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Neighborhood Racial Composition, Racial Discrimination, and Depressive Symptoms in African Americans

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Abstract

While evidence indicates that experienced racial discrimination is associated with increased depressive symptoms for African Americans, there is little research investigating predictors of experienced racial discrimination. This paper examines neighborhood racial composition and sociodemographic factors as antecedents to experienced racial discrimination and resultant levels of depressive symptoms among African American adults. The sample included 505 socioeconomically-diverse African American adults from Baltimore, MD. Study data were obtained via self-report and geocoding of participant addresses based on 2010 census data. Study hypotheses were tested using multiple pathways within a longitudinal Structural Equation Model. Experienced racial discrimination was positively associated with age and sex such that older individuals and males experienced increased levels of racial discrimination. In addition, the percentage of White individuals residing in a neighborhood was positively associated with levels of experienced racial discrimination for African American neighborhood residents. Experienced racial discrimination was positively associated with later depressive symptoms. Neighborhood-level contextual factors such as neighborhood racial composition and individual differences in sociodemographic characteristics appear to play an important role in the experience of racial discrimination and the etiology of depression in African American adults.

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Keywords

Racial discrimination; African American; Neighborhood racial composition; Sociodemographics; Racial health disparities

Introduction

Prior research has evinced a link between African American's experiences with racial discrimination and depressive symptoms (Banks et al. 2006; Borrell et al. 2006; Bynum et al. 2008; Dyrbye et al. 2007; Greene et al. 2006; Tran 2014), a major cause of individual social, occupational, and physiological disability in the U.S. (Olfson et al. 2002). For example, a recent meta-analysis indicates that there is a strong and consistent link between experienced racial discrimination and depressive symptoms for groups including African Americans (Pascoe and Smart Richman 2009). However, little is known about predictors of racial discrimination for African Americans, thus limiting the understanding of race-related factors involved in the etiology of depression within this community. In order to design culturally-relevant interventions that reduce depression and its adverse effects for African Americans, there is a critical need to identify factors that precede racial discrimination.

Several theoretical studies highlight neighborhood racial composition and sociodemographic characteristics as key factors in predicting experienced racial discrimination and consequent health outcomes for African Americans (e.g., Clark et al. 1999; Harrell 2000). For instance, research commenting on the importance of community context in the development of health outcomes suggests that racial and ethnic diversity within a neighborhood affect interpersonal interactions and, in turn, mental health symptoms of individuals within that context (Burton and Jarrett 2000; Leventhal and Brooks-Gunn 2003). Likewise, Gee and Payne-Sturges (2004) proposed a multilevel integrational framework modeling race and residential location as predictors of neighborhood stressors, including psychosocial stressors such as racial discrimination that, in turn, lead to individual stress and directly affect health outcomes and, thus, race-based health disparities. In addition, Hirsch and Cha (2008) stress that racial discrimination occurs on multiple levels including at the individual, workplace, neighborhood, and societal levels, all of which interact and contribute to variation in the expression and experience of racial discrimination. Clark et al.'s (1999) biopsychosocial model and Harrell's (2000) multidimensional model postulate that sociodemographic factors, such as sex and socioeconomic status (SES), modulate the experience of racism stress, which, in turn, leads to negative mental health outcomes for African Americans. Intersectionality theory (e.g., Crenshaw 1989) states that social identities such as gender and race are interdependent and mutually constructive and, thus, the experience of racial discrimination can vary based on the sex of the target individual. Moreover, researchers have theorized that SES influences the experience of racial discrimination and consequent health outcomes through its effect on the perception and internalization of unfairness (Jackson et al. 2006). Across these and other theoretical models, researchers have suggested that factors such as racial residential segregation may cause African Americans to occupy a token status (i.e., being part of a minority group with low representation within a given neighborhood; see Kanter 1977) and predict a higher likelihood they are marginalized and

incur negative psychological consequences as a result. Taken together, the existing theoretical literature suggests that neighborhood racial composition and sociodemographic characteristics play a critical role in the experience of racial discrimination and resultant health disparities for African Americans.

Recent empirical evidence provides some support for the theoretical frameworks positing factors associated with racial discrimination, suggesting that neighborhood racial composition predicts experienced racial discrimination for African Americans. For example, one study found an inverse linear association between percentage of African American individuals within a neighborhood and experienced racial discrimination among African American women, such that experienced racial discrimination decreased as the percentage of African American neighborhood residents increased (Hunt et al. 2007). Likewise, Dailey et al. (2010) found that African American women living in neighborhoods with the lowest percentages of Black individuals were the most likely to report having experienced racial discrimination. In addition, in a study of individual level and neighborhood level discrimination for Chinese–American adults, experienced interpersonal discrimination was found to be linked to neighborhood-level indicators of structural discrimination (e.g., segregation, redlining; Gee 2008). For African American men specifically, the percentage of young African American men in a neighborhood has been linked to greater perceptions of crime levels, even given equivalent neighborhood characteristics and crime levels (Quillian and Pager 2001), which may indicate the greater likelihood that they are profiled and discriminated against. As an exception, Bellmore et al. (2012) found that the highest levels of peer ethnic discrimination were associated with moderate levels of diversity among a group of racially diverse adolescents.

While these studies highlight the significance of the neighborhood context for the experience of racial discrimination, none examined the association between neighborhood racial composition and racial discrimination after adjusting for other individual characteristics known to influence the experience of racial discrimination, potentially inflating their results. In addition, given the exclusively female samples of two of these studies (Dailey et al. 2010; Hunt et al. 2007), it is not clear whether the effect of racial composition on experienced racial discrimination generalizes across sex. Moreover, there is a dearth of studies that have examined the psychological impact of neighborhood racial composition on African Americans living in predominantly White neighborhoods (Acevedo-Garcia et al. 2003). This is important because as the U.S. becomes more integrated (Logan et al. 2004), there will be an increase in the number of African Americans living in predominantly White neighborhoods.

In addition to neighborhood racial composition, empirical research suggests that age, sex, and SES are three sociodemographic factors that have bearing on experienced racial discrimination for African Americans. With regard to age, there is evidence that younger African American individuals experience racial discrimination more frequently than older African Americans (e.g., Kessler et al. 1999; LaVeist et al. 2003), though there are some exceptions to this finding (e.g., Krieger et al. 2005). Likewise, recent quantitative assessments indicate that African American men and African American women experience racial discrimination with different frequency, such that men tend to report higher levels of

the stressor (e.g., Pieterse and Carter 2007; Borrell et al. 2006; Sellers and Shelton 2003). In particular, African American men report more experiences with racial discrimination and in more settings than women, including while seeking employment, working at their jobs, applying for bank loans, and dealing with the justice system (Borrell et al. 2006; Krieger and Sidney 1996).

Findings regarding the influence of SES on experienced racial discrimination are mixed, with some studies suggesting that African Americans of low SES report less experienced racial discrimination than African Americans of high SES (e.g., Dailey et al. 2010), and other studies suggesting that racial discrimination is more common for low SES African Americans because it is more easily legitimized for individuals who are already disadvantaged (see Williams and Mohammed 2009). However, Williams and Mohammed (2009) report that there is more quantitative evidence to support that high SES predicts greater levels of experienced racial discrimination. Taken together, it appears that age, sex, and SES each play a role in the levels of racial discrimination experienced by African Americans and, as a result, may affect their depressive symptoms.

Although recent research links neighborhood racial composition (e.g., Hunt et al. 2007) and sociodemographic factors (e.g., Dailey et al. 2010) with levels of experienced racial discrimination, no studies have examined these factors collectively as predictors of depressive symptoms in African Americans. This omission limits the understanding of the interplay between individual and neighborhood characteristics that influence the experience of racial discrimination and, in turn, the etiology of depressed mood within the African American community. Therefore, the following hypotheses were tested: (1) African Americans living in neighborhoods with larger percentages of White inhabitants will experience higher levels of racial discrimination; (2) Sociodemographic factors will predict levels of experienced racial discrimination such that younger age, male sex, and higher SES will be associated with higher levels of experienced racial discrimination; (3) Experienced racial discrimination will predict later depressive symptoms for African Americans; and (4) Percentage of White inhabitants in a neighborhood will have a positive indirect effect on depressive symptoms through its effect on experienced racial discrimination.

Methods

The current study included participants from the HANDLS project, a prospective longitudinal epidemiologic study of health disparities in a sample of adults living in Baltimore, Maryland (Evans et al. 2010). A primary objective of HANDLS is to explore the association between SES and health in urban African American adults. In particular, HANDLS is designed to parse the effects of race and SES on disease etiology and associated mortality. Between 2004 and 2009, HANDLS recruited 3,720 participants (55 % females), ranging in age from 30 to 64 years, for baseline testing. Of the original 3,720 participants, 2,197 were African American and 1,523 were White adults. Of the 2,197 African Americans, 505 African Americans were reassessed 4–5 years later (mean interval between examinations = 4.63; *SD* = 0.79), completed measures of depressive symptoms at wave three, completed the measure of experienced racial discrimination at baseline, and provided full demographic information. Participants were initially interviewed with household

screenings starting in 2004. The original sample was recruited from 12 predetermined neighborhoods, as defined by groups of contiguous census tracts, based on their national representativeness of 30–64 year old African Americans and Whites. Socioeconomic statuses were sampled and indexed by poverty status (below or above 125 % of the Federal Poverty Guidelines). Initial inclusion criteria for participants included: (1) being within the 30–64 age range at initial in-home interview; (2) being able to provide informed consent; (3) being able to participate in at least five of the following: laboratory evaluation, medical history, physical examination, physical performance, cognitive testing, dietary recall, audio questionnaire, body composition, carotid Doppler, or pulse wave velocity assessment; (4) being able to produce a valid picture identification; and (5) and having a verifiable address during the initial interview. Participants who were pregnant at the time of entry, had a diagnosis of AIDS, or were within 6 months of active treatment of cancer (chemotherapy, biologic, or radiation) were excluded from the sample. A more detailed description of the HANDLS project study design, recruitment procedures, measures, and baseline sample demographic has been previously published (Evans et al. 2010). The present study includes data from the initial interview and exam at baseline spanning from 2005 to 2009 (wave 1) and the follow-up wave of data collection spanning from 2009 to 2012 (wave 3). Study data at wave 1 were obtained via in-home interviews. Wave 3 data were obtained via examinations performed on mobile vehicles. The MedStar Institutional Review Board approved this protocol.

Measures

Demographics—Participant age, sex (female = 1; male = 2), and poverty status information was collected. Poverty status was categorized as 0 (*family income<125 % the poverty threshold*) or 1 (*family income ≥125 % the poverty threshold*) as defined by the Federal poverty threshold (Evans et al. 2010). A family income <125 % the poverty threshold suggests that on average participants' income was ≥1.25 times the U.S. national poverty threshold.

Experienced Racial Discrimination—Experienced racial discrimination was assessed using six items from the Discrimination scale of the Experience of Discrimination (EOD) questionnaire and a global experienced discrimination item, both of which were drawn from a compendium developed by Krieger et al. (2005). The self-report discrimination scale includes the following root question "Have you ever experienced discrimination, been prevented from doing something, or been hassled or made to feel inferior in any of the following situations because of your race, ethnicity or color?" Item examples include *getting medical care*, *at work*, and *getting housing*. In accordance with the "situation" version of the EOD, participants responded to each item with either 1 (no) or 2 (yes). In order to obtain a clearer assessment of the frequency of experienced racial discrimination for each participant, a global frequency item from Krieger et al. (2005) was included. This item read, "How often do you feel that you, personally, have been discriminated against because of your race ethnicity or color? (choose the number that best represents how you feel)." Participants responded on a four-point Likert-type scale ranging from 1 (*Not at all*) to 4 (*A lot*). The 7 items were summed to obtain a composite score ranging from 7 to 16. The EOD and global question have demonstrated high test–retest reliability (correlations of 0.69 and higher),

convergent validity with the Williams Everyday Discrimination measure (Williams et al. 1997), and concurrent validity with a measure of psychological distress (Krieger et al. 2005). In the present study, the composite measure demonstrated acceptable internal consistency ($\alpha = 0.78$).

Depressive Symptoms—Depressive symptoms were measured at wave 3 using the Center for Epidemiological Study Depression Scale (CES-D; Radloff 1977). The CES-D is a 20-item instrument developed to assess current depressive symptomatology among the general population. It measures four factors of depressive symptomatology: depressive affect, interpersonal problems, somatic complaints, and positive affect. Items include: "I was bothered by things that usually don't bother me;" "I had trouble keeping my mind on what I was doing;" and "My sleep was restless." Participants indicate the degree to which they have experienced a given symptom during the previous week on a four-point Likert-type scale ranging from 0 (*Rarely*) to 3 (*Most or all of the time*). Scores in the positive affect section were reverse coded. The CES-D has shown good psychometrics with adult African American samples (Nguyen et al. 2004). In the present sample, the Cronbach's alpha for the full CES-D was .92 at wave 3, indicating excellent internal consistency. Depressive symptoms were measured as a latent variable in the present analyses with four indicators corresponding to the four factors of the CES-D. In order to create the latent variable, a confirmatory factor analysis (CFA) was completed. The results of the CFA showed that all indicators loaded onto one factor with factor loadings exceeding .50.

Neighborhood Racial Composition—Participant addresses were geocoded to their respective census tracts. Total number and percentage of White individuals living in each study census tract were obtained from the Census Bureau using the American Fact Finder. Census tract data is comparable to GIS surface-density-derived indices in studies of racial segregation and health disparities, particularly within large metropolitan areas in the northeast of the U.S. (Kramer et al. 2010).

Analytic Strategy

Structural Equation Modeling (SEM) was employed using the Lavaan application with *R* statistical software (Rosseel 2012). Model fit was evaluated using the following indicators: Chi square, the Comparative Fit Index (CFI), the Tucker Lewis Index (TLI), and the Root Mean Square Error of Approximation (RMSEA). CFI and TLI values above .90 (Hu and Bentler 1999), and RMSEA values <.08 (Hu and Bentler 1999) represent acceptable fit. Bivariate correlations were examined to assess whether the associations included in the present model existed without controlling for the other linkages within the SEM framework.

Results

Descriptive Statistics

Correlations among study variables, means, and standard deviations for the total sample are presented in Table 1. Eighty-three percent of participants indicated experiencing at least one instance of racial discrimination (see Table 2 for item percentages). Across the census tracts included in the present analyses, the percentage of inhabitants living below the poverty line

ranged from 2.1 to 40.3 % (M = 21.4 %). The tracts were predominantly comprised of White and Black inhabitants with the percentage of White inhabitants ranging from .5 to 92.3 % with a mean of 27 % across all tracts and Black inhabitants ranging from 3.4 to 97 % with a mean 66.5 % across all tracts.

Age and sex were significantly positively correlated with experienced racial discrimination such that older individuals and males experienced greater amounts of racial discrimination. Sex was significantly negatively associated with depressive symptoms such that females experienced greater levels of depression. Poverty status was significantly and positively associated with depressive symptoms but not significantly associated with experienced racial discrimination. Percentage of White individuals in a census tract and depressive symptoms were significantly positively correlated with experienced racial discrimination. Experienced racial discrimination and depressive symptoms were not significantly correlated.

Structural Equation Model

The hypothesized model was a two-wave longitudinal SEM (see Fig. 1). All of the study hypotheses were tested within a single model as depicted in theoretical models of experienced racial discrimination (e.g., Clark et al. 1999). Specifically, racial discrimination was regressed on sex, age, and poverty status (Hypothesis 1); racial discrimination was regressed on neighborhood racial composition (Hypothesis 2); depressive symptoms were regressed on racial discrimination (Hypothesis 3); and the indirect pathway from neighborhood racial composition to depressive symptoms through racial discrimination was assessed (Hypothesis 4). In addition to the hypothesized paths, depressive symptoms were regressed on sex and age in order to control for spurious pathways from age and sex on depressive symptoms evidenced in past studies (e.g., Skarupski et al. 2005) that can inflate the associations between racial discrimination and age and sex via their shared associations with depressive symptoms. No constraints were imposed on the model. All pathways in the model were significant, with the exception of the paths from age to depressive symptoms and poverty status to racial discrimination (see Table 3). Fit indices suggested that the fit of the base model was excellent: $\chi^2(df) = 19.20$, $p < .001$; CFI = 0.99; TLI = 0.98; RMSEA = 0.03 (90 % CI 0.00; 0.06).

The model provided partial support for Hypothesis 1. Experienced racial discrimination was significantly positively associated with sex ($\beta = 0.24$, $p < .001$), such that men experienced more racial discrimination; however, age ($\beta = 0.14$, $p < .001$) was significantly positively associated with experienced racial discrimination, such that older individuals experienced more racial discrimination, and poverty status ($\beta = -0.02$, $p > .05$) was not significantly associated with experienced racial discrimination. Thus, sex was the strongest predictor of racial discrimination amongst the variables included in Hypothesis 1. Estimation of the base model provided support for Hypotheses 2, 3, and 4. Experienced racial discrimination was significantly positively associated with the percentage of White neighborhood members ($\beta = 0.14$, $p < .001$) and depressive symptoms ($\beta = 0.13$, $p < .01$). Percentage of White neighborhood members had an indirect effect on depressive symptoms through its effect on depressive symptoms ($\beta = 0.02$, $p < .05$).

Discussion

Few empirical studies have considered the effects of neighborhood racial composition and sociodemographic characteristics on experienced racial discrimination for African Americans. Moreover, no studies have investigated experienced racial discrimination simultaneously as an outcome of these factors and as a predictor of depressive symptoms for African Americans. Results from this research provide evidence for theoretical models positing neighborhood racial composition (e.g., Gee and Payne-Sturges 2004) and sociodemographic characteristics (e.g., Harrell 2000) as antecedents to experienced racial discrimination and depressive outcomes for African Americans, indicating that: (1) Percentage of White individuals residing in a neighborhood was positively associated with levels of experienced racial discrimination for African American neighborhood residents; (2) Experienced racial discrimination was positively associated with age and sex such that older individuals and males reported greater levels of experienced racial discrimination; (3) Experienced racial discrimination at wave 1 was positively associated with depressive symptoms at wave 3; and (4) Percentage of White individuals residing in a neighborhood had a positive indirect effect on depressive symptoms at wave 3 through its effect on racial discrimination at wave 1.

Neighborhood Racial Composition and Racial Discrimination

The present results show that the percentage of White individuals within in a neighborhood is positively associated with experienced racial discrimination for African Americans within that neighborhood. This finding provides support for the framework proposed by Gee and Payne-Sturges (2004) that stipulates that neighborhood characteristics affect stress experienced by individuals within that neighborhood. In addition, this result is consonant with Tokenism theory (Kanter 1977), which posits that minorities who make up a low percentage of a neighborhood (15 % or less) endure increased amounts of race-related stress in negotiating stereotypes and discrimination associated with their minority status. This study adds to the burgeoning literature assessing the effects of racial residential composition and experienced race-related stress for African Americans. The results suggest that African Americans residing in predominantly White neighborhoods are at high risk for stress associated with racial discrimination. This conclusion is consistent with past research evincing the importance of intergroup contact in reducing racial discrimination (Pettigrew 1998) as there is likely little intergroup contact within racially-homogeneous neighborhoods. Consequently, these neighborhoods appear to put African Americans at risk for race-related stress and, in turn, poorer health outcomes. This notion is supported by recent research suggesting that racial health disparities may be lower for African Americans living in racially diverse neighborhoods (Kershaw et al. 2011). Thus, while racially homogeneous neighborhoods appear to lead to racial health disparities, racially-diverse neighborhoods may lead to equitable health outcomes for inhabitants for all races. It is critical that researchers continue to investigate the health implications of racial residential composition, identifying positive and negative aspects of racially-diverse neighborhoods.

Sociodemographics and Racial Discrimination

These results suggest that some individual sociodemographic factors predict the frequency of racial discrimination experienced by African American individuals. That older African Americans experienced greater levels of racial discrimination than younger African Americans is contrary to past studies indicating that younger African Americans are at greatest risk for experienced racial discrimination (e.g., LaVeist et al. 2003). However, this finding provides support for past research that suggests older African Americans are affected by racial discrimination to a greater degree than younger African Americans as a function of accumulated allostatic load and re-experiencing of past discrimination (e.g., Deuster et al. 2011). If these results indicate an actual trend in experienced racial discrimination, older African American adults may be a group that is especially vulnerable to the negative effects of the stressor. As such, preventive interventions addressing the negative effects of racial discrimination should intervene early in the lifespan as to reduce cumulative effects. However, these results must be interpreted in light of the measurement used in this study, as lifetime exposure to racial discrimination was assessed rather than recent or daily experiences of racial discrimination, which give a more valid indication of recent and chronic experiences of racial discrimination.

The present findings also show that men experienced racial discrimination more frequently than women, confirming past research indicating that African American men are faced with racial discrimination at a greater frequency than are African American women (e.g., Borrell et al. 2006; Kessler et al. 1999). A probable cause for this finding is the gendered and racialized stereotypes that remain ubiquitous throughout U.S. society that depict African American males as deviant and violent (Williams and Mohammed 2009). Another possible explanation for the higher reports of experienced racial discrimination amongst men compared to women is that, rather than being faced with more frequent racial discrimination, men may tend to be exposed to more unambiguous expressions of racial discrimination whereas women may be confronted with more subtle, ambiguous forms of racial discrimination, making it less likely that women would recall and report experiencing the stressor (Chavous et al. 2008).

Although past studies have found that experienced racial discrimination was positively associated with SES in African Americans (e.g., Kessler et al. 1999), the present analyses indicated that there was not a significant association between poverty status and experienced racial discrimination. The lack of an association may reflect the way SES was measured in this study. Poverty status (i.e., whether above or below the poverty line) masks distinctions among household incomes that likely are relevant for the experience of racial discrimination (Dailey et al. 2010). For example, it was not possible to differentiate the effects of middle versus high income on experienced racial discrimination because they were both included in the group above the poverty line. Given the discrepancy between these findings and prior research, future studies should examine fine divisions of SES as predictors of experienced racial discrimination to further elucidate this pattern.

Neighborhood Racial Composition, Racial Discrimination, and Depressive Symptoms

Replicating the evidence of past studies, experienced racial discrimination predicted subsequent depressive symptoms in the African American adult sample included in the present study. Moreover, racial discrimination predicted depressive symptoms over and above the effect of sex, suggesting that the association between racial discrimination and depressive symptoms was not driven by the established link between sex and depressive symptoms (Piccinelli and Wilkinson 2000). Together, these findings indicate that experienced racial discrimination is a contributor to the etiology of depressive symptoms in African American adults. In addition, given the significant indirect association between neighborhood racial composition and depressive symptoms through racial discrimination, it appears that that racial discrimination may be one explanation for recent findings that indicate African Americans living in predominantly White neighborhoods exhibit increased levels of depression relative to other African Americans (e.g., Kershaw et al. 2011; Wickrama et al. 2005; Wight et al. 2005). This provides additional evidence that racially-segregated neighborhood contexts are key contributors to the current racial health disparities in the United States (e.g., Chang 2006; Gee and Payne-Sturges 2004; Kershaw et al. 2011; Russell et al. 2011).

Strengths, Limitations, and Future Directions

A particular strength of the present study was the socioeconomic diversity of the sample as there were roughly equal distributions of African Americans above and below the poverty line. As such, poverty and other stress variables were not confounded as in much prior research focusing on low-income, urban African Americans (LaVeist 2005). In addition, this study used a measurement model resembling the theoretical models (e.g., Gee and Payne-Sturges 2004) that provide the foundation for racial discrimination research, improving upon past studies that have focused on single associations between racial discrimination and health outcomes, without attention to contextual factors. Also, in contrast to past studies focusing on African Americans living in predominantly African American neighborhoods, the present study focused on the effect of living in proximity to White individuals. This focus brings a new perspective to disparities associated with neighborhood racial context, showing that there are unique implications for African Americans living in racially-homogenous White neighborhoods.

The strengths of this study must be considered in the context of its limitations. The instrument used to assess experienced racial discrimination measured the frequency of the construct over a lifetime, obscuring information on the timing of experienced racial discrimination, i.e., whether it occurred on or around the time of measurement or further in the past. As such, the present finding that older African Americans experience greater levels of racial discrimination may be a function of older individuals simply having more experiences across their lifetimes than younger individuals. In addition, the measures of experienced racial discrimination and depressive symptoms used in the present study were both self-report, presenting a risk of common rater effects. Although temporal separation between measurement wave 1 and measurement wave 3 in the present study does work to remedy this bias (Podsakoff et al. 2003), future studies should obtain these measures from

different sources in order to further control for possible shared method bias. Also, using census block groups rather than census tracts might have yielded more precise measures of participants' neighborhood context as some researchers believe them to be a closer representation of neighborhood divisions than census tracts (e.g., Hunt et al. 2007).

Despite these limitations, the present study is a valuable addition to racial discrimination research within the African American community and offers several implications for future intervention and research. The results indicate that preventive intervention efforts tailored to African Americans must consider the age and sex of their clients and the racial composition of their clients' neighborhood environment. In order to extend this research to inform future intervention efforts, additional mechanisms through which neighborhood racial composition affects African American mental health outcomes, such as social exclusion (Kurzban and Leary 2001) and acculturative stress (Anderson 1991), must be explored. In addition, future research should investigate possible moderators of the link between neighborhood racial composition and experienced racial discrimination, such as collective efficacy (Bandura 2000), as well as moderators of the link between racial discrimination and depressive symptoms, such as coping strategies (Utsey et al. 2000). Future studies also can test the effectiveness of adapting depression treatment programming for African Americans based on sex, age, and neighborhood racial composition, like past Cognitive Behavioral Therapy modalities that have been adapted based on race, sex, and income level (Kohn et al. 2002). Future studies can explore the quality of interracial relations within diverse neighborhood contexts and investigate factors that help foster positive racial relations within diverse neighborhoods.[1] Future research also can examine how neighborhood racial composition operates with other dimensions of neighborhood context (e.g., individual perceptions of neighborhood) to influence the etiology of depression among African American adults. Finally, future investigations must build upon the present results and aim to inform policy-based solutions to confronting the potentially positive and negative effects of racial residential composition.

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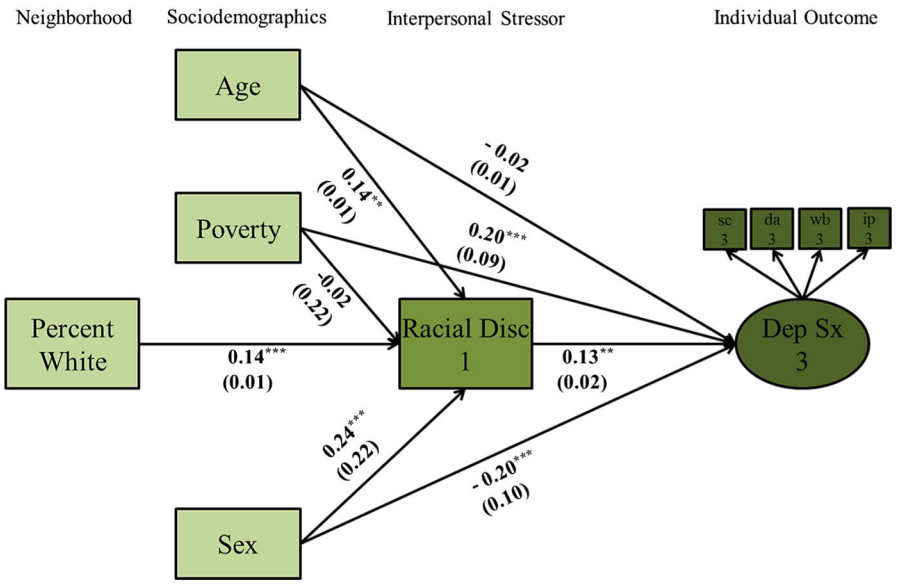

Fig. 1.

Base structural equation model. *Note* Poverty = Poverty status; Percent White = Percentage of white neighborhood residents; Racial disc 1 = Racial discrimination at wave 1; Dep Sx 3 = Depressive symptoms at wave 3. Standardized estimates provided. Standard errors provided in parentheses. ***p* <.01, ****p* <.001 (*two-tailed*)

Table 1

Correlations among study variables

Variable	1.	2.	3.	4.	5.	6.
1. Age	–	–	–	–	–	–
2. Sex	0.00	–	–	–	–	–
3. Poverty status	−0.07	−0.02	–	–	–	–
4. Percentage White	−0.12**	0.03	0.07	–	–	–
5. Racial discrimination W1	0.12**	0.24***	−0.03	0.13***	–	–
6. Depressive symptoms W3	0.00	−0.15***	0.20***	0.07	0.07	–
N	516	516	516	516	512	513
Mean (SD)	47.57 (8.69)	1.40 (0.49)	1.55 (0.50)	13.33 (18.45)	10.08 (2.52)	15.60 (11.83)

Female = 1, Males = 2

** p <.01;

*** p <.001. (two-tailed)

Table 2

Rates of experienced racial discrimination by age and sex

	Overall	Females	Males	Age		
				30–39	40–49	50–65
N	502	303	199	93	200	209
School (%)	19	16	25	9	28	21
Getting a job (%)	38	32	48	31	37	44
Work (%)	41	35	51	37	40	45
Getting housing (%)	17	15	20	10	17	20
Getting medical care (%)	13	13	13	8	14	14
From police/court (%)	33	19	55	25	40	32
Frequency						
Not at all (%)	19	24	11	27	18	16
A little (%)	35	37	33	38	38	32
Some (%)	26	25	28	20	27	29
A lot (%)	20	14	28	15	18	23

Percentages rounded to whole numbers. Age recorded in years. Across all experiences, 83 % of participants reported at least one experience with racial discrimination

Table 3

Parameter estimates for base model

	Estimate	S.E.	Standardized Estimate	Two- tailed *p* value
Depressive symptoms 3				
By somatic complaints 3	3.38	0.18	0.77	0.00
By depressive affect 3	4.97	0.19	0.97	0.00
By well-being 3	1.64	0.11	0.63	0.00
By interpersonal problems 3	0.73	0.06	0.52	0.00
Racial discrimination				
On age	0.04	0.01	0.14	0.00
On sex	1.23	0.22	0.24	0.00
On percentage White	0.02	0.01	0.14	0.00
On poverty status	−0.12	0.22	−0.02	0.58
Depressive symptoms 3				
On racial discrimination	0.05	0.02	0.13	0.01
On age	0.00	0.01	0.00	0.99
On sex	−0.39	0.10	−0.19	0.00
On poverty status	0.41	0.09	0.20	0.00

Model fit indices: $\chi^2(df) = 19.20$; *CFI = 0.99; TLI = 0.98; RMSEA = 0.03*

CFI Comparative fit Index, *TLI* Tucker–Lewis Index, *RMSEA* Root-mean-square error approximation