302.52	305.82	299.29	315.83

Note: X-standardized odds ratios are presented, with confidence intervals in parentheses.

^aReference category is never married, separated, widowed, or divorced.

^bReference category is no past month drug use.

*
 $p < .05$;

**
 $p < .01$;

 $p < .001$ (two-tailed tests).