



## The Effects of School-Based Discrimination on Adolescents of Color Sexual Health Outcomes: A Social Determinants Approach

Brandon N. Respress, Ndidiama N. Amutah-Onukagha & Ijeoma Opara

To cite this article: Brandon N. Respress, Ndidiama N. Amutah-Onukagha & Ijeoma Opara (2017): The Effects of School-Based Discrimination on Adolescents of Color Sexual Health Outcomes: A Social Determinants Approach, Social Work in Public Health

To link to this article: <https://doi.org/10.1080/19371918.2017.1378953>



Published online: 04 Dec 2017.



Submit your article to this journal [↗](#)



View related articles [↗](#)



View Crossmark data [↗](#)



# The Effects of School-Based Discrimination on Adolescents of Color Sexual Health Outcomes: A Social Determinants Approach

Brandon N. Respress<sup>a</sup>, Ndidiama N. Amutah-Onukagha<sup>b</sup>, and Ijeoma Opara<sup>c</sup>

<sup>a</sup>College of Nursing and Health Innovation, University of Texas at Arlington, Arlington, Texas, USA; <sup>b</sup>Department of Public Health and Community Medicine, School of Medicine, Tufts University, Boston, Massachusetts, USA; <sup>c</sup>Department of Family Science and Human Development, Montclair State University, Montclair, New Jersey, USA

## ABSTRACT

Social inequalities are at the heart of disparities in sexual health outcomes among African American and Latino/a adolescents living in the United States. Schools are typically the largest and primary context in youth development. School characteristics such as peer and teacher discrimination and school performance were examined to determine whether such characteristics predict sexual behavior in adolescents of color. This study utilized a representative sample of high school age students to assess sexual risk behavior. Findings indicate that there was a clear disparity in sexually transmitted infection diagnoses. School characteristics such as teacher discrimination and Grade Point Average were significant predictors to sexual risky behaviors among adolescents of color. The study adds to the literature in examining contextual factors that are associated with adolescent sexual risk behavior, and findings provide implications for future prevention work.

## KEYWORDS

Adolescents; discrimination; schools; sexual risk behaviors; social determinants of health

## Introduction

Race in the United States represents a powerful social/cultural factor that has major implications for the development of youth of color. Despite race being recognized as an arbitrary social categorization—and the detrimental effects of the linkage of racial differences to biological and genetic differences (Frank, 2007; Jones, LaVeist, & Lillie-Blanton, 1991; Smedley & Smedley, 2005)—race, in America, continues to have profound social meaning. The norms related to race are deeply rooted in history with pervasive contemporary consequences (LaVeist, 2000). As such, racial group status becomes a risk marker for exposure to racism, which may be a primary factor in racial differences in adolescent risk behaviors. For example, the exclusion from critical resources that many racial and ethnic minorities lack as a result of racial discrimination and prejudice places adolescents and their families on less favorable (and potentially disadvantaged) social and developmental paths (Garcia Coll et al., 1996). Race in the United States unfortunately represents as a marker for experiencing disparities that contribute to health inequity.

Among adolescents, racial bias often is experienced in very subtle ways while in school and in their communities, often leaving adolescents of color to experience higher rates of dropout, suspension, and lower test scores than their counterparts (Carter, Russell, & Fine, 2014; Gibson, Wilson, Haight, Kayama, & Marshall, 2014). In addition to educational disparities, sexual health disparities considerably affect adolescents of color at higher rates thus reducing their quality of life and leaving them more vulnerable to experience sexually transmitted infection (STI)-related comorbidities

(Kann et al., 2014). Very few studies have examined the association of educational performance and sexually risky behaviors.

Literature shows that adolescents whom achieve higher grades in school are more likely (1) not to use illicit drugs, (2) to practice safe sex, and (3) practice abstinence (Ma, Fisher, & Fuller, 2014). School environments are typically the context in which adolescent risk behaviors are being shaped due to attitudes, behaviors, and norms that are exhibited in school settings by peers and teachers. Other studies that have viewed school experiences and the relationship between sexual behaviors in adolescents have found that there is often a mediating factor that influences the relationship between school characteristics and sexually risky behaviors. Kirby (2008) found that schools with a percentage of students receiving free or reduced-price lunch are likely to have students who engage in more sexual risk taking than other students, but when socioeconomic status of family or the community is controlled, the relationship disappears. In a more recent study, school connectedness was a significant factor in determining sexual behavior in adolescents (Harper, Dittus, Steiner, & Ethier, 2017). Consistent with previous research, youth who feel connected to their schools initiate sex at a later age, and those who are also performing well academically tend to have fewer sexual partners, engage in safe sex practices, and are less likely to get pregnant (Kirby, 2008).

### ***Sexual health disparities in minority youth***

Nearly one half of all newly acquired STIs in the United States have been diagnosed in 15- to 24-year-olds (Centers for Disease Control and Prevention [CDC], 2013). Adolescents that have previously been exposed to an STI have a higher chance of contracting HIV due to the repetition of behaviors and community influences that contributed to the diagnoses of an STI (Raiford, Seth, & DiClemente, 2013). African American youth age 14 to 25 years have higher incidences of Chlamydia, faster growth in the number of new HIV/AIDS cases, and higher rates of pregnancy as compared to their White counterparts (Chandra, Schievello, Ravi, Weinstein, & Hook, 2002; Meade, Kershaw, & Ickovics, 2008; Yan, Chiu, Stoesen, & Wang, 2007). Among African American female adolescents between ages 15 and 19, one out of four has contracted an STI (Forhan et al., 2009; Sales et al., 2014). In addition, African American adolescents account for 57% of HIV diagnoses among all adolescents in the United States (CDC, 2013).

Currently, a total of 757,000 pregnancies occur each year among female adolescents age 15 to 19 (CDC, 2007). Although adolescent pregnancy rates have declined; disproportionate high rates of pregnancies, STIs, and HIV continue to occur, particularly among African American and Latino American adolescents (Hamilton, Martin, & Ventura, 2006). Thus, engaging in high-risk sexual behaviors represents a significant social and public health concern among adolescents of color. In addition, though studies have shown that sexual onset between adolescents are fairly similar, African American adolescents are still more likely to contract STIs and HIV compared to other adolescents' due to engaging in sexually risky behaviors that are defined as behaviors such as unprotected sex, unintended pregnancy, and increase risk of contracting an STI. Among U.S. high school students, 43% admitted to not using a condom the last time that they had sex (Kann et al., 2015) whereas 21% admitted they were intoxicated or used drugs before their last sexual encounter (Kann et al., 2015).

### ***Factors contributing to sexual behavior in adolescents***

Sociohistorical and community factors play a significant role in shaping behaviors of adolescents including sexual behaviors (Collins, Bairdi, Tate, & Rouen, 2015; Lutfi, Trepka, Fennie, Ibanez, & Gladwin, 2015). Through an ecological systems lens (Bronfenbrenner, 1986), external influences from the environment can affect the capacity of families to foster the healthy development of their children and limit risky behaviors (Córdova, Heinze, Mistry, Salas-Wright, & Zimmerman, 2016). Specifically, for African American adolescents, the shared historical experience of slavery and racial segregation has continued to contribute to the racist and sexist ideologies that are embedded in

society and perpetuated through media, laws, and community norms (Collins et al., 2015; Miller, Forehand, & Kotchick, 1999), leaving African American adolescents and other adolescents of color to negate negative sexual images of that have become normalized. African American and Hispanic adolescents often learn about sexual behaviors from their immediate systems that comprise peers and family (Aronowitz, Rennels, & Todd, 2006; Córdova et al., 2016). Neighborhood and community context have been identified as having direct effects on sexual behavior in adolescents and sexual health outcomes (Laveist, 1993, 2000, 2005; Lillie-Blanton & Laveist, 1996; Stevens, Gilliard-Matthews, Nilsen, Malven, & Dunaev, 2014). Communities that adolescents of color and their families reside in are often under-resourced neighborhoods that lack quality health care access, nonjudgmental health clinics, health education—all contributing to increased morbidity and mortality among this group (Gentry, Elifson, & Sterk, 2005; Haley et al., 2017). In addition, social networking contributes to disproportionate rates of STIs among African Americans (Collins et al., 2015). African American adolescents tend to obtain sexual partners from their direct environment, whom often share the same structural barriers that negatively influence risky sexual attitudes within social networks (Floyd & Brown, 2013). Documentation of neighborhood and social effects on adolescent sexual risk behaviors, as well as illumination of the mechanisms by which they are mediated, could have important social work policy and practice implications for improving the social conditions of adolescents living in concentrated areas of poverty and reducing health disparities (Lillie-Blanton & Laveist, 1996; Stanton et al., 1995). By virtue of where they live, African American and Hispanic adolescents are placed at an increased risk of HIV and STIs (Floyd & Brown, 2013).

Historically, African Americans have been unjustly treated unfairly, due to racist and sexist ideologies that have become normalized in culture. Adolescents' self-identities are being formed based on their view of self. Individuals from marginalized groups tend to view themselves based on how society views them as a group (Demo, 2007). Not only do social groups become more important during adolescence, but youth also become more aware of the traditional stereotypes associated with the social groups to which they belong (Rowley, Kurtz-Costes, Mistry, & Feagans, 2007). Consequently, adolescents whom experience forms of racial discrimination and prejudice tend to exhibit risky behaviors such as violence, sexual risk, and drug usage (Roberts et al., 2012; Hurd et al., 2014). There is also evidence that for youth, many individual discriminatory encounters occur within the school setting (C. S. Brown, 2006; Fisher, Wallace, & Fenton, 2000; Harris-Britt, Valrie, Kurtz-Costes, & Rowley, 2007). In a sample of adolescents attending a racially mixed high school, majority of study participants (94%) reported experiencing at least one discriminatory event within the past 3 months and that the most frequently reported experiences were within the school (Harris-Britt et al., 2007). Specific school-related discriminatory incidents cited included: receiving a lower grade than deserved, wrongly disciplined, given after-school detention, and being called racially insulting names by other students at school (Harris-Britt et al., 2007).

Few studies have explored the relationship between discrimination/prejudice and sexual behaviors in youth. One of the only studies in the published literature to explore the effects of discrimination/prejudice on youth's sexual behavior found that individuals who perceived more racial discrimination at age 10 or 11 engaged in more sexual risk taking at age 18 or 19 (Roberts et al., 2012). The pervasiveness of youth's encounters with prejudice/discrimination, particularly within the school domain, as well as the potential implications for sexual risk behaviors, warrants further investigation of these relationships. Therefore, it is important to consider their developmental trajectory within the context of a society or social environment (in this case, schools), upon which they may be exposed to prejudice and discrimination. This is with the understanding that exposure to prejudice and discrimination within their social environment has profound effects on their identity and future outcomes as related to sexual risk taking. Due to the residual effects of slavery, which have resulted in not only discriminatory actions against African Americans, systemic factors such as under-resourced communities, disproportionate rates of poverty leaves adolescents of color extremely vulnerable to the racist and sexist views of them as a group thus increasing their risk of engaging in sexual risky behaviors. As a result of racism, the

combination of effects of socioenvironmental factors such as poverty, discrimination, and lower socioeconomic status (SES) places adolescents of color, in particular, at an increased risk for engagement in sexual risky behaviors with negative adverse consequences (D. L. Brown, Rosnick, Webb-Bradley, & Kirner, 2014; Carlson, McNutly, Bellair, & Watts, 2014) From this perspective, we sought to understand the relation among prejudice, discrimination, and risky sexual behavior.

### **Theoretical framework**

There has been a substantive amount of empirical inquiry on sexual behaviors within largely racial and ethnic minority populations and in urban areas of the United States; however, few studies have explained how sexual risk behaviors and their interaction with social factors interact to influence engagement in these behaviors (A. Brown et al., 2006; Hallfors, Waller, Bauer, Ford, & Halpern, 2005; Halpern et al., 2004; Rink, Tricker, & Harvey, 2007). These studies have contributed greatly to our understanding and identification of key correlates and predictors of risk behaviors among African Americans and other racial and ethnic minority youth; however, these studies neglect to adequately address the risk behaviors of African American and other racial and ethnic minority adolescents within the context of the social determinants of health. Moreover, there continues to be a minimization of the effects that racism, prejudice, and discrimination have on the socialization and development of racial and ethnic minority adolescents (Garcia Coll et al., 1996; McKinney, Abrams, Terry, & Lerner, 1994).

Addressing the risks for African American and other racial and ethnic minority youth within a social determinants framework allows the researcher to address broader social and environmental factors (e.g., SES, poverty, and neighborhoods) and to explore sociopolitical factors (e.g., discrimination, racism, and segregation) that influence adolescent risk behaviors. The idea behind this is that focusing on the role of these broader social and political environmental factors will help us to move beyond what is known and begin to make stronger associations between the sociocultural (race), economic (SES), and political conditions that influence adolescent risk behaviors,

This study will use the Social Determinants of Adolescent Risk Behaviors Model (SDOARB), an integration of LaVeist's conceptual model of race (LaVeist, 1994) and social determinants of health model (LaVeist, 2005). Given these factors, such as discrimination, a comprehensive model is needed to help us understand the racial (i.e., Black/White) differences in behaviors and outcomes among adolescents, and the disproportionately higher incidence of poor outcomes as a result of Blacks and other racial and ethnic minority adolescents engaging in risk sexual behaviors. The SDOARB model is different from many socioecological models that tend to include race, social class, culture, and ethnicity as constructs in the periphery of the model (Atzaba-Poria, Pike, & Deater-Deckard, 2004; Bronfenbrenner, 1986; Marmot, 2005). In this model, these factors are proposed to be directly related to the health outcomes. Use of the SDOARB framework to examine adolescent risk behaviors in this study is an approach adapted from public health, medical sociology, and health disparities research. The current study contributes to a body of work that has begun to explore factors that are associated with racial differences in sexual risk behaviors and discusses why those factors are important. These factors are potentially of greater importance among racial and ethnic minority adolescents because these sociopolitical factors often hampered the ability of teachers, school administrators, school social workers, and policy makers to intervene efficaciously and minimize the deleterious effects of less-optimal conditions that poor and minority persons experience within school settings (Garcia Coll et al., 1996).

### **Method**

#### **Study sample**

The current study made use of the National Longitudinal Study of Adolescent Health Wave II, Public Use data set, which included 4,724 adolescents in Grades 7 through 12. The National

Longitudinal Study of Adolescent Health (Add Health, Wave II, 1994–2008) is a national cohort study of approximately 20,000 adolescents in Grades 7 through 12 (Resnick et al., 1997; Udry, Bearman, Harris, & Bauman, 2007). The study was designed to examine health-related behaviors and to determine the health-related outcomes of those behaviors into adulthood. The complete design of the study has been described in detail elsewhere (Resnick et al., 1997; Udry et al., 2007). This current study's analyses included only those students who admitted to being sexually active. Thus, the total sample for the current study was 2,044 adolescents, which represents 43.2% of the total Wave II Public Use data set, and 13.9% of the entire Wave II data set. All initial Add Health protocols were reviewed and approved by the Institutional Review Board for the Protection of Human Subjects at the University of North Carolina at Chapel Hill. Secondary analyses of Add Health Wave II Public Use data set were approved for this study by the Institutional Review Board at Case Western Reserve University. It is important to note that there are currently four waves of data available. However, for the purposes of this study, the use of Wave II was of particular interest because the study aims to examine the school based experiences and sexually risky behaviors of adolescents within the particular age range.

### **Study variables**

Study variables selected from the Add Health Public Use contextual database, which links geocoded respondent addresses and census areas, and the Public Use questionnaire were conceptualized into two domains (socioenvironmental and individual factors) based on the social determinants of health model. The data sets were merged into one data set and were used to examine predictors of depressive symptoms, and to identify any racial differences that may exist across groups. Consistent with the two original models, race, social class, culture, and ethnicity remain as core constructs of the proposed model. The adaptation of the model to include the variables academic performance, peer prejudice, and teacher discrimination to consider as social determinants among adolescent populations, thus using the making the model more appropriate for examining racial differences in risk behaviors among adolescents.

Factors representing the socioenvironmental domain included family SES, parental education, poverty level, teacher discrimination, peer prejudice, and academic performance as the individual factor. Demographic variables of age and gender were also used for descriptive purposes within the current study. All multivariate results are stratified by race/ethnicity to identify the effect of specific socioenvironmental measures (e.g., parental education or peer prejudice) across, as well as within groups (LaVeist, 1994).

### **Dependent variables**

The dependent variables for this study were sexual risk behaviors and diagnoses of STIs. Sexual risk behavior was assessed by self-report as to assess whether they had ever engaged in sexual activity. Specifically, participants answered the question: "Have you ever had sexual intercourse?" The responses were then dichotomized. STIs were categorized as being diagnosed with (1) HIV, (2) gonorrhea, (3) genital herpes, (4) genital wart, and (5) Hepatitis B.

### **Socioenvironmental factors**

Three different measures of SES were used in this study to determine the SES of the adolescents and their family including household income, poverty status, and parental education. Socioeconomic data were taken from the Add Health Public Use Contextual Data Base (Billy, Wenzlow, & Grady, 1998). *Median household income* was defined as all sources of income, including public assistance, based on parental report, and was rounded to the nearest \$1,000. The study incomes ranged from less than \$10,000 to \$101,000. Poverty status in this study was measured based on the socioeconomic

characteristics of the neighborhood, or concentrated neighborhood poverty. *Neighborhood poverty*, defined as the distribution of proportion of persons in a census tract who had a 1989 income below the federal poverty level (FPL), was categorized into three groups: low (< 11.6%), medium (11.6 to 23.9), and high (> 23.9) (Billy et al., 1998). Poverty levels cited in this study were not adjusted to the 1996 levels, which would have provided a more accurate picture of neighborhood poverty across groups. Thus, actual levels of concentrated neighborhood poverty within the study sample may be greatly underestimated. For this reason, median household income was also used in this study as a measure of SES to account for any underestimation. Parental education was used as a categorical variable based on standard categorizations of educational attainment, (1) less than high school; (2) high school, no college; (3) college or higher.

### **School characteristics**

*Academic performance* was defined as the Grade Point Average (GPA) across four academic subjects, using a 4-point scale. The study question asks what grade was received in English or language arts, mathematics, history or social studies, and science. A letter grade of A = 4; B = 3; C = 2; D or below = 1. Literature has documented the association of school performance and sexually risky behaviors (Libby, 2004; Voison, 2010; Voison et al., 2005; Resnick et al., 1997) For this study, academic performance in terms of GPA was viewed as an individual-level risk factor for engaging in sexual risk behaviors.

### **Peer prejudice and teacher discrimination**

To explore discrimination within the school environment, the current study used the responses to two survey items within the Add Health school and education questionnaire; these two items addressed peer prejudice and teacher discrimination, as determined by the individual perception of fair treatment. To assess peer prejudice, a Likert-type scale was reverse-coded and ranged from 1 (*strongly disagree*) to 5 (*strongly agree*) for the survey item, "Students at your school are prejudiced." Therefore, peer prejudice was identified by responses that *agreed* or *strongly agreed* with the statement. To assess teacher discrimination, a Likert-type scale ranging from 1 (*strongly agree*) to 5 (*strongly disagree*) was used for the survey item, "The teachers at your school treat students fairly." Therefore, teacher discrimination was identified by responses that *disagreed* or *strongly disagreed* with the statement regarding fair treatment by teachers.

### **Statistical analyses**

We used IBM SPSS Complex Samples version 20 to conduct the data analyses for this study. For all statistical analyses, we adjusted the standard errors to account for the complex sample design of the Add Health, which involved multiple stages, clustering, and stratification. All analyses presented are weighted data, with exception of the sample sizes. For descriptive purposes, we conducted chi-squared bivariate analyses to examine group differences among sexually active adolescents by demographic variables (age and gender) and socioenvironmental constructs (household income, poverty status, educational attainment, academic achievement, peer prejudice, and teacher discrimination) variables and diagnoses of STIs. We then conducted *F* tests based on bivariate regression analyses to examine group mean differences on age, household income, academic performance, peer prejudice, and teacher discrimination. Finally, we conducted a series of multivariate logistic regression analyses to assess the direct effects of the main study variables of interest (SES, academic performance, peer prejudice, and teacher discrimination) on sexual activity, by each racial group. All regression analyses were conducted for White, Black, Other (Latino and Asian) adolescents as a combined group (total sample), and then as separate racial groups.

## Results

The original Add Health Wave 2, Public Use data set, sample consisted of 4,724 youth, of which 1,607 identified as White, 368 identified as Black, and 68 were other minorities for a total sample of 2,044 sexually active youths (see Table 1). The ages of the youth who were sexually active ranged from 11 to 21 years, with a mean age of 16.7 ( $SE = .95$ ) in the total sample. The sample comprised slightly more females ( $n = 1,041$ ) than males ( $n = 1,003$ ). The median income for the total sample was \$28,507; however, the range of income for both minority groups ranged from \$16,298 to \$21,206 for Blacks and \$19,400 to \$37,375 for other minorities, compared to \$29,942 to \$34,236 for Whites. Approximately 49% of the overall sample lived in neighborhoods with a low concentration of neighborhood poverty. However, 70% of Black adolescents and 46.2% of other racial and ethnic minorities lived in neighborhoods with a high concentration of poverty. More than 51% of Whites reported that their school peers were prejudiced, compared to 26.1% of Blacks and 21.3% of other racial and ethnic minority youth. However, there were no differences in reporting teacher discrimination across racial groups, though both minority groups reported that their teachers were discriminatory, slightly more than Whites (25.7% vs. 25.5%, respectively).

Table 2 presents self-reports of diagnosed STIs across racial groups. Significant differences were noted in the diagnosis of gonorrhea ( $F = 14.563$ ,  $p < .0001$ ), HIV/AIDS ( $F = 16.797$ ,  $p < .0001$ ),

**Table 1.** Baseline Characteristics of Sexually Active Adolescents, by Racial Group. National Longitudinal Study of Adolescent Health (Add health) Wave 2, Public Use Data Set.

Unweighted n Characteristic	White		Black		Other		Total		Adj. <i>F</i> ; <i>p</i> Value
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	
Gender									1.079; 0.341
Male	779	49.9%	190	55.1%	34	56.3%	1003	49.0%	
Female	829	51.1%	178	44.9%	34	43.7%	1041	51.0%	
Age, mean	16.7		16.6		16.6		16.7		0.775; 0.643
Educational attainment									14.16; <0.0001
No high school	158	10.0%	158	42.4%	44	69.5%	360	16.0%	
High school	1289	80.8%	191	53.6%	20	25.0%	1500	75.7%	
College or higher	159	9.1%	17	4.0%	3	5.5%	179	8.3%	
Household Income									16.87; <0.0001
Median income, \$	30,093		18,752		18,752		28,507		
≤ \$20,999	380	23.2%	223	68.0%	20	32.1%	623	29.5%	
\$21,000 – \$37,999	833	54.5%	106	27.9%	22	36.8%	961	50.4%	
\$38,000 +	361	22.3%	24	4.1%	24	31.1%	409	20.0%	
Poverty									26.25; <0.0001
Low	913	55.7%	60	12.2%	29	38.6%	1002	49.3%	
Medium	419	26.7%	64	17.7%	10	15.2%	493	25.2%	
High	276	17.6%	244	70.1%	29	46.2%	549	25.6%	
Academic performance									1.73; 0.042
Grade Point Average (GPA), mean	2.68		2.42		2.42		2.63		
Peer prejudice									10.59; <0.0001
Strongly disagree	87	5.8%	57	17.1%	1	.9%	145	7.3%	
Disagree	264	18.7%	85	25.4%	24	48.8%	373	20.3%	
Neutral	330	24.3%	104	31.4%	17	29.1%	451	25.5%	
Agree	448	33.0%	64	18.4%	8	16.4%	520	30.6%	
Strongly agree	230	18.2%	23	7.7%	3	4.9%	256	16.4%	
Teacher discrimination									0.704; 0.650
Strongly disagree	74	5.0%	19	7.4%	2	7.5%	25	5.4%	
Disagree	266	20.5%	66	17.3%	11	18.2%	337	20.0%	
Neutral	358	26.0%	92	27.5%	13	23.6%	463	26.1%	
Agree	503	37.1%	117	34.8%	22	41.8%	642	36.9%	
Strongly agree	159	11.3%	45	13.0%	5	8.9%	209	11.5%	

*Note.* All estimates represent unweighted frequencies and weighted percentage. Rao-Scott chi-Squared statistics are adjusted for the sampling stratification, clustering and weighting of the data. The adjusted *F* is a variant of the second-order Rao-Scott adjusted chi-squared statistic. Significance is based on the adjusted *F* and its degrees of freedom. Means and medians are based on mean age, median income, and mean GPA per race and outcome group



**Table 2.** Sexually Transmitted Infections among Sexually Active Adolescents by Racial Group. National Longitudinal Study of Adolescent Health Wave 2, Public Use Data Set, Total  $N = 233$ .

Variable Name	White		Black		Other		Total		Adj. $F$ ; $p$ Value
	$n$	% (SE)	$n$	% (SE)	$n$	% (SE)	$n$	% (SE)	
Chlamydia	49	3.0 (0.5)	11	3.5 (1.0)	4	6.9 (3.4)	64	3.2 (0.5)	1.418; 0.244
Syphilis	18	1.1 (0.3)	4	2.0 (1.4)	3	2.9 (1.6)	25	1.2 (0.3)	1.031; 0.339
Gonorrhea	11	0.7 (0.3)	3	1.4 (0.7)	4	9.1 (4.3)	18	1.0 (0.3)	14.563; <0.0001
HIV/AIDS	9	0.6 (0.2)	3	1.1 (0.7)	4	9.0 (4.2)	16	0.8 (0.2)	16.797; <0.0001
Genital herpes	13	0.9 (0.3)	2	0.7 (0.6)	3	5.9 (3.4)	18	1.0 (0.3)	4.353; 0.014
Genital warts	16	0.8 (0.2)	2	0.7 (0.6)	3	5.9 (3.4)	21	1.1 (0.2)	5.170; 0.007
Trichomoniasis	13	0.8 (0.3)	6	1.9 (0.8)	1	4.0 (3.7)	20	1.0 (0.3)	2.433; 0.092
Hepatitis B	11	0.8 (0.3)	1	0.7 (0.6)	3	6.3 (3.4)	15	1 (0.3)	5.320; 0.006
Bacterial Vaginosis	19	2.2 (0.6)	5	2.4 (1.2)	1	2.5 (2.4)	25	2.2 (0.5)	0.024; 0.973
Non-Gonococcal Vaginitis	6	1.0 (0.5)	2	1.1 (0.8)	1	2.5 (2.4)	9	1.0 (0.4)	0.344; 0.697

Note. All estimates represent unweighted frequencies and weighted percentage. Rao-Scott chi-Squared statistics are adjusted for the sampling stratification, clustering and weighting of the data. The adjusted  $F$  is a variant of the second-order Rao-Scott adjusted chi-squared statistic. Significance is based on the adjusted  $F$  and its degrees of freedom.

genital herpes ( $F = 4.353$ ,  $p = .014$ ), genital warts ( $F = 5.170$ ,  $p = .007$ ), and Hepatitis B ( $F = 5.32$ ,  $p = .006$ ). To best understand the STI-related risks associated with engaging in sexual activity, we also report the relative indicators (minority-White and Black-other minority ratios), to illustrate the disparities associated with STIs (D. R. Williams & Jackson, 2005). For example, other minority adolescents were 13 times more likely to be diagnosed with gonorrhea than White adolescents and 6.5 times more likely to be diagnosed than Black adolescents. Blacks adolescents were twice as likely to be diagnosed with gonorrhea compared to Whites. Further, other minority adolescents were 15 times more likely to be diagnosed with HIV/AIDS than Whites, and eight times more likely to be diagnosed than Blacks. Overall, minority adolescents were at a greater risk for being diagnosed with an STI than Whites; however, White adolescents were at more risk of being diagnosed with genital herpes and genital warts than Black adolescents.

Table 3 presents findings from the multivariate analyses using the total sample. Overall, age, parental education, poverty level, household income, and peer prejudice were not significant predictors of sexual behaviors; compared to those who did not report ever having sex. GPA and teacher discrimination were, however, significant predictors in the model ( $p < .05$ ). Additionally, participants who believed that their teachers discriminated against the students were 1.3 times more likely to have ever engaged in sexual activity (odds ratio [OR] = 1.295,  $p < .0001$ ). Participants with higher GPAs were less likely to have ever engaged in sexual activity (OR = .554,  $p < .0001$ ).

Although not statistically significant, racial differences were noted in the degree of influence across the predictors. White females were 1.2 times more likely to be sexually active than White males ( $p = .132$ ), whereas females who self-identified as Black or other were less likely to be sexually active than males in their respective racial groups (OR = .645,  $p = .115$  and .853,  $p = .789$ , respectively). Across racial groups, adolescents with higher GPAs were less likely to be sexually active. This effect was largest for adolescents who self-identified as other (OR = .398,  $p = .122$ , respectively). Teacher discrimination also had the greatest effect among adolescents who self-identified as other. These adolescents were nearly 2.2 times more likely to be sexually active ( $p = .067$ ). Older adolescents were also more likely to be sexually active.

## Discussion

The current study sought to explore socioenvironmental predictors of engaging in sex by examining racial differences in sexually active adolescents using a national sample. Our findings suggest that there are significant relationships among academic performance, gender, teacher discrimination, and sexual behavior in the overall sample, and that those relationships interact to result in different

**Table 3.** Odds Ratios (ORs) from Multivariate Models Predicting Sexual Behaviors among Adolescents, by Racial Group.

Unweighted Cases	White			Black			Other			Total		
	Odds Ratio	95% Confidence Interval		Odds Ratio	95% Confidence Interval		Odds Ratio	95% Confidence Interval		Odds Ratio	95% Confidence Interval	
		Lower	Upper		Lower	Upper		Lower	Upper		Lower	Upper
Gender <sup>a</sup>												
Female	1.171	.953	1.440	.645	.373	1.114	.853	.262	2.771	1.074	.885	1.305
Male	Reference	Reference	Reference	Reference	Reference	Reference	Reference	Reference	Reference	Reference	Reference	Reference
Age												
No high school or equivalency	1.842	1.698	1.998	1.868	1.612	2.163	2.308	1.650	3.228	1.827	1.697	1.968
Education attainment												
High school degree/no college degree	.523	.281	.975	.428	.068	2.704	.140	.008	2.400	.556	.341	.907
Poverty level												
College degree or more	.844	.585	1.217	.317	.047	2.140	.287	.022	3.770	.805	.555	1.168
Low	Reference	Reference	Reference	Reference	Reference	Reference	Reference	Reference	Reference	Reference	Reference	Reference
Medium	.493	.344	.705	1.363	.382	4.872	9.164	.443	189.503	.589	.425	.815
High	.643	.429	.962	1.457	.682	3.115	.141	.009	2.202	.758	.540	1.063
Household income												
Academic Performance (Grade Point Average [GPA]) <sup>a</sup>												
(increments of \$10,000)	.987	.977	.997	.994	.949	1.041	.937	.856	1.025	.986	.976	.996
Peer prejudice	.554	.455	.674	.607	.418	.882	.398	.123	1.285	.554	.466	.659
Teacher discrimination <sup>a</sup>												
Average	1.157	1.034	1.294	.925	.687	1.247	1.019	.569	1.825	1.105	.993	1.228
Total	1.305	1.161	1.467	1.131	.907	1.410	2.163	.946	4.945	1.295	1.165	1.440

a. ORs reflect the association between sexual behavior and each variable, adjusting for all the other variables.

pattern of risk across racial groups. Study results indicate that sexual activity in adolescents is associated with teacher discrimination and peer prejudice, for Whites only. Poor academic performance was a risk factor for Black and White adolescents. Our findings also suggest that socio-environmental factors (i.e., SES) are also associated with being sexually active, for Whites only; however, SES factors were not significant for Black and other minorities.

These findings are in contrast to much of the existent literature on sexual risk behaviors among minority youth. Poverty status, income, and parental education have been accepted as major risk factors for sexual risk behaviors in minority population; however, what we must consider is the populations in which these studies were conducted. Many of the studies focused on sexual activity or risk behaviors among Blacks and other minority have samples that are usually urban youth, from low SES backgrounds. The authors want to stress that although minorities compared to Whites, for example, are more likely to be poor, live in impoverished neighborhoods, and attend under-resourced schools, that these associations are simply a manifestation of their minority status. We must remain cognizant of the historical aspects of race and opportunity within the United States to begin to understand the complex relationships among health and social, economic, and educational predictors that effect minority youth, in particular.

GPA appears to have a protective effect, whereas teacher discrimination is associated with increased sexual activity. Peer prejudice is associated with sexual activity among White adolescents only. Prior studies examining racial differences failed to explore peer prejudice and teacher discrimination as additional social determinants of adolescent sexual activity. Several factors are known to place adolescents at risk for engaging in sexual activity; such as parental relationships and peer influences; however, those factors are often generalized across all racial groups for the purposes of interventions and social policy development. (Browning, Leventhal, & Brooks-Gunn, 2004; Buhi & Goodson, 2007; Cubbin, Santelli, Brindis, & Braveman, 2005; Salazar et al., 2004; Sieving et al., 1997). In addition, our findings suggest the need to examine more closely school-based factors that contribute to adolescents engaging in sexual risk behaviors, which have not been examined previously. Individuals who experience prejudice and discrimination are at increased risk for substance use and other psychological problems such as depression, anxiety and suicide (Respress, Morris, Gary, Lewin, & Francis, 2013; Respress, Small, Francis, & Cordova, 2013). It has been suggested that racial minorities are at increased risk for these problems due to repeated exposure to racial prejudice and discrimination in multiple areas of their lives across their lifespan (Copeland-Linder, Lambert, Chen, & Ialongo, 2011; Rosenbloom & Way, 2004; Seaton, 2006). The cumulative effects related to experiences of discrimination often sends them on a trajectory of poor health outcomes, despite increases in other social determinants of health such as income and education (Garcia Coll et al., 1996).

Compared to the total sample, more Black adolescents lived in neighborhoods with high concentrated poverty (70.1% vs. 25.6%). In our findings, poverty, parental education, discrimination, and prejudice were not predictors of having sex in Black adolescents; however, they were in White adolescents. Age was the only predictor of sexual activity in Black adolescents, meaning, older Black adolescents were more likely to have stated they have had sex than younger Black adolescents. Interestingly, our findings are contrary to many studies focused on racial differences in sexual risk behaviors or predictors of sexual risk behaviors. This study is not to minimize the fact that contextual factors, such as poverty, discrimination, low educational attainment, and racism play a role in Blacks risk for pregnancy, STIs, and HIV; it is simply to bring to our attention as researchers, clinicians, and policy makers that being “Black” alone does not place you at risk for adverse consequences of health behaviors.

## Implications

These findings may be explained by the fact that interrelationships among residential segregation, discrimination, and prejudice were not examined in this study; however, the differences that were noted among the SES variables across racial groups are similar to findings in studies which explore

variations in SES and residential segregation (Seaton & Yip, 2009) For adolescents, residence dictates the school you attend, the resources available in that school, and so on. For example, many urban and inner-city schools have eliminated sexual education courses. This lack of education about their sexual development and risks associated with engaging in sexual behaviors increases their risk for STI, pregnancy, and school failure. In turn, they may be placed at risk for poor (SES) outcomes, in particular as adults, such as living in poverty, low educational attainment, and low income (Geronimus & Korenman, 1993; Zeck, Bjelic-Radusic, Haas, & Greimel, 2007).

Finally, based on the findings in this study, we suggest that systems based interventions may be needed to direct toward addressing the social and environmental factors that place African Americans and other minority youth at risk. Addressing the social causes of any health behavior can be a daunting task. However, given the projected increase of minority populations within the United States by 2050, it will be imperative for this nation to begin to address those concerns now among adolescents (Colby & Ortman, 2015). Addressing sexual risk behavior and its sequelae becomes even more relevant when the prevalence of STIs among adolescents is considered. We also examined self-reported STI rates among sexually active adolescents to begin to explore the disparities in rates of HIV and other STIs among racial and ethnic minority youth. The results suggest that minority youth are at a greater risk for being diagnosed with an STI compared to White youth. Again, these findings may be related the socioeconomic effects of having a lack of resources, such as living in poverty, lack of health care access, and neighborhood factors (Adimora & Schoenbach, 2005; Adderley-Kelly & Stephens, 2005; Munson et al., 2008). Based on the results of this study, interventions may need to continue to be directed toward addressing the needs of Black and Latino/a males and females. In particular, targeted efforts at minority females are a priority due to the higher rates of pregnancy and STIs compared to White females (Aral, 2006; Bryant, 2006; Crosby et al., 2007; Hogben & Leichliter, 2008; Waddell, Orr, Sackoff, & Santelli, 2010; C. R. Williams & Wimberly, 2006) and the increased risks for persistent poverty among female-headed households.

Our findings build upon what is currently known about the deleterious effects of discrimination on health and health behaviors among minority adolescents. The existent literature has focused on internalizing behaviors such as depression, substance use, and suicide (Respress et al., 2013, 2013). Of the studies that have explored sexual risk behaviors and discrimination in adolescents, many are focused on adolescents who were discriminated against due to their sexual orientation, not their racial/ethnic background, which is examined in this study. The literature is replete with empirical work focused on the risk behaviors and mental health outcomes of lesbian, gay, bisexual, and transgendered (LGBT) youth; however, a discussion of that specific population is beyond the scope of this article.

This study adds to the literature on adolescent risk behaviors by demonstrating the importance of examining the effects of teacher discrimination and peer prejudice on sexual risk behaviors and further examining those differences among racially diverse groups. Despite the study being drawn from a large national epidemiological study of adolescent health, this study is not without limitations. A limitation of the study is that prejudice and discrimination are measured with individual level of prejudice and discrimination among peers and teachers, whereas the model discussed prejudice and discrimination from a societal perspective. Despite this difference, the implied connection is that experiences of discrimination and prejudice are social stressors, therefore, subsequent behaviors and mental health outcomes are a result of the stressor (D. R. Williams, Neighbors, & Jackson, 2008). This relationship has been demonstrated among minority adolescents with reports of depression, suicidal behaviors, and substance use (Harris-Britt et al., 2007; Joe, Baser, Neighbors, Caldwell, & Jackson, 2009; Pachter & Coll, 2009).

The findings of this study are important in to consider in light of population trends among increases in minority populations and decreases in non-Hispanic Whites (Frey, 2015). A recent study focused on poverty, educational attainment, and health among children in the United States demonstrates this effectively (Murdock, Zey, Cline, & Klineberg, 2010). Similar to findings in this

study, minority status was strongly associated with increased poverty, decreased levels of educational attainment, and increases in health conditions (Murdock et al., 2010; Pachter & Coll, 2009). However, this study is guided by a social determinants framework that employs the examination of these socioeconomic factors that are known to influence sexual health outcomes across the life course.

## Conclusion

The interrelated factors of race, prejudice, and discrimination, according to the framework used in this study, increase the likelihood of impoverishment, more poorly educated and less healthy individuals. In other words, the cyclical nature of such structural factors and their impact in particular on the health of minority youth is astounding. In particular, to potentially break this cycle, it is the argument of the authors that the best and most logical place to begin is within the schools. Schools are an important context to consider because the school setting is the social context upon which adolescents spend a considerable amount of time. Consistent with previous studies, school engagement and connectedness often serve as protective factors in adolescents of color (Resnick et al., 1997; Voisin et al., 2010). Understanding the barriers that adolescents face in engaging positively in school, such as teacher and peer discrimination, leads adolescents to feel isolated and socially excluded thus leading to an increase in participating in risky behaviors include unsafe sexual behaviors. Although the study reported that discrimination was found to be a predictor in adolescent sexual risk behavior in White adolescents, it is worth understanding for future research whether adolescents of color. Additionally, the most common risk behaviors adolescents engage in are often the result of the interpersonal relationships within schools, including sexual risk behaviors. We know that educational attainment is a major determinant of health outcomes. However, what we are unclear of is how stressful the classroom environments are for minority youth in particular, and if a large portion of their stress is related to prejudice and discrimination in the classroom. Additionally, what remains unclear are the long-term effects on health and future educational attainment among these populations. Consistent with literature, this study found that high GPA attainment served as a protective factor in adolescent sexual behavior. Future research is needed in determining what contextual resources adolescents have that contribute to reducing adolescent sexual behavior, resilience strategies, and community resources that can be implemented in schools where at-risk students primarily attend.

## Limitations

As mentioned previously, ADD Health Wave 2 was utilized in analysis. Add Health data is self-reported and thus may be susceptible to over- or under-reporting of risk behaviors. Although data may be outdated, it is important to note that researchers were interested in this population's health outcomes and characteristics based on their age. Poverty status was measured in study as an indicator for SES using median household income in the study and were adjusted to the 1996 levels. Thus, neighborhood poverty may be greatly underestimated. The cross-sectional nature of the data makes it unclear whether SES, academic performance, and teacher discrimination simply covary with sexual risk behavior or cause changes in sexual risk behaviors, separately or collectively (i.e., via interactions). Although teacher discrimination was significant among White adolescents, a longitudinal analysis would allow us to determine if the effect of teacher discrimination is situational, working only within the context of that school, or if experiences of teacher discrimination, serves as an important factor, affecting sexual risk behaviors in the future as well. White adolescents were overly represented in the sample that may have made it difficult to produce significant differences in perceived reports of teacher and peer discrimination among adolescents in this sample. In addition,

“minorities” are not a homogenous group. Further individual and group-characteristics will vary and affect their sexual health outcomes.

## References

- Adderley-Kelly, B., & Stephens, E. M. (2005). Chlamydia: A major health threat to adolescents and young adults. *Journal of the Association of Black Nursing Faculty in Higher Education, Inc*, 16(3), 52–55.
- Adimora, A. A., & Schoenbach, V. J. (2005). Social context, sexual networks, and racial disparities in rates of sexually transmitted infections. *Journal of Infectious Diseases*, 191, S115–S122. doi:10.1086/425280
- Aral, S. O. (2006). Social and behavioral determinants of sexually transmitted disease: Scientific and technologic advances, demography, and the global political economy. *Sexually Transmitted Diseases*, 33, 698–702. doi:10.1097/01.olq.0000250476.76031.e8
- Aronowitz, T., Rennells, R. E., & Todd, E. (2006). Ecological influences of sexuality on early adolescent African American females. *Journal of Community Health Nursing*, 2, 113–125. doi:10.1207/s15327655jchn2302
- Atzaba-Poria, N., Pike, A., & Deater-Deckard, K. (2004). Do risk factors for problem behaviour act in a cumulative manner? An examination of ethnic minority and majority children through an ecological perspective. *Journal of Child Psychology and Psychiatry, and Allied Disciplines*, 45(4), 707–718. doi:10.1111/jcpp.2004.45.issue-4
- Billy, J. O., Wenzlow, A. T., & Grady, W. R. (1998). *National longitudinal study of adolescent health public use contextual database* (ICPSR21600-v12). Chapel Hill, NC: Carolina Population Center, University of North Carolina-Chapel Hill; Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributors]. doi:10.3886/ICPSR21600.v12
- Bronfenbrenner, U. (1986). Ecology of the family as a context for human development: Research perspectives. *Developmental Psychology*, 22(6), 723–746. doi:10.1037/0012-1649.22.6.723
- Brown, A., Yung, A., Cosgrave, E., Killackey, E., Buckby, J., Stanford, C.,... McGorry, P. (2006). Depressed mood as a risk factor for unprotected sex in young people. *Australasian psychiatry: Bulletin of Royal Australian and New Zealand College of Psychiatrists*, 14(3), 310–312.
- Brown, C. S. (2006). Bias at school: Perceptions of racial/ethnic discrimination among Latino and European American children. *Cognitive Development*, 21(4), 401–419. doi:10.1016/j.cogdev.2006.06.006
- Brown, D. L., Rosnick, C. B., Webb-Bradley, T., & Kirner, J. (2014). Does daddy know best? Exploring the relationship between paternal sexual communication and safe sex practices among African-American women. *Sex Education*, 14, 241–256. doi:10.1080/14681811.2013.868800
- Browning, C. R., Leventhal, T., & Brooks-Gunn, J. (2004). Neighborhood context and racial differences in early adolescent sexual activity. *Demography*, 41(4), 697–720. doi:10.1353/dem.2004.0029
- Bryant, K. D. (2006). Update on adolescent pregnancy in the Black community. *Association of Black Nursing Faculty in Higher Education*, 17(4), 133–136.
- Buhi, E. R., & Goodson, P. (2007). Predictors of adolescent sexual behavior and intention: A theory-guided systematic review. *Journal of Adolescent Health*, 40(1), 4–21. doi:10.1016/j.jadohealth.2006.09.027
- Carlson, D., McNulty, T., Bellair, P., & Watts, S. (2014). Neighborhoods and racial/ethnic disparities in adolescent sexual risk behavior. *Journal of Youth & Adolescence*, 43(9), 1536–1549. doi:10.1007/s10964-013-0052-0
- Carter, P., Russell, R., & Fine, M. (2014). Discipline disparities series review: A research to practice overview. *The Equity Project at Indiana University*, 1-8. Retrieved from [http://www.indiana.edu/~atlantic/wp-content/uploads/2014/04/Disparity\\_Overview\\_040414.pdf](http://www.indiana.edu/~atlantic/wp-content/uploads/2014/04/Disparity_Overview_040414.pdf)
- Centers for Disease Control & Prevention. (2007). *Sexually transmitted disease surveillance, 2006*. Atlanta, GA: Author. Retrieved from <http://www.cdc.gov/STD/STATS/toc2006.htm>
- Centers for Disease Control and Prevention. (2013). Estimated HIV incidence among adults and adolescents in the United States, 2007–2010. *HIV Surveillance Supplemental Report*, 4(16). Retrieved from [http://www.cdc.gov/hiv/pdf/statistics\\_hssr\\_vol\\_17\\_no\\_4.pdf](http://www.cdc.gov/hiv/pdf/statistics_hssr_vol_17_no_4.pdf)
- Chandra, P. C., Schiavello, H. J., Ravi, B., Weinstein, A. G., & Hook, F. B. (2002). Pregnancy outcomes in urban teenagers. *International Journal of Gynecology and Obstetrics*, 79(2), 117–122. doi:10.1016/S0020-7292(02)00240-0
- Colby, S. L., & Ortman, J. M. (2015). *Projections of the size and composition of the US population: 2014 to 2060*. Washington, DC: U.S. Census Bureau.
- Collins, M. L., Baiardi, J. M., Tate, N. H., & Rouen, P. A. (2015). Exploration of social, environmental and familial influences on the sexual health practices of urban African American adolescents. *Western Journal of Nursing Research*, 37, 1441–1457. doi:10.1177/0193945914539794
- Copeland-Linder, N., Lambert, S., Chen, Y.-F., & Ialongo, N. (2011). Contextual stress and health risk behaviors among African American adolescents. *Journal of Youth and Adolescence*, 40(2), 158–173. doi:10.1007/s10964-010-9520-y
- Córdova, D., Heinze, J. E., Mistry, R., Salas-Wright, C. P., & Zimmerman, M. A. (2016). Ecodevelopmental trajectories of family functioning: HIV/STI risk behaviors and STI among Black adolescents. *Developmental Psychology*, 52(7), 1115–1127. doi:10.1037/dev0000136

- Crosby, R. A., DiClemente, R. J., Wingood, G. M., Salazar, L. F., Rose, E., & Sales, J. M. (2007). The protective value of school enrolment against sexually transmitted disease: A study of high-risk African American adolescent females. *Sexually Transmitted Infections*, 83(3), 223–227. doi:10.1136/sti.2006.022590
- Cubbin, C., Santelli, J., Brindis, C. D., & Braveman, P. (2005). Neighborhood context and sexual behaviors among adolescents: Findings from the National Longitudinal Study of Adolescent Health. *Perspectives on Sexual and Reproductive Health*, 37(3), 125–134. doi:10.1363/3712505
- Demo, A. (2007). Integrating Black consciousness and critical race feminism into family studies research. *Journal of Family Issues*, 28, 452–473. doi:10.1177/2F0192513X06297330
- Fisher, C. B., Wallace, S. A., & Fenton, R. E. (2000). Discrimination distress during adolescence. *Journal of Youth and Adolescence*, 29(6), 679–695. doi:10.1023/A:1026455906512
- Floyd, L. J., & Brown, Q. (2013). Attitudes towards and sexual partnerships with drug dealers among young adult African American females in socially disorganized communities. *Journal of Drug Issues*, 2, 154–165. doi: 10.1177/0022042612467009
- Forhan, S. E., Gottlieb, S. L., Sternberg, M. R., Xu, F., Datta, S. D., McQuillan, G. M., ... Markowitz, L. E. (2009). Prevalence of sexually transmitted infections among female adolescents aged 14 to 19 in the United States. *Pediatrics*, 6, 1505.
- Frank, R. (2007). What to make of it? The (Re)emergence of a biological conceptualization of race in health disparities research. *Social Science & Medicine* 64(10), 1977–1983. doi:10.1016/j.socscimed.2007.01.010
- Frey, W. (2015). The geography of white population loss. *Brookings Institute*. Retrieved from <https://www.brookings.edu/blog/the-avenue/2015/04/30/the-geography-of-white-population-loss/>
- Garcia Coll, C., Lamberty, G., Jenkins, R., McAdoo, H. P., Crnic, K., Wasik, B. H., & Vazquez Garcia, H. (1996). An integrative model for the study of developmental competencies in minority children. *Child Development*, 67(5), 1891–1914. doi:10.2307/1131600
- Gentry, Q., Elifson, K., & Sterk, C. (2005). Aiming for more relevant HIV risk reduction: a black feminist perspective for enhancing HIV intervention for low-income African American women. *AIDS Education & Prevention*, 17, 238–252. doi:10.1521/aeap.17.4.238.66531
- Geronimus, A. T., & Korenman, S. (1993). The socioeconomic costs of teenage childbearing: Evidence and interpretation. *Demography*, 30(2), 281–290. doi:10.2307/2061842
- Gibson, P. A., Wilson, R., Haight, W., Kayama, M., & Marshall, J. M. (2014). The role of race in the out-of-school suspensions of black students: The perspectives of students with suspensions, their parents and educators. *Children and Youth Services Review*, 47(3), 274–282. doi:10.1016/j.childyouth.2014.09.020
- Haley, D. F., Haardörfer, R., Kramer, M. R., Adimora, A. A., Wingood, G. M., Goswami, N. D., ... Cooper, H. L. (2017). Associations between neighborhood characteristics and sexual risk behaviors among HIV-infected and HIV-uninfected women in the southern United States. *Annals Of Epidemiology*, 27, 252–259. doi:10.1016/j.annepidem.2017.03.004
- Hallfors, D. D., Waller, M. W., Bauer, D., Ford, C. A., & Halpern, C. T. (2005). Which comes first in adolescence—sex and drugs or depression? *American Journal of Preventive Medicine*, 29(3), 163–170. doi:10.1016/j.amepre.2005.06.002
- Halpern, C. T., Hallfors, D., Bauer, D. J., Iritani, B., Waller, M. W., & Cho, H. (2004). Implications of racial and gender differences in patterns of adolescent risk behavior for HIV and other sexually transmitted diseases. *Perspectives on Sexual and Reproductive Health*, 36(6), 239–247. doi:10.1363/3623904
- Hamilton, B. E., Martin, J. A., & Ventura, S. J. (2006). Births: Preliminary data for 2005. National vital statistics reports from the Centers for Disease Control and Prevention. *National Center for Health Statistics, National Vital Statistics System*, 55(11), 1–18.
- Harper, C., Dittus, P., Steiner, R., & Ethier, K. (2017). School connectedness enhances the protective effects of parental monitoring on adolescent sexual risk behavior. *Journal of Adolescent Health*, 60, S103–S104. doi:10.1016/j.jadohealth.2016.10.385
- Harris-Britt, A., Valrie, C. R., Kurtz-Costes, B., & Rowley, S. J. (2007). Perceived racial discrimination and self-esteem in African American youth: Racial socialization as a protective factor. *Journal of Research on Adolescence*, 17(4), 669–682. doi:10.1111/jora.2007.17.issue-4
- Hogben, M., & Leichter, J. S. (2008). Social determinants and sexually transmitted disease disparities. *Sexually Transmitted Diseases*, 35, 13–18. doi:10.1097/OLQ.0b013e31818d3cad.
- Hurd, N. M., Stoddard, S. A., Bauermeister, J. A., & Zimmerman, M. A. (2014). Natural mentors, mental health, and substance use: Exploring pathways via coping and purpose. *American Journal of Orthopsychiatry*, 84, 190–200. doi:10.1037/h0099361
- Joe, S., Baser, R. S., Neighbors, H. W., Caldwell, C. H., & Jackson, J. S. (2009). 12-month and lifetime prevalence of suicide attempts among black adolescents in the National Survey of American Life. *Journal of the American Academy of Child and Adolescent Psychiatry*, 48(3), 271–282. doi:10.1097/CHI.0b013e318195bccf
- Jones, C. P., LaVeist, T. A., & Lillie-Blanton, M. (1991). “Race” in the epidemiologic literature: An examination of the American Journal of Epidemiology, 1921–1990. *American Journal of Epidemiology*, 134(10), 1079–1084. doi:10.1093/oxfordjournals.aje.a116011

- Kann, L., Kinchen, S., Shanklin, S. L., Flint, K. H., Kawkins, J., Harris, W. A., ... Zaza, S. (2014). Youth risk behavior surveillance—United States, 2013. *Morbidity and Mortality Weekly Report*, 63, 1–168.
- Kann, L., Kinchen, S., Shanklin, S. L., Flint, K. H., Kawkins, J., Harris, W. A., ... Zaza, S. (2015). Youth risk behavior surveillance—United States, 2014. *Morbidity and Mortality Weekly Report*, 64, 1–168.
- Kirby, D. B. (2008). The impact of abstinence and comprehensive sex and STD/HIV education programs on adolescent sexual behavior. *Sexuality Research & Social Policy: Journal of NSRC*, 5(3), 18–27.
- Laveist, T. A. (1993). Segregation, poverty, and empowerment: Health consequences for African Americans. *Milbank Quarterly*, 71(1), 41–64. doi:10.2307/3350274
- LaVeist, T. A. (1994). Beyond dummy variables and sample selection: What health services researchers ought to know about race as a variable. *Health Services Research*, 29(1), 1–16.
- LaVeist, T. A. (2000). On the study of race, racism, and health: A shift from description to explanation. *International Journal of Health Services: Planning, Administration, Evaluation*, 30(1), 217–219. doi:10.2190/LKDF-UJQ5-WIKU-GLR1
- LaVeist, T. A. (2005). *Minority populations and health: An introduction to health disparities in the United States*. San Francisco, CA: Jossey-Bass.
- Libby, H. P. (2004). Measuring student relationships to school: attachment, bonding, connectedness, and engagement. *Journal of School Health*, 7, 274–278.
- Lillie-Blanton, M., & Laveist, T. (1996). Race/ethnicity, the social environment, and health. *Social Science & Medicine*, 43(1), 83–91. doi:10.1016/0277-9536(95)00337-1
- Lutfi, K., Trepka, M. J., Fennie, K. P., Ibanez, G., & Gladwin, H. (2015). Racial residential segregation and risky sexual behavior among non-Hispanic blacks, 2006–2010. *Social Science & Medicine*, 140, 95–103. doi:10.1016/j.socscimed.2015.07.004
- Ma, Z., Fisher, M., & Kuller, L. (2014). School-based HIV/AIDS education is associated with reduced risky sexual behaviors and better grades with gender and race/ethnicity differences. *Health Education Research*, 29(2), 330–339.
- Marmot, M. (2005). Social determinants of health inequalities. *Lancet*, 365, 1099–1104. doi:10.1016/S0140-6736(05)74234-3
- McKinney, M. H., Abrams, L. A., Terry, P. A., & Lerner, R. M. (1994). Child development research and the poor children of America: A call for a developmental contextual approach to research and outreach. *Family and Consumer Sciences Research Journal*, 23(1), 26–42. doi:10.1177/1077727X940231003
- Meade, C. S., Kershaw, T. S., & Ickovics, J. R. (2008). The intergenerational cycle of teenage motherhood: an ecological approach. *Health psychology*, 27(4), 419–429.
- Miller, K. S., Forehand, R., & Kotchick, B. A. (1999). Adolescent sexual behavior in two ethnic minority samples: The role of family variables. *Journal of Marriage and the Family*, 61, 85–98. doi:10.2307/353885
- Munson, E., Napierala, M., Olson, R., Endes, T., Block, T., Hryciuk, J. E., & Schell, R. F. (2008). Impact of *Trichomonas vaginalis* transcription-mediated amplification-based analyte-specific-reagent testing in a metropolitan setting of high sexually transmitted disease prevalence. *Journal of Clinical Microbiology*, 46(10), 3368–3374. doi:10.1128/JCM.00564-08
- Murdock, S., Zey, M., Cline, M. E., & Klineberg, S. (2010). Poverty, educational attainment and health among America's children: Current and future effects of population diversification and associated socioeconomic change. *Journal of Applied Research on Children: Informing Policy for Children at Risk*, 1, 1–33.
- Pachter, L. M., & Coll, C. G. (2009). Racism and child health: A review of the literature and future directions. *Journal of Developmental and Behavioral Pediatrics*, 30(3), 255–263. doi:10.1097/DBP.0b013e3181a7ed5a
- Raiford, J. L., Seth, P., & DiClemente, R. J. (2013). What girls won't do for love: Human immunodeficiency virus/sexually transmitted infections risk among young African-American women driven by a relationship imperative. *Journal of Adolescent Health*, 52, 566–571. doi:10.1016/2Fj.jadohealth.2012.09.006
- Resnick, M. D., Bearman, P. S., Blum, R. W., Bauman, K. E., Harris, K. M., Jones, J., ... Udry, J. R. (1997). Protecting adolescents from harm. Findings from the National Longitudinal Study on Adolescent Health. *Journal of the American Medical Association*, 278, 823–832.
- Respress, B. N., Morris, D. L., Gary, F. A., Lewin, L. C., & Francis, S. A. (2013). Social determinants of adolescent depression: An examination of racial differences. *Issues in Mental Health Nursing*, 34(7), 539–549. doi:10.3109/01612840.2012.758206
- Respress, B. N., Small, E., Francis, S. A., & Cordova, D. (2013). The role of perceived peer prejudice and teacher discrimination on adolescent substance use: A social determinants approach. *Journal of Ethnicity in Substance Abuse*, 12(4), 279–299. doi:10.1080/15332640.2013.836728
- Rink, E., Tricker, R., & Harvey, S. M. (2007). Onset of sexual intercourse among female adolescents: The influence of perceptions, depression, and ecological factors. *Journal of Adolescent Health*, 41(4), 398–406. doi:10.1016/j.jadohealth.2007.04.017
- Roberts, M. E., Gibbons, F. X., Gerrard, M., Weng, C.-Y., Murry, V. M., Simons, L. G., ... Lorenz, F. O. (2012). From racial discrimination to risky sex: Prospective relations involving peers and parents. *Developmental Psychology*, 48(1), 89–102. doi:10.1037/a0025430



- Rosenbloom, S. R., & Way, N. (2004). Experiences of discrimination among African American, Asian American, and Latino Adolescents in an urban high school. *Youth & Society*, 35(4),420–451. doi:10.1177/0044118X03261479
- Rowley, S. J., Kurtz-Costes, B., Mistry, R., & Feagans, L. (2007). Social status as a predictor of race and gender stereotypes in late childhood and early adolescence. *Social Development*, 16(1), 150–168.
- Salazar, L. F., DiClemente, R. J., Wingood, G. M., Crosby, R. A., Harrington, K., Davies, S., . . . Oh, M. K. (2004). Self-concept and adolescents' refusal of unprotected sex: A test of mediating mechanisms among African American girls. *Prevention Science*, 5(3), 137–149. doi:10.1023/B:PREV.0000037638.20810.01
- Sales, J. M., Smearman, E. L., Swartzendruber, A., Brown, J. L., Brody, G., & DiClemente, R. J. (2014). Socioeconomic-related risk and sexually transmitted infection among African-American adolescent females. *Journal of Adolescent Health*, 55, 698–704. doi:10.1016/j.jadohealth.2014.05.005
- Seaton, E. K. (2006). Examination of a measure of racial discrimination among African American adolescents. *Journal of Applied Social Psychology*, 36(6), 1414–1429. doi:10.1111/j.0021-9029.2006.00066.x
- Seaton, E. K., & Yip, T. (2009). School and neighborhood contexts, perceptions of racial discrimination, and psychological well-being among African American adolescents. *Journal of Youth and Adolescence*, 38, 153–163. doi:10.1007/s10964-008-9356-x
- Sieving, R., Resnick, M. D., Bearinger, L., Remafedi, G., Taylor, B. A., & Harmon, B. (1997). Cognitive and behavioral predictors of sexually transmitted disease risk behavior among sexually active adolescents. *Archives of Pediatrics & Adolescent Medicine*, 151(3), 243–251. doi:10.1001/archpedi.1997.02170400029006
- Smedley, A., & Smedley, B. D. (2005). Race as biology is fiction, racism as a social problem is real: Anthropological and historical perspectives on the social construction of race. *American Psychologist*, 60(1), 16–26. doi:10.1037/0003-066X.60.1.16
- Stanton, B., Black, M., Feigelman, S., Ricardo, I., Galbraith, J., Li, X., . . . Nesbitt, R. (1995). Development of a culturally, theoretically and developmentally based survey instrument for assessing risk behaviors among African-American early adolescents living in urban low-income neighborhoods. *AIDS Education and Prevention*, 7(2), 160–177.
- Stevens, R., Gilliard-Matthews, S., Nilsen, M., Malven, E., & Dunaev, J. (2014). Socioecological factors in sexual decision making among urban girls and young women. *Journal of Obstetric, Gynecologic, & Neonatal Nursing*, 43 (5), 644–654. doi:10.1111/1552-6909.12493
- Udry, J. R., Bearman, P. S., Harris, K. M., & Bauman, K. E. (2007). Database: *The National longitudinal study of adolescent health (Add Health), 1994-2008* [Public Use] (ICPSR21600-v17). Chapel Hill, NC: Carolina Population Center, University of North Carolina-Chapel Hill; Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributors]. doi:10.3886/ICPSR21600.v17
- Voisin, D., Salazar, L., Crosby, R., DiClemente, R., Yarber, W., & Staples-Horne, M. (2005). Teacher connectedness and health-related outcomes among detained adolescents. *Journal of Adolescent Health*, 37, 317–337.
- Voisin, D. R., & Neilands, T. B. (2010). Low school engagement and sexual behaviors among African American youth: Examining the influences of gender, peer norms, and gang involvement. *Children and Youth Services Review*, 32(1), 51–57. doi:10.1016/j.childyouth.2009.06.016
- Waddell, E., Orr, M., Sackoff, J., & Santelli, J. (2010). Pregnancy risk among black, white, and hispanic teen girls in New York City public schools. *Journal of Urban Health*, 87(3),426–439. doi:10.1007/s11524-010-9454-4
- Williams, C. R., & Wimberly, Y. (2006). Sexually transmitted disease prevention in adolescents and young adults. *Journal of the National Medical Association*, 98(2), 275–276.
- Williams, D. R., & Jackson, P. B. (2005). Social sources of racial disparities in health. *Health Affairs*, 24(2), 325–334. doi:10.1377/hlthaff.24.2.325
- Williams, D. R., Neighbors, H. W., & Jackson, J. S. (2008). Racial/ethnic discrimination and health: Findings from community studies. *American Journal of Public Health*, 98, 29–37. doi:10.2105/AJPH.98.Supplement\_1.S29
- Yan, A. F., Chiu, Y. W., Stoesen, C. A., & Wang, M. Q. (2007). STD-/HIV-related sexual risk behaviors and substance use among U.S. rural adolescents. *Journal of the National Medical Association*, 99(12), 1386–1394.
- Zeck, W., Bjelic-Radisic, V., Haas, J., & Greimel, E. (2007). Impact of adolescent pregnancy on the future life of young mothers in terms of social, familial, and educational changes. *Journal of Adolescent Health*, 41(4), 380–388. doi:10.1016/j.jadohealth.2007.05.012