

# Are benefits conferred with greater socioeconomic position undermined by racial discrimination among African American men?

## Keywords

African Americans

Racial discrimination

Socioeconomic position

Depression

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Online 26 April 2012

## Abstract

**Background:** conventional wisdom suggests that increased socioeconomic resources should be related to better health. Considering the body of evidence demonstrating the significant association between racial discrimination and depression, we examined whether exposure to racial discrimination could attenuate the positive effects of increased levels of socioeconomic position (SEP) among African Americans. Specifically, this paper investigated the joint interactive effects of SEP and racial discrimination on the odds of depression among African Americans.

**Methods:** racial discrimination was measured using two measures, major and everyday discrimination. Study objectives were achieved using data from the National Survey of American Life, which included a nationally representative sample of African Americans ( $n = 3570$ ). Logistic regression models were used to estimate the effects of SEP and racial discrimination on the odds of depression.

**Results:** reports of racial discrimination were associated with increased risk of depression among African American men who possessed greater levels of education and income. Among African American men, significant, positive interactions were observed between education and experiences of major discrimination, which were associated with greater odds of depression ( $P = 0.02$ ). Additionally, there were positive interactions between income and both measures of racial discrimination (income x everyday discrimination,  $P = 0.013$ ; income x major discrimination,  $P = 0.02$ ), which were associated with increased odds of depression ( $P = 0.02$ ).

**Conclusions:** it is possible that experiences of racial discrimination could, in part, diminish the effects of increased SEP among African American men. © 2012 WPMH GmbH. Published by Elsevier Ireland Ltd.

## Introduction

Advantage and adversity in the United States are socially patterned by race, gender and socioeconomic position (SEP) and are considered major factors in shaping the mental health status of members of socially disadvantaged

groups [1]. For instance, high levels of lifetime exposure to adversity are related to the onset of depression [2]. While African Americans are socially and economically disadvantaged, compared to Whites [3], findings from psychiatric epidemiologic studies have consistently indicated either that African Americans report

lower rates of depression compared to Whites [4–8] or that there are no statistically meaningful racial differences in rates of depression between African Americans and Whites [9].

Conventional wisdom suggests that increased socioeconomic resources should be related to better health. Individuals who possess greater levels of socioeconomic resources generally report better health, including lower prevalence of mental disorders, compared to poorer people [10–12]. However, results from previous psychiatric epidemiologic studies largely indicate that there is no consistent inverse relationship between SEP and depression among African Americans [1,6,13–16]. For instance, Hudson et al. found mixed relationships between SEP indices and risk of depression [9]. They found that unemployment and reports of the highest income levels were both associated with greater risk of depression among African American men. Conversely, greater levels of education were associated with lower odds of depression among African American men and there were no significant relationships between SEP and depression in African American women. Even when examining less commonly used SEP indicators such as parental education and indices of wealth, no definitive SEP–depression relationship has been observed [8,16]. These findings are counterintuitive considering that most physical morbidities are negatively associated with SEP indicators [17]. One area that warrants attention and remains understudied is the examination of the relationship between racial discrimination and SEP and how this relationship could moderate the relationship between SEP and depression among African Americans.

Racial discrimination has been identified as a prominent stressor and an important predictor of depression among African Americans within the public health literature [18–21]. Researchers have found empirical associations between perceived racial discrimination and impaired psychological well-being, decreased self-esteem, and increased risk of depression [13,18,22]. Williams et al. posited that racial discrimination is an added burden that African Americans face and that perceptions of discrimination can adversely affect both physical and mental health [22]. Several scholars have found that African Americans who possess greater levels of socioeconomic resources experience more racial discrimination than poorer African

Americans [23,24]. African Americans with greater levels of SEP may also become more aware of unfair treatment as well as the receipt of diminished returns on human capital investments compared to Whites [25–27]. At every level of education, African Americans generally tend to earn lower levels of income compared to Whites. This discrepancy in returns on human capital investment, compared to Whites, may be a unique source of stress and alienation for African Americans [25].

## The present research

Considering the body of evidence demonstrating the significant association between racial discrimination and depression, it is possible that racial discrimination could attenuate the positive effects of increased levels of SEP among African Americans [28,29]. However, the joint effects of racial discrimination and SEP on depression have not been examined in previous studies. The objective of this study was to determine whether the relationship between SEP and depression was moderated by racial discrimination. It is important to note that there are different forms and dimensions of racial discrimination. We examined two measures of racial discrimination here, one acute (major discrimination) and one chronic (everyday discrimination). We hypothesized that the interaction between racial discrimination and SEP would be related to more frequent reports of depression among African Americans such that higher racial discrimination scores would be associated with greater odds of depression for African Americans who reported higher SEP levels.

## Methods

### Data and sample

Data for this study were drawn from the National Survey of American Life (NSAL), a national population-based sample drawn from the coterminous United States. NSAL data were collected between 2001 and 2003 and used an in-home, face-to-face interview design with computer-assisted personal interviewing (CAPI) software. NSAL interviews lasted an average of 2 hours and 20 minutes [30]. Due to the stratified and clustered sample design, sample weights were created to account for unequal probabilities of selection, non-response, and

post-stratification. More detailed documentation on the NSAL sampling methodology and study procedures are discussed elsewhere [31,32]. The final sample included 3570 African American men and women aged 18 years and over. The NSAL was approved by the Institutional Review Board at the University of Michigan.

### Depression measurement

Major depressive episode (MDE) was the outcome of interest, which was ascertained using the World Mental Health Composite International Diagnostic Interview (WMH-CIDI), a fully structured lay-administered diagnostic instrument that mimics DSM-IV diagnoses of psychiatric disorders [5,33,34]. Respondents were considered a case if they met 12-month DSM-IV criteria for MDE.

### SEP measurement

Respondents' household income was categorized as less than \$18,000, \$18,000–\$31,999, \$32,000–\$54,999, and \$55,000 or greater. These categories were constructed according to U.S. federal poverty guidelines for 2001. Respondents in the less than \$18,000 category corresponded to 1.5 times the poverty level or less, the \$18,000–\$31,999 category corresponded to 1.5–3 times the poverty level, the \$32,000–\$54,999 category corresponded to 3–6 times the poverty level, and the  $\geq$  \$55,000 category corresponded to 6 or more times the poverty level. Respondents' education level was categorized as less than 12 years, 12–15 years, and 16 or greater years of education completed. SEP was limited to household income and education because these were the only significant SEP markers to emerge in previous NSAL work that explored the relationship between SEP and depression using the NSAL [9].

### Racial discrimination measurement

Racial discrimination was measured using two measures of racial discrimination: the major discrimination scale [18,20] and the everyday discrimination scale [35]. The major discrimination scale reflects the sum of the unfair events attributable to respondents' race. The following unfair events were assessed: being unfairly fired from a job, unfairly not hired, unfairly denied a job promotion, unfairly

denied a bank loan, unfairly discouraged from seeking more education, unfairly stopped by the police, unfairly prevented from moving into a neighborhood, neighbors making life difficult for respondents, and receiving poorer service because of race.

The everyday discrimination scale was scored as the sum of 10 items designed to measure the frequency of routine experiences of unfair treatment due to respondent's race. Respondents were asked, "In your day-to-day life how often have any of the following things happened to you?" The 10 domains included the following items: being treated with less courtesy than others receive; receiving less respect than others; receiving poorer service than others in restaurants or stores; people acting as if you are not smart, they are better than you, they are afraid of you, they think you are dishonest; being called names or insulted, being threatened or harassed, and being followed around in stores because of race. Respondents indicated how often they experienced these situations, with 1 being "never" and 6 being "almost every day."

### Other covariates

Age was a continuous variable calculated from respondents' date of birth. Marital status was included as a control variable because previous research has demonstrated that unmarried respondents typically report greater odds of depression than married respondents [36,37]. Marital status was coded into two categories, married/partnered and not married. The not married category included respondents who were separated, widowed, and divorced. The married/partnered category was used as the reference group. Employment status was classified as follows: employed, corresponding to respondents who reported that they were currently employed at the time of data collection; unemployed, for respondents who were unemployed but actively seeking employment; and not in workforce, for respondents who were not currently working and were not seeking employment. We adjusted for employment status because unemployment is a predictor of depression [8,38] and employment status could be a contributing factor in the determination of SEP. Household size indicated the number of individuals who reside in respondents' households, including adults and children.

## Statistical analysis

Logistic regression models were used to estimate the effects of SEP and racial discrimination on odds of 12-month MDE. Because previous studies have typically shown a greater prevalence of depression among women compared to men [39–43], analyses were stratified by sex to examine differences between African American men and women. All models were adjusted for age, marital status and employment status. Interaction terms were generated between SEP indices (education and income) and the two measures of racial discrimination (major and everyday) to examine whether racial discrimination moderated the influence of SEP on risk of depression. The analyses were performed using SAS version 9.2 [44] and incorporated the design effects in the estimation of standard errors and test statistics.

To display the effects of the interactions between SEP and racial discrimination on MDE, the predicted log odds of MDE (depression = 1) stratified by education or income levels were plotted against the scores for major discrimination and everyday discrimination, respectively. The predicted log odds of depression were calculated holding other independent

variables constant. The continuous numeric variable of age was held at its sample mean value (males, 43.53; females, 42.93), and the categorical variables of marital status, employment status and education/income level were set at the reference levels.

## Results

Table 1 displays the sociodemographic characteristics of the NSAL African American sample stratified by sex. There were significant gender differences across several sociodemographic variables. Although men and women had the same average age (approximately 42 years) and similar levels of education, men reported significantly greater levels of household income (\$42,560 vs. \$32,328, respectively;  $P < 0.001$ ) and were more likely to report being currently employed (71% vs. 63%, respectively;  $P < 0.001$ ). Men were also significantly more likely to report that they were married or living with a partner (49% vs. 34%, respectively;  $P < 0.001$ ). Men were significantly more likely to report incidents of both major and everyday racial discrimination compared to women ( $P < 0.001$ )

**Table 1** Sociodemographic characteristics of sample<sup>†</sup>.

Variables	Men ( <i>n</i> = 1271) % (SE) or <i>M</i> (SE)	Women ( <i>n</i> = 2299) % (SE) or <i>M</i> (SE)	<i>P</i> -value <sup>‡</sup>
Age	41.97 (0.65)	42.6 (0.58)	0.33
Education (years)	12.42 (0.11)	12.43 (0.10)	0.90
<12 years	23.22 (1.58)	25.96 (1.74)	
12–15 years	62.33 (1.76)	61.18 (1.70)	
≥16 years	14.45 (1.50)	13.86 (1.34)	
Income (household)	42,560 (2159)	32,328 (1271)	<0.001
<\$18,000	23.28 (1.79)	36.70 (1.55)	
\$18,000–\$31,999	23.16 (1.20)	26.74 (1.11)	
\$32,000–\$54,999	28.29 (1.41)	20.13 (0.95)	
\$55,000 or more	25.27 (1.83)	16.43 (1.27)	
Employment status			0.0003
Working	71.4 (1.47)	63.23 (1.42)	
Not working	28.6 (1.47)	36.77 (1.42)	
Marital status			<0.001
Married/partnered	49.3 (1.64)	35.47 (1.28)	
Not married	50.7 (1.64)	64.53 (1.28)	
Major discrimination	6.00 (0.59)	1.49 (0.16)	<0.001
Everyday discrimination	9.70 (0.46)	7.45 (0.30)	<0.001
Major depressive episode	2.07 (0.29)	4.63 (0.30)	<0.001

<sup>†</sup> Percentages with standard errors or means with standard errors are presented.

<sup>‡</sup> The complex design corrected *t*-test or chi-square represents the test of significance.

while women reported greater overall prevalence of 12-month MDE compared to men (4.63% vs. 2.07%, respectively;  $P < 0.001$ ).

Overall, greater levels of education ( $r = 0.05$ ;  $P = 0.002$ ) and household income ( $r = 0.03$ ;  $P = 0.14$ ) were positively associated with reports of major racial discrimination (correlation analyses not shown). Greater levels of education ( $r = 0.06$ ;  $P < 0.001$ ) and income ( $r = 0.05$ ;  $P < 0.001$ ) were positively associated with greater reports of everyday racial discrimination. There were some significant gender differences. Only education was significantly related to greater reports of everyday discrimination for women, while only education and everyday discrimination were positively related for African American men. Overall, there was a strong, positive relationship between the two measures of racial discrimination ( $r = 0.23$ ;  $P < 0.001$ ).

Neither educational attainment nor household income was significantly related to MDE for African American women in multivariate analyses, as indicated in Table 2. Men who reported earning annual incomes of \$55,000 or more had significantly greater odds of MDE compared to men in the lowest income category (OR = 2.34 (1.00–1.08)). We found that everyday discrimination was associated with greater odds of MDE for both men and women; however, there was not a statistically significant relationship between major discrimination and MDE.

Figure 1 displays the interaction between major racial discrimination and education

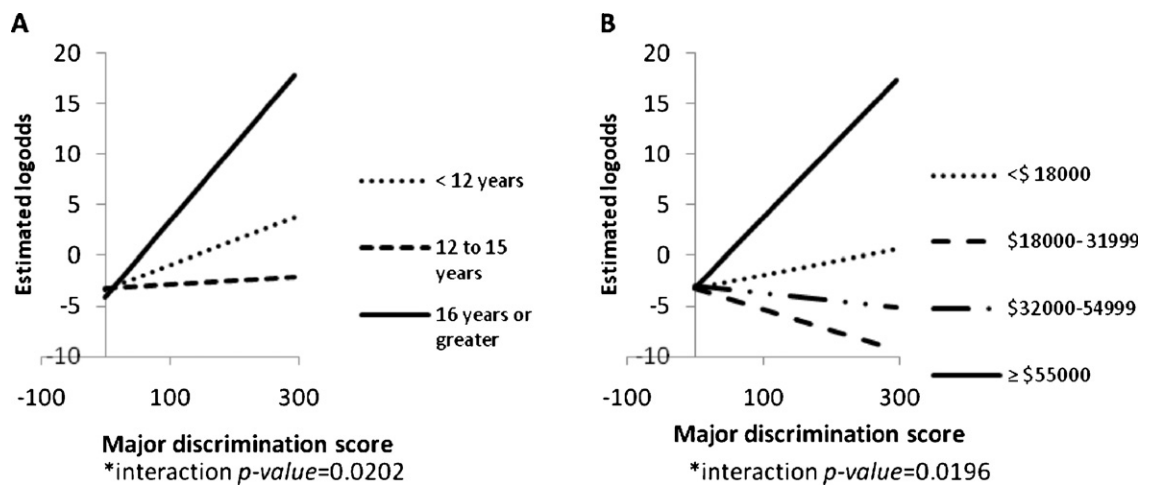
level on MDE for African American men. A significant interaction between major racial discrimination and education ( $P = 0.029$ ) was observed among men. Compared to those at the reference education level (less than high school diploma), men with 12–15 years of education had a slightly, but not significantly, smaller effect of major discrimination on the log odds of MDE per unit change in major discrimination scores. However, we found a significant positive association between major discrimination and increased log odds of MDE among African American men who reported completing 16 or more years of education, compared to men in the least educated group ( $P = 0.0081$ ). Similarly, we observed a significant interaction ( $P = 0.0261$ ) between household income and incidents of major discrimination among African American men (Figure 1). This indicated that among men who reported greater levels of major discrimination, those in the highest income group ( $\geq \$55,000$ ) were significantly more likely to report MDE ( $P = 0.01$ ), compared to men in the lowest income group ( $< \$18,000$ ). Conversely, among men who reported experiences of major discrimination, those in the lowest income category were more likely to report MDE than men in the middle income categories, although this relationship interaction was not significant.

Figure 2 displays the effects of the interaction between everyday discrimination and SEP on odds of MDE. We did not observe a significant

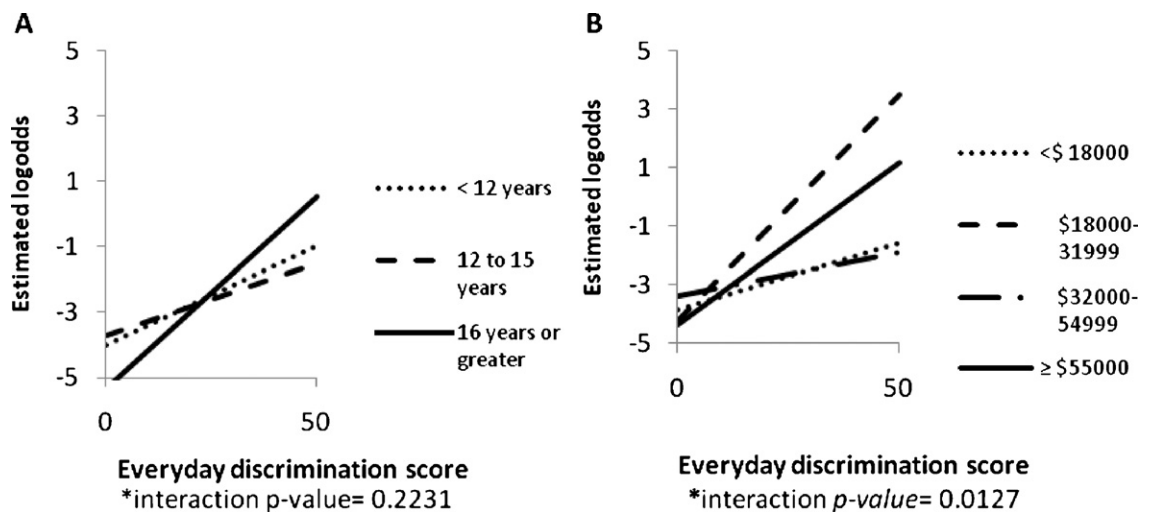
**Table 2** Relative odds of 12-month depressive episode for African Americans.

	Odds ratio (95% CI)		Odds ratio (95% CI)	
	Men	Women	Men	Women
<b>SEP</b>				
Education (years)				
<12 years (ref.)				
12–15 years	0.60 (0.30–1.44)	0.72 (0.45–1.16)	0.63 (0.33–1.22)	0.73 (0.44–1.20)
$\geq 16$ years	0.58 (0.16–2.09)	1.00 (0.51–2.00)	0.46 (0.13–1.63)	0.95 (0.48–1.88)
Income (US dollars)				
< \$18,000 (ref.)				
\$18,000–31,999	1.15 (0.48–2.75)	0.78 (0.44–1.36)	1.09 (0.40–2.96)	0.72 (0.39–1.32)
\$32,000–54,999	1.49 (0.66–3.37)	0.91 (0.45–1.84)	1.67 (0.76–3.67)	0.93 (0.44–1.96)
$\geq \$55,000$	2.17 (0.97–4.85)	0.68 (0.24–1.93)	2.34 (1.00–1.08)	0.70 (0.24–2.01)
<b>Racial discrimination</b>				
Major discrimination			0.99 (0.98–1.01)	1.02 (0.99–1.04)
Everyday discrimination			1.04 (1.01–1.08)	1.05 (1.03–1.07)

SEP, socio-economic position; CI, confidence interval; ref., reference variable. Controlled for age, household size, marital status, and employment.



**Figure 1** Interactions between SEP and major racial discrimination among African-American men. (A) Interactions between major discrimination score and education level ( $P$ -value = 0.0202). (B) Interactions between major discrimination score and income level ( $P$ -value = 0.0196).



**Figure 2** Interactions between SEP and everyday racial discrimination among African American men. (A) Interactions between everyday discrimination score and education levels ( $P$ -value = 0.2231). (B) Interactions between everyday discrimination score and income levels ( $P$ -value = 0.0127).

interaction between education and incidents of everyday discrimination for African American men. However, men who reported experiences of everyday discrimination in the \$18,000–31,999 and \$55,000 and more categories reported significantly higher odds of MDE compared to men in the referent category.

The results for African American women differed significantly from those of their male counterparts. We did not observe any significant interactions between SEP and racial discrimination among African American women (data not shown).

## Discussion

Using a nationally representative sample of African American adults, this study documents that racial discrimination negatively affects the association between SEP and depression among African American men. Findings for African American men were largely supportive of our *a priori* hypothesis predicting a significant interaction between greater levels of SEP and racial discrimination that would be positively related to increased odds of depression. Although the findings presented for men are supportive of our hypothesis, they

are seemingly counterintuitive. Despite the prevalent and plausible assumption that having more socioeconomic resources would be inversely related to depression, this study demonstrates that the effects of major racial discrimination interact with SEP such that African American men who possess the highest levels of education and income report greater odds of depression.

It is possible that highly educated African American men who earn greater incomes may perceive diminished returns on investments in social and cultural capital, and limited advancement in occupational settings due to “racialized” glass ceilings [29,45,46]. Perhaps African American men of greater SEP are more likely than those of lower SEP to observe unfair racial differences in rates of compensation, as well as structural barriers, which result in unequal socioeconomic distributions. Sociologist Alford Young chronicled the stories of four young African American men who all had humble beginnings, but found their way to highly competitive graduate and professional programs in *Navigating Race: Getting Ahead in the Lives of ‘Rags-to-Riches’ Young Black Men* [47]. Notably, one of Young’s respondents stated that the further up the socioeconomic hierarchy he went, the more he recognized structural barriers that prevent African Americans from attaining success similar to that of Whites. Concordantly, Hochschild states that poor African Americans believe in the American dream more than rich African Americans because those African Americans who have attained greater SEP also realize that despite greater levels of education, higher incomes, and more prestigious occupations, there is still an enormous gap between African Americans and Whites in assets accumulation [45].

These findings shed additional light on the distribution of depression among African Americans, given the null findings in previous studies that have explored the relationship between SEP and depression among African Americans. Future studies that investigate the relationship between SEP and depression among African Americans should account for the effects of racial discrimination. The findings in this study underscore the robust nature of racial discrimination and crystallize the importance of considering racial discrimination as a critical social determinant in the prediction of depression among African American men.

The results for women were not supportive of our hypotheses. In fact, we did not observe any significant interactions between SEP and racial discrimination among African American women. It is possible that there are differences in how African American men and women experience, assess and cope with instances of racial discrimination. These differences may help explain why we did not observe the significant interactions between SEP and racial discrimination among African American women that we did for African American men. A related issue is that perceptions of racial discrimination for women may have been underestimated. The measures of racial discrimination examined in this paper primarily examined personal incidents of racial discrimination and results from a recent study conducted by Nuru-Jeter and colleagues suggest that perceptions of racial discrimination among African American women should include childhood experiences of discrimination, which had enduring effects among their focus group participants, as well as vicarious experiences related to their children [48].

There are a number of limitations that should be highlighted when interpreting the results of our study. While the data we examined were cross-sectional, it is also important to examine the temporal order of racial discrimination, SEP and depression. It is possible that depressed individuals are more likely to interpret certain social interactions as instances of racial discrimination. Another potential limitation could be the income categories used here. It is possible that African Americans with incomes toward the lower end of the highest income category were included with respondents with higher income categories, thus the effects of racial discrimination may be conservative in this study.

Our study also has a number of strengths. To our knowledge, this is the first study that has used a nationally representative data set to provide evidence of significant synergistic influences of discrimination and SEP on depression among African Americans. Our study was conducted with data drawn from the most comprehensive study of mental health and mental disorders among Americans of African descent ever conducted [30,32]. In addition, we used the CIDI to measure depression, which used a structured diagnostic interview to approximate clinically diagnosed cases of depression, rather

than simply evaluating depressive symptoms. Although it is difficult to capture all experiences and forms of racial discrimination, the two measures of racial discrimination we used examined both chronic and acute experiences. This allowed us to capture experiences that may have been more subtle, but also more frequently occurring, in addition to capturing acute experiences related to major life events.

### Future directions

The findings from this study highlight the importance of considering racial discrimination in future studies that investigate the relationship between SEP and depression among African Americans. Importantly, we only observed significant interactions between SEP and racial discrimination at *higher* levels of SEP for African American men. These results suggest that the benefits derived from greater levels of SEP may not be uniformly protective against the development of depression in African American men. In future studies, it is important not only to examine how racial discrimination attenuates the effects of SEP on depression, but also how different experiences of racial discrimination could prospectively affect the accumulation of socioeconomic resources, including education, income, and occupation. Another avenue of exploration is to examine not only the effects of racial discrimination, but also of other economic, environmental and social stressors, such as goal-striving stress, stressful life events, and financial strain, on the relationship between SEP and depression among African Americans. Similarly, it is likely that the racial composition of people's neighborhoods and workplace could explain an important piece of the story here. Walsemann et al. recently found that African American students who attended schools that had a larger composition of White students reported more depressive symptoms and they concluded that it is

possible that predominantly-minority schools buffer African American students from discrimination [49]. A very important and timely direction for future research is greater exploration of the effects of SEP accumulated over the life course and intergenerational social mobility on the mental health of African Americans. Researchers have begun to investigate whether the process of upward social mobility could be deleterious to the mental and physical health of African Americans [50,51]. Cole & Omari describe the hidden costs of mobility, including painful experiences with racial discrimination and isolation from protective social support networks, that middle class African Americans pay [33]. Additional research in this area could possibly determine whether trajectories differ by age, and whether there are critical life course periods during which African Americans are most vulnerable to experiencing depression or when they may be more vulnerable to exposure to racial discrimination.

### Acknowledgments

This work was supported by the National Institute of Mental Health (NIMH; grants U01-MH577165; R01MH068804-04), with supplemental support from the Office of Behavioral and Social Science Research at the National Institutes of Health, the University of Michigan, and the Center for Research on Ethnicity, Culture and Health funded through the National Institute of General Medical Sciences (5R25GM058641-10). Additional support was provided by the Kellogg Health Scholars Program, the University of California, San Francisco, Center on Social Disparities in Health, and the University of California, San Francisco Health Disparities Working Group. We are also thankful to Dr Nancy Adler and Ms Karen Simpkins for their helpful editorial feedback as well as the anonymous reviewers.

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