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Discrimination and Mental Health in a Representative Sample of African American and Afro Caribbean Youth

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Abstract

Background—Racism and discrimination are psychosocial stressors that affect the health of minority populations. While discrimination has been associated with poor mental health, little is known about the relationship between discrimination and mental health outcomes in youth nationally. Furthermore, mental and behavioral health consequences of discrimination may differ in different minority groups.

Objective—The goal of this study is to determine 1) how common perceptions of discrimination are in a nationally representative sample of African American (AA) and Afro Caribbean (AC) teens, 2) relationship between discrimination and mental health conditions, 3) whether discrimination has different associations with mental health in AA and AC youth.

Design—cross sectional comparison study

Setting—National Survey of American Life-Adolescent Supplement, a nationwide sample of African American and Afro Caribbean youth drawn from a nationally representative household survey of African American (AA) and Afro-Caribbean (AC) population.

Participants—1170 AA and AC youth between 13–17 years.

Exposure—experiences with discrimination (Everyday Discrimination Scale)

Main Outcomes—lifetime and past 12 month major depression and anxiety

Results—90% of AA and 87% of AC youth experienced discrimination. Discrimination was significantly associated with lifetime and 12 month major depression, and lifetime and 12 month anxiety. There were no differences in the associations between discrimination and mental health

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Compliance with Ethical Standards:

All procedures used were in accordance with the ethical standards of the 1964 Helsinki declaration and its later amendments. Informed consent was obtained from all individual participants included in the dataset this study is based on. This study included secondary data analysis from a national data set and therefore local IRB determined that the present analysis did not need internal review board approval at the author's institution.

The authors of this paper declare that they have no conflicts of interest.

between AA and AC youth except for lifetime anxiety: as discrimination increased, the likelihood of lifetime anxiety disorder increased at a higher rate among AC youth compared to AA.

Conclusions—Discrimination is a common psychosocial stressor in African American and Afro Caribbean youth. It is associated with poor mental health outcomes. There was no difference in the occurrence of discrimination between African American and Afro Caribbean youth, or in its mental health consequences.

Keywords

discrimination; racism; disparities; mental health; depression; anxiety; minority health; adolescent; pediatrics

INTRODUCTION

Psychosocial stressors are known to contribute to adverse physical and mental health outcomes. The mechanisms through which they take affect vary based on the specific stressor, condition, and context. One such context is being a member of a minority racial or ethnic group. Cynthia García Coll and colleagues proposed an ecological model for minority child development that also holds true for minority child health[1]. It posits that interrelationships among multi-level factors such as individual and family characteristics, community and cultural factors, and societal macro issues have direct and indirect effects on child development and health. Some of these factors, such as social class, promoting and inhibiting environments, family factors, and individual differences, affect both minority and non-minority children. Other factors are more specific to the minority experience. Racism and discrimination is one such variable.

Racial discrimination can be defined as negative beliefs, attitudes, actions, or behaviors that are based on phenotypic characteristics or ethnic affiliation. There is a growing literature on the effects of racism on child health[2,3]. The majority of research to date has focused on the relationship between discrimination and mental or behavioral health outcomes[4–7].

Racism is a common occurrence in the lives of children of color. Previous studies have shown that over half of African American youth have experienced discrimination[8–14]. A study conducted in Hartford and Providence found that 88% of 277 children between the ages of 8 and 18 had experienced situations that they perceived to be racially discriminatory[15]. More recently, the Philadelphia Urban Adverse Childhood Experiences Study interviewed over 1700 adults about their childhood experiences and 50% of the African American respondents related experiences with racism as they grew up[16,17].

While effects of discrimination have been found in people from a number of minority population groups, including Asian[18–21], Latino[22–26], Native American[27,28], Muslims[29,30], and Arab-Americans[31], most studies on the effects of racism and discrimination in the US have been conducted with African Americans and have not adequately looked at potential differences in different racial/ethnic subgroups. For example, individuals who are West Indian or Afro Caribbean have been underrepresented in medical and social science research, often being grouped together with American born African Americans despite

significant historical and cultural differences. Youth of Afro Caribbean descent may have perspectives on discrimination that are different than African Americans whose ancestry is from the US due to different historical, migration, social, and cultural contexts[32]. Approaches to and consequences of discrimination may be different in these two groups. This has been an understudied area of investigation[33]. The few studies that have disaggregated African American and Afro Caribbean youth have suggested that ethnicity does not moderate the relationship between discrimination and mental health outcomes[34,35]. However another study in adults demonstrated that ethnic affiliation (Afro Caribbean vs. African American) did moderate the relationships between the belief that race is a major barrier to upward social mobility (race attribution), exposure to discrimination, and depression[36].

The goals of this study are to determine 1) how common are perceptions of discrimination in a national sample of African American and Afro Caribbean teens, 2) the relationship between discrimination and mental health conditions, and 3) whether discrimination has different incidence and relationships with mental health in African American (AA) and Afro Caribbean (AC) youth. Our hypotheses are 1) Discrimination is perceived to be a common occurrence in the lives of AA and AC youth; 2) more experiences with discrimination are associated with higher rates of mental health conditions; and 3) Afro Caribbean youth, compared to African American youth, will have lower occurrences of perceived discrimination and fewer effects on their mental health.

METHODS

Design

Data analyzed in this report are drawn from the adolescent component of the National Survey of American Life (NSAL), administered by the Program for Research on Black Americans within the Institute for Social Research at the at the University of Michigan in 2001–2004. The NSAL is a nationally representative household survey of African American (AA), Afro Caribbean (AC), and non-Hispanic White adult population designed to explore prevalence and variation in mental health disorders, psychological distress, service use, risk and resilience factors, and coping resources among AA and AC individuals[37]. The adult study utilized a stratified, clustered sample strategy and included 3,570 AA, 1,623 AC and 1,006 non-Hispanic whites. The adolescent sample (NSAL-A) included 1,170 youth aged 13–17 who were attached to the households of the adult respondents. The weighted data were stratified to approximate a national distribution of African American and Afro Caribbean youth by gender and age. Informed consent was obtained from the legal guardian of the adolescent as well as assent from the adolescent himself or herself. The majority of the adolescent surveys were administered in person with computer assisted personal interviewing (CAPI) technology. Approximately 18% were telephone interviews. AA and AC interviews averaged 1 hour 40 minutes and 1 hour 50 minutes, respectively. Further details of the survey design and procedures are provided elsewhere[37–39].

Measures

Ethnicity—Adolescents first had to self-identify as "Black" in order to be included in the study. Those who indicated they were of West Indian or Caribbean descent or whose parents or grandparents were born in a Caribbean country were classified as Afro Caribbean (AC) by NSAL protocol. Those who were not so identified were considered African American.

Mental Health—In the NSAL-A survey 19 DSM-IV mental health disorders in 5 categories (anxiety, mood, substance, impulse control and eating disorders) were identified using self-reported symptom lists derived from the WHO World Mental Health Composite International Diagnostic Interview (WMH-CIDI) (second iteration—2000)[40]. The WMH-CIDI was originally validated for ages 15+ and adapted for use with adolescents aged 13+ in the NSAL-A. In addition, concordance with CIDI diagnoses was explored in the NSAL by interviewing 10% of the adult sample using a modified version of the Structured Clinical Interview (SCID).

Diagnoses used in the present analyses included lifetime and prior 12 months major depressive disorder and anxiety disorder, which are common mental health disorders in youth.

Discrimination—Perception of discrimination was assessed with the Everyday Discrimination Scale, developed by Williams, et al,[41,42] which measures an individual's perception of discriminatory treatment. An introductory question is asked: "In your day-to-day life, how often have any of the following things happened to you?" followed by a set of discriminatory experiences (e.g. "you are treated with less respect than other people," "you are followed around in stores"). Responses are given on a 6 point Likert scale from "almost every day" to "never." This original 10 item instrument was developed and normed on adult samples[41,43]. For the adolescent NSAL study three extra items were added to include perceptions of teacher discrimination, resulting in a 13-item scale.

Data analysis

The mental health outcomes explored in this analysis are the presence/absence of 4 disorders: lifetime and 12 month major depressive disorder and lifetime and 12 month major anxiety disorder. "Everyday discrimination count" (EDD) was operationalized as the sum of items, resulting in a score ranging from 0 – 13. Discrimination was also expressed as a dichotomous variable – "any discrimination" (EDD ≥ 1) versus "no discrimination" (EDD=0).

Associations of ethnicity (AC versus AA) with mental health disorders and perceived discrimination were explored with chi square analyses. Logistic regression models were developed to explore associations between perceived discrimination and the mental health disorders, adjusting for age, ethnicity, household income (operationalized as a 4 level ordinal variable derived from imputed income data provided in the adult survey and matched to adolescents by family), gender, and a model including a discrimination by ethnicity interaction term was run to assess whether there was a differential association between discrimination and mental health comparing the African American and Afro Caribbean

subjects. Analyses were conducted with SPSS version 22.0. All analyses were adjusted for complex sampling using the weights provided by NSAL.

RESULTS

Eight hundred ten (810) youth were identified as African American and 360 as Afro Caribbean. Gender was equally distributed within ethnic groups. The AA sample was slightly older than the AC sample (15.22 vs. 14.96 years, p=.011). The mean family income of the sample was $38,327 and was slightly (but not significantly) higher in the Afro Caribbean sample (Table 1).

Mental health

Lifetime major depression was estimated to be 6.3% in the African American (AA) and 6.6% in the Afro Caribbean (AC) samples; major depression over the past 12 months occurred in 4.2% of AA and 5.2% of AC samples. The prevalence of lifetime anxiety was 17.3% for the AA sample and 17.9% for the AC sample; anxiety in the past 12 months occurred in 13.7 of the AA and 13.1% of the AC. None of these differences in the prevalence of mental health conditions were significant between the African American and Afro Caribbean youth samples.

Perceived Discrimination

90.2% of the African American and 86.9% Afro Caribbean youth samples encountered at least one of the experiences on the Discrimination Scale. There was no significant difference in perceptions of discrimination by ethnicity.

Relationship between discrimination, mental health, and ethnicity (Table 2)

The logistic regression analysis shows that increasing levels of perceived discrimination are significantly associated with higher rates of major depression and anxiety, both lifetime and in the last 12 months, after controlling for gender, age, and ethnicity. In addition, female gender was significantly associated with higher odds of anxiety (lifetime and last 12 months), and age was positively associated with depression (lifetime and 12 month). Family income was marginally associated with anxiety within the past 12 months.

We next determined if ethnicity (AA vs. AC) moderated the relationship between perceived discrimination and the mental health outcomes. An ethnicity-discrimination interaction variable was added into the model, and this analysis shows that the relationship between discrimination and mental health was not significantly different in the Afro Caribbean or African American samples for depression (lifetime and 12 month) or 12 month anxiety disorder. However ethnicity did moderate the effects of perceived discrimination on lifetime anxiety disorder. As more items on the Discrimination Scale were answered positively, the likelihood of lifetime anxiety disorder increased at a higher rate among Afro Caribbean youth compared to African Americans.

DISCUSSION

Our study shows that discrimination is perceived to be a common occurrence in the lives of AA and AC youth. Over 86% of this nationally representative sample had at least one experience of discrimination. This is consistent with other studies that showed high rates of perceived discrimination in youth[8–15].

Second, we found that experiences with discrimination were associated with significantly higher levels of mental health conditions such as major depression and anxiety. Discrimination should be seen as a psychosocial stressor that has the potential to become toxic. These findings and others point to the importance of including stressors such as discrimination in studies assessing health status and outcomes in populations of color. As a toxic stressor, discrimination should be thought of as a childhood adversity, and included as a potential Adverse Childhood Experience (ACE)[16]. Studies such as this show the effects of discrimination on children and youth. Other studies need to determine whether perceptions of discrimination in childhood are associated with suboptimal outcomes later in the lifecourse, as these youth become adults[44]. One of the proposed mechanisms for the effects of childhood adversity on later adult outcomes is the allostatic load model which posits that toxic psychosocial stressors (such as discrimination) result in physiological dysregulation of allostatic systems such as cortisol stress response, inflammation and immunity. Such physiological dysregulation over the lifecourse may contribute to increased incidence of chronic diseases such as cardiovascular disease, diabetes, asthma, depression, and obesity. If the allostatic load model holds, perhaps the potential dysregulatory effects of racial discrimination may contribute to the disparities we see in many chronic illnesses. Further study is certainly warranted.

We hypothesized that Afro Caribbean youth would perceive lower rates of discrimination compared to African Americans. This was based on the theory that historical and contextual differences in experience may result in different interpretations and reactions to discrimination[32,45–47]. Our findings do not support this hypothesis, and show no major differences in the perception of discrimination or their effects on mental health among the African American and Afro Caribbean samples. While the historical, migration, family, and social context of growing up Afro Caribbean has been noted to be different than that of African Americans, it may be that in the present national cultural context, phenotypic similarities (i.e., skin color) may supersede any protective advantage West Indian background may have provided with regard to mental health outcomes of discrimination. In other words, for Afro Caribbean youth the realities of American race relations quickly cancel out any protective advantage ones cultural and migration history may have afforded. It may also be that Afro Caribbean youth quickly acculturate to African American cultural norms and standards and thus are not seen as differentiated from African Americans by those who promulgate discrimination. One approach to teasing out these complex interrelationships would be to look at differences in the discrimination experience and its effects on health in Afro Caribbean youth with stratification by generational or acculturation status.

The effects of a stressor such as discrimination are in part mediated through an individual's appraisal of its relative threat. Among adults, cognitive appraisal has been shown to be a mediator between perceptions of discrimination and depression[48]. Such appraisals are in turn related to numerous factors, including perception of attribution. A study of immigrant minority youth, including Caribbean youth, demonstrated that cognitive appraisal mediated the relationship between attribution to discrimination and internalizing conditions[49]. There may be difference among Afro Caribbean and African American youth in discrimination attribution and cognitive appraisal of events based on differences in context as well as differences in styles of ethnic and racial socialization—the way youth are taught attitudes and approaches to living in a socially stratified society where discrimination is a reality[50]. Racial socialization has been shown to be a factor in how African American youth respond to discrimination[9,51–54]. There has been little research on these relationships in Afro Caribbean youth[47,55], but given known differences in approaches to racial socialization among different racial/ethnic groups, this may be an area of future investigation.

While the present study shows a significant relationship between experiences of perceived discrimination and adverse mental health outcomes, there are limitations that need to be acknowledged. The NSAL is a cross sectional dataset and therefore one cannot infer causality on the association between discrimination and mental health outcomes. The measures of mental health (CIDI) were developed for individuals over the age of 15 and its concordance with direct interview methods such as the SCID has not been documented in youth. Furthermore the discrimination instrument used with these youth was initially developed and tested on adult samples. Developmentally appropriate instruments that measure psychosocial constructs such as discrimination are available and need to be included in large epidemiologic studies of minority child health[2,56,57]. The instrument also was developed to measure general discrimination, not specifically racial discrimination. However, prior studies have shown that measures of generalized everyday discrimination correlates with racial discrimination[5859].

The Adolescent Supplement of the NSAL was administered between 2001 and 2004, and therefore the data from this survey is slightly old. However, since this study has been conducted, there have been no other nationally representative surveys designed to investigate the prevalence, distributions, course, and comorbidity of mental health disorders among African American and Caribbean adolescents in the United States, in particular with regard to such psychosocial determinants as discrimination. The fact that nationally conducted studies such as the NSAL, as well as local studies, have consistently shown high prevalence of perceptions of discrimination among youth of color lends credence to the need to include discrimination as a salient exposure variable in epidemiological and other studies. One can hypothesize that in the intervening years since 2004, the occurrence of highly visible instances of interpersonal discrimination between persons of color and law enforcement, and the present political climate provide a context in which the mental health consequences of perceived discrimination may be much higher than is seen in this study. Further studies are obviously needed.

Despite these limitations, we believe this study shows that 60+ years after Brown vs. the Board of Education, discrimination is still a common occurrence in the lives of minority

youth. It remains a toxic stressor that has associations with poor mental health. While we as a society attempt to grapple with this on a sociopolitical level, we need to address the consequences of this exposure for our youth, perhaps through acknowledging the toxic effects of discrimination on youth of color, clinical identification and screening of psychosocial determinants and adversities such as discrimination, and developing programs and interventions that address positive coping strategies and stress reduction techniques to mitigate the health consequences of this common stressor.

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Abbreviations

AA	African American
AC	Afro Caribbean.

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Table 1

Sample Demographics*

	Total (n=1170)	African American (n=810)	Afro-Caribbean (n=360)	sig.
Percent female	50.0	49.6	55.2	.068
Mean age in years (SE)	14.98 (.06)	14.96 (.07)	15.22 (.06)	.011
Mean Family Income (SE)	38,327 (2238)	38,292 (2238)	38,830 (3986)	.907

* Data are weighted percentages and means, adjusted for national population age and gender distributions for subgroups among black youth. Sample size is unweighted.

Table 2

Logistic Regression Models of Mental Health Outcomes with Discrimination*Ethnicity Interaction Term

Mental Health Issue	Factor	OR	95% C.I.	p
Lifetime Major Depressive Disorder				
	Male Gender	0.80	0.42 – 1.50	.470
	Age	1.30	1.04 – 1.62	.024
	AA Ethnicity	1.22	0.44 – 3.42	.699
	Family Income	1.11	0.82 – 1.50	.490
	Discrimination	1.39	0.97 – 1.34	.018
	Eth*Disc	0.97	0.81 – 1.16	.724
12 Month Major Depressive Disorder				
	Male Gender	0.92	0.47 – 1.80	.806
	Age	1.37	1.13 – 1.65	.002
	AA Ethnicity	1.58	0.57 – 4.36	.374
	Family Income	0.99	0.72 – 1.37	.967
	Discrimination	1.21	1.06 – 1.39	.001
	Eth*Disc	0.91	0.77 – 1.07	.231
Lifetime Anxiety				
	Male Gender	0.66	0.50 – 0.89	.007
	Age	1.08	0.95 – 1.22	.254
	AA Ethnicity	1.83	0.96 – 3.48	.066
	Family Income	0.85	0.72 – 1.02	.079
	Discrimination	1.17	1.10 – 1.25	<.001
	Eth*Disc	0.90	0.83 – 0.98	.011
12 Month Anxiety				
	Male Gender	0.60	0.43 – 0.85	.005
	Age	1.01	0.89 – 1.14	.890
	AA Ethnicity	1.44	0.37 – 5.61	.593
	Family Income	0.84	0.70 – 1.00	.047
	Discrimination	1.15	1.00 – 1.33	.006
	Eth*Disc	0.95	0.82 – 1.11	.532