

Perceived Discrimination and Children's Mental Health Symptoms

Cheryl L. Cooke, PhD, MN, RN; Bonnie H. Bowie, PhD, MBA, RN; Sybil Carrère, PhD

Perceived discrimination has been shown to be strongly associated with mental health outcomes, such as depression, anxiety, chronic stress, post traumatic stress disorder, and low self-esteem. This study (N = 88) examined the effects of perceived discrimination and its association with child mental health symptoms. African American children had a significantly stronger association between social stress and a sense of exclusion/rejection than Multiracial or European American children. Nurses need to assess and counsel families of color about their experiences with perceived discriminatory acts. **Key words:** *anxiety, BASC-C, children's mental health, depression, health disparities, life course theory, mental health, mental health outcomes in children, perceived discrimination, racism*

ONE OF the overarching goals of the U.S. Department of Health and Human Services, Healthy People 2020,¹ is to "Achieve health equity, eliminate disparities, and improve the health of all groups." Perceived ethnic discrimination has been linked to health inequities and may have a particularly devastating impact on children. Life course theory and previous research indicate that health inequities experienced during

childhood set in motion a trajectory that puts the individual at greater risk for health problems and premature death (see the special 2009 special issue of Pediatrics on childhood health disparities).^{2,3} The 2008 meeting of researchers representing different disciplines associated with child health inequities was convened to address factors, such as membership in a minority group, that are major contributors to children's health disparities.⁴ A series of recommendations for future children's health disparities research resulted from this meeting including the need for studies that examine the role of discrimination on the personal, interpersonal, and institutional levels. Part of this group's concern was that health disparities are typically addressed at the adult level and are unable to address cumulative life course factors, prospectively, that put a child on the path toward physical and mental health problems. This article addresses the links between children's perceived ethnic discrimination and mental health-related outcomes.

The current study was part of a larger 5-year longitudinal study of parenting practices associated with the emotional development of children as they transitioned through elementary school to middle school. Over the

Author Affiliations: *School of Nursing and Health Studies, University of Washington Bothell, Bothell (Dr Cooke); College of Nursing, Seattle University, Seattle, Washington (Dr Bowie); and Department of Psychology, California State University, San Bernardino, San Bernardino (Dr Carrère).*

This study was funded by NIMH (MH42484); NINR (#2P30 NR04001; T32 NR07039); NICHD (P30 HD02274); and NIDA training grant (T32 DA07257-14) NIMHD (P20MD002722).

The authors have disclosed that they have no significant relationships with, or financial interest in, any commercial companies pertaining to this article.

Correspondence: Cheryl L. Cooke, PhD, MN, RN, School of Nursing and Health Studies, University of Washington Bothell, Box 358532, Bothell, WA 98011 (ccooke@uwb.edu).

DOI: 10.1097/ANS.000000000000047

course of the first 3 years of our study, we observed differences in how parents taught their children to respond to emotionally stressful situations. In an earlier article, we reported differences between African American, Multiracial, and European American families in the kinds of parental “emotion coaching” that was most predictive of positive mental health outcomes.⁵ For example, in those African American families where the mothers provided more coaching for their children about how to manage their anger and sadness, the children reported significantly lower levels of depressive symptoms. In contrast, it was the fathers’ emotion coaching in the Multiracial families that was most predictive of better mental health symptoms. These patterns of behaviors led us to the conclusion that it would be important to examine the role of perceived discrimination, a topic that came up repeatedly in our family interviews. We added a self-report measure of perceived discrimination to the third and final time point of our study in order to examine the role it might play in the emotional well-being and mental health of our children.

There is a growing body of evidence demonstrating that perceived discrimination is strongly associated with mental health outcomes, including, but not limited to, depression, anxiety, chronic stress, posttraumatic stress syndrome, and low self-esteem.^{6,8} This article adds to that health equities literature, exploring the effects of perceived discrimination and its association with child mental health symptoms. We now know that perceived discrimination can contribute to negative health outcomes in adults, young adults, and adolescents. However, the effect of perceived discrimination on children and preadolescents is a research topic that needs to be further developed. Furthermore, with regard to specific ethnic and racial groups, Multiracial children have been largely ignored in this important area of health disparities research. In this study, we describe findings related to perceived ethnic discrimination and child mental health-related outcomes. Our study examined discrimination on the basis of ethnic-

ity or racial grouping. Understanding the social and psychological processes associated with the ways that discrimination operates may enhance provider self-awareness. This self-awareness may give providers a foundation from which to begin recognizing when discrimination is affecting the health of children receiving care in their offices.

CONCEPTUAL FRAMEWORK

Childhood health inequities and life course theory

Shonkoff et al⁹ describe a commonly held scientific paradigm, life course theory, that health inequities frequently stem from experience during childhood. The 2 mechanisms of life course theory they propose are the cumulative, developmental impact of adverse experiences and the manner in which such adverse experiences get “under the skin”.⁹ The term “under the skin” describes how adverse events create embedded biological risk factors for health problems. Particularly during sensitive periods of development, there may be a lag time of years or even decades before poor physical or mental health symptoms appear. Hertzman and Boyce¹⁰ describe the impact of stress on the hypothalamic-pituitary-adrenal axis as an example, where stress can increase levels of cortisol, which, with chronic or repeated exposures to stress, can cause dysregulation of the hypothalamic-pituitary-adrenal axis response and potentially damage other organ systems in the body.¹⁰ Neural development continues during childhood and thus, according to life course theory, is more sensitive to stressors in a child’s environment, such that even in preadolescent individuals, social economic status is associated with different neural circuitry used to achieve a demanding cognitive task.¹¹ Furthermore, there is evidence that suggests that a “chaining effect” can occur when adverse events occur and exposure to stressors (eg, racism, discrimination, undocumented immigrant status, dangerous neighborhoods, and poverty) can increase the likelihood of subsequent adverse experiences.¹²

For example, exposure to racism and discrimination in school may discourage children from pursuing academic excellence, thus limiting their career choices and increasing their chances of poverty in adulthood.

Life course theory highlights the importance of examining perceived discrimination in childhood as a health inequities issue. Not only does exposure to stressors such as racism and discrimination have the potential for immediate negative health-related outcomes, these adverse experiences may help put the minority child on a trajectory toward further adverse situations (chaining) as well as increasing their risk for adult physical and mental health problems and premature death (biological embedding).

Racism and perceived ethnic discrimination

The effects of racism and discrimination have left a lasting mark on the United States population and continue to affect the lives of those individuals, families, and communities who experience it. The concept of race is a social construct used as social shorthand for understanding, identifying, and often, marginalizing groups of people who are different than ourselves. Understanding racism as fundamentally structural and institutional¹³ means moving away from understanding racism only in terms of individual behaviors, beliefs, or practices, (ie, being labeled “a racist”). Rather, it allows us to examine these acts as manifestations of systematic patterns that support and favor, often unconsciously, the success of European Americans (as a group) over peoples of color (as racial or ethnic groups). Adopting such a view of racism can allow individuals to shift their focus away from anxieties about behaving or being labeled a “racist” (which then comes with a defense of how they are “not a racist”) toward examining how institutionalized systems perpetuate unconscious racist behaviors and acts that we (often unconsciously) participate in.

One way of measuring racism is by measuring perceived ethnic discrimination. Per-

ceived ethnic discrimination is a real event, or series of events, that occurs routinely for people in minority populations. Perceived ethnic discrimination is a concept used by researchers such as Contrada et al¹⁴ and Brondolo et al¹⁵ to refer to a broader range of discriminatory acts that can be experienced by members of different racial, ethnic, or culture-based groups. In part, they used this term to move beyond measures that solely indexed perceived discrimination toward African Americans in order to assess perceived discrimination that might be experienced by members of any racial, ethnic, or culture-based group. We use perceived ethnic discrimination in describing the links between racism, perceived discrimination, and subsequent outcomes to capture the range of experiences that are possible when members of different racial or ethnic groups are included.

In adolescents and young adults, multiple rather than a singular form of discrimination (eg., racial, ethnic, class, or sexual discrimination) have an association with mental and physical health.¹⁶ Therefore, attention must be paid to the cumulative experiences with discrimination for members of minority groups. This perspective is also consistent with the life course theory of cumulative impact of “insults” such as perceived ethnic discrimination across time. Not only do such incidences of ethnic discrimination have potential additive effects across time, but the exposure to ethnic discrimination may alter potential developmental pathways for children such as academic, career, and lifestyle choices.¹²

Subtle forms of discrimination including unconscious behavior, microaggressions, and “daily slights”¹⁷⁻¹⁹ can stem from socialization processes that encompass years of racial stereotyping and social categorization. On the surface, while some acts of ethnic discrimination may not be outwardly visible to those who commit them, they are obvious to and painful for ethnic and racial minorities and may generate significant adverse outcomes.^{15,16,20} These behaviors and

practices are all-inclusive, as Biernat and Dovidio²¹ found, in that even highly educated people who support egalitarian ideals might also exhibit discriminatory behaviors and practices toward members of minority groups.

Microaggressions are “commonplace verbal, behavioral, and environmental indignities” that may be recognized as occurring, or go unrecognized by the perpetrator, but that happen daily against people of color.²² In school settings, this may be in the form of racial ignoring or racial “spotlighting” those children who are racial or ethnic minorities as behavioral examples (good and poor) in the classroom.²³ It can be asking a child to speak for, or represent his or her opinion as a stand-in for all members of their racial group—a form of stereotyping—that ignores the complexity of experiences within a minority group. When we draw on the concepts described previously to understand racism and ethnic discrimination, we can begin to tease out areas where our view of a child’s misbehaviors or response to illness (for example) may be seen through a lens other than one that puts the onus of change only on the affected child and/or that child’s family.

One of the goals of this exploratory study then was to examine the relationship between children’s perceived ethnic discrimination and mental health-related symptoms (depressive symptoms, anxiety, social stress, self-esteem, interpersonal relations) within and between 3 groups: European American, African American, and Multiracial. The following section provides a brief overview of some recent studies that have examined the effects of perceived ethnic discrimination on mental health outcomes in children.

BACKGROUND AND SIGNIFICANCE

The idea that perceived ethnic discrimination may, in and of itself, be a harmful stressor in one’s life was identified in the literature more than 30 years ago; however, more recently, the effects of perceived ethnic discrim-

ination on children and adolescents are being studied. Several authors have documented an association between perceived ethnic discrimination and depression.^{8,24-26} In their 5-year longitudinal study of African American adolescents that began when the children were between the ages of 10 and 12 years, Brody and colleagues²⁴ found that perceived racism was strongly associated with later depressive symptoms and conduct problems. The researchers also found that the effects of perceived ethnic discrimination on depressive symptoms and conduct disorder were significantly reduced when nurturing parents and prosocial peers were present in the lives of youth.

In a similar cross-sectional study with African American adolescents aged 11 to 17 years, Sellers and colleagues²⁵ examined both risk and resilience associated with psychological well-being and exposure to racial discrimination. They found that perceived racial discrimination was associated with lower levels of psychological functioning, namely, depressive symptoms and psychological well-being. The authors also found that the majority of the types of discrimination the study subjects reported were covert or implicit forms, rather than overt racism. Sellers and colleagues speculate that trying to interpret these more subtle forms of racism added to the African American adolescents’ stress and psychological well-being.²⁵

Coker and colleagues⁸ analyzed cross-sectional data from a large study of fifth-grade students and their parents across 3 US school districts. A significant association between perceived discrimination and depressive symptoms was found for African American, Hispanic, and other children but not for European American children. Children who reported discrimination experiences were also more likely to report symptoms of attention deficit syndrome, conduct disorder, and oppositional defiant disorder. Interestingly, the adjusted odds ratio for Hispanic children was higher than that for African American children for all 4 of the mental health disorders.

Nyborb and Curry²⁶ found similar associations in a sample of fifth-grade African American boys in which perceived discrimination was associated with higher feelings of hopelessness and lower self-concept. The researchers also identified trait anger (hostility) as a mediating variable between perceived personal racism and externalizing behaviors, such as aggression or delinquent behaviors.

In sum, there is a growing body of research supporting the relationship between perceived discrimination and poor mental health-related outcomes in children and adolescents. In this exploratory study, we examined the association between children's perceived racial discrimination and mental health symptoms. The specific aims for this study were to (1) examine the relationship between children's perceived racial discrimination, anxiety, depressive symptoms, and social stress within and between 3 groups: European American, African American, and Multiracial; and (2) examine the relationship between perceived discrimination and children's attitudes to school as well as their relationships with their parents and teachers within each of these groups as well as between these 3 groups.

METHODS

Sample and recruitment

The sample for this analysis was drawn from a longitudinal study in which participants were recruited by information sheets sent to families through public and private schools, flyers posted in community settings, articles in several local newspapers in the Puget Sound area of Washington State, presentations at community events, and word of mouth. Married couples expressing an interest in participating in the study were contacted. Oral assent to participate in the screening interviews was obtained before conducting the telephone interviews.

The original, larger sample consisted of 129 families recruited from the Puget Sound area of Washington State. Measures were taken at baseline or Time 1 (T1), 18 months later at

Time 2 (T2), and 30 months after baseline at Time 3 (T3). Data collection occurred in an off-campus laboratory setting and within family homes (see Bowie²⁷ and Carrère and Bowie²⁸ for a more complete description of recruitment and data collection procedures). The analyses for the current were based on data collected from families (ie, parent and children) for whom we had complete data at T3. In addition, we excluded 2 ethnic groups, Asian Americans and Hispanic Americans, from the analysis because of small sample size (Asian Americans: $n = 12$; Hispanics: $n = 4$). After these exclusions, the sample for the current study that consisted of 88 families that provided complete data for T3 included 18 African American (AA), 40 European American (EA), and 30 Multiracial (MR) families. There were 39 boys (44.3%) and 49 girls (55.7%) in the sample. Income ranges for the families were 7% earning less than US\$50 000, 18.6% between US\$50 000 and US\$80 000, and 74.4% more than US\$80 000 per year. At T3 children, ranged in age from 8.1 to 14.3 years, averaging 11.28 years.⁵

Procedure

Data collection for this study occurred in subject homes at T3. In a traditional approach to measuring discrimination, questionnaires described in the measures section were provided to the children on laptop computers. A research assistant was in the room to clarify procedures. Children who might have difficulty completing the questionnaire were assisted by the research assistant who read the questions aloud. The child then answered each question using the computer keyboard.

Measures

Perceived discrimination

The *Child's Perceived Ethnic Discrimination Questionnaire-Community Version* (CPEDQ-CV) was designed to assess multiple dimensions of perceived discrimination over time.²⁹ We chose this measure of perceived discrimination not only because it has strong psychometric properties

but also because it permits the measure of perceived discrimination for any ethnic group, rather than just focusing on one ethnic group. The ability of this instrument to index perceived discrimination for not only African Americans but also Multiracial and European Americans is relatively unique, as noted by Brondolo, Contrada, and their colleagues.^{14,15,29,30}

The CPEDQ-CV is an adapted version of the *Perceived Ethnic Discrimination Questionnaire-Community Version* (PEDQ-CV) developed for adults. The questionnaire consists of 16 items, employing Likert responses on a scale from 1 (never) to 7 (very often). The PEDQ-CV had subscales that measured perceived discrimination at work or school (eg, “How often have you been treated unfairly by your teacher because of your ethnicity?”); stigmatization or devaluation because of ethnicity (eg, “How often has someone hinted that you might be lazy?”); threat or aggression (eg, “How often have others threatened to hurt you because of your ethnicity?”); and exclusion or rejection because of ethnicity (eg, “How often has someone been nice to your face but said bad things behind your back?”). Construct validity and reliability were good for the PEDQ-CV.²⁹

The 4 subscales of the CPEDQ-CV were based on adult subscales in the original questionnaire. The only changes were to drop the question about whether the respondent’s boss or supervisor was unfair due to ethnicity and to modify 1 question, so it just asked about the school environment rather than both work and school environments. Thus, the 4 subscales used in the present analyses were as follows: “Discrimination at School” (3 items; $\alpha = .75$), “Stigmatization/Devaluation,” (4 items; $\alpha = .71$), “Threat/Aggression” (4 items; $\alpha = .48$), and “Exclusion/Rejection” (4 items; $\alpha = .80$). The correlations between these 4 subscales were low enough so that it was not necessary to aggregate the subscales because of multicollinearity (highest correlation between subscales was 0.73).

*Behavior Assessment System for Children-Child Version*³¹ (BASC-C) is considered one

of the gold standards for measuring children’s personality and mental well-being.³² The measure is composed of 152 items rated by the child as either true or false. The BASC self-report of personality questionnaire has subscales to measure emotional problem variables such as behaviors and perceptions associated with internalizing problems (subscales including social stress, self-esteem, self-reliance, sense of inadequacy, anxiety, depression), behaviors and perceptions associated with externalizing problems (subscales such as aggression, school problems), and interpersonal relations (subscales include attitude to school and to teachers, relations with parents). Internal consistency for these subscales ranged between 0.77 and 0.88, with 3 of the 5 subscales used above 0.85. Reynolds and Kamphaus³³ reported strong validity and reliability properties for these scales. The BASC-C assessment includes statements such as, “My parents listen to what I say” (Relations with Parents) and “I am bothered by teasing from others” (Social Stress).

Anxiety and depression

To minimize the statistical problem of shared variance between the measures, we elected to use 2 additional questionnaires, rather than the BASC, to measure anxiety and depression symptoms.

The *Revised Children’s Manifest Anxiety Scale*³⁴ is a 37-item scale containing 28 anxiety and 9 “Lie Scale” items. Children are asked to circle Yes if they feel that a statement is true about them and No if it is not true. The Anxiety Scale has statements such as, “I worry about what other people think of me”, while the Lie Scale presents children with statements such as, “I tell the truth every single time.” The Lie Scale permits a check of the validity of the children’s general responses on the questionnaire. For this study, the T3 Anxiety Scale was used to examine its association with the 4 subscales of the CPEDQ-CV. Internal consistency scores for the Revised Children’s Manifest Anxiety Scale were reported to range from 0.79 to 0.85 across age groups from 6 to 19 years.³⁴

The *Reynolds Child Depression Scale*³⁵ is a 30-item questionnaire measuring the construct of depression. Items are scored on a 4-point Likert-type scale ranging from “almost never” (1) to “all the time” (4). The last item asks children to rate themselves on a 5-point “smiley type” scale ranging from sad to happy. Reynolds and Graves³⁵ reported internal consistencies of 0.88 and 0.90 across 2 time points. The authors also found strong correlations with other self-rated depression scales ($r = 0.68-0.79$).³⁵

Human subjects approval

The Family Health Project Human Subjects Application was approved by the University of Washington Institutional Review Board (Human Subjects Division) for study recruitment and procedures in February 2002 (Human Subjects Research Compliance approval no.: 01-0494-C/E-4). Written informed consents were obtained from parents for the full study and oral assents from children at the time of each data collection.

RESULTS

Group differences in children’s self-reports

To explore the differences between the ethnic groups on the major study variables, a series of 1-way analyses of variance were conducted. See the Table for means and standard deviations of the major study variables. There was a statistically significant difference in children’s scores for perceived discrimination at school, stigmatization, perceived threat, and perceived exclusion/rejection. Post hoc comparisons using the Tukey HSD test indicated that the mean perceived discrimination at school, stigmatization, perceived threat, and perceived exclusion/rejection scores for AA children were significantly higher than the means for EA children perceived discrimination (mean = 3.23), stigmatization (mean = 4.43), perceived threat (mean = 4.14), and perceived exclusion/rejection scores (mean = 5.98). The MR children also had mean stigmatization (mean = 5.43; $P < .01$) and

Table. Child’s Perceived Ethnic Discrimination Questionnaire-Community Version Subscale Means, Standard Deviations, and 1-Way ANOVA

Subscale	African American (N = 18) Mean (SD)	Multiracial (N = 30) Mean (SD)	European American (N = 40) Mean (SD)	1-Way ANOVA Results F^a
Discrimination at School	5.56 ^b (3.87)	4.37 (2.39)	3.23 (0.73)	6.84 ^c
Stigmatization/disvaluation	8.39 ^d (5.61)	5.43 (2.25)	4.43 (0.93)	11.65 ^c
Threat/aggression	5.72 ^f (2.59)	4.57 (2.13)	4.14 (0.58)	5.07 ^c
Exclusion/rejection	10 ^g (5.81)	6.47 (2.84)	5.98 (2.90)	7.95 ^c

Abbreviation: ANOVA, analysis of variance.

^a F statistic $df(2,86)$.

^bTukey HSD post hoc test: African American children perceived significantly greater discrimination than European American children ($P < .001$).

^c $P < .01$.

^dTukey HSD post hoc test: African American children perceived significantly greater stigmatization than both European American ($P < .001$) and Multiracial children ($P < .01$).

^e $P < .001$.

^fTukey HSD post hoc test: African American children perceived significantly greater threats of aggression than European American children ($P < .01$).

^gTukey HSD post hoc test: African American children perceived significantly greater exclusion/rejection than both European American ($P < .001$) and Multiracial children ($P < .01$).

perceived exclusion/rejection scores (mean = 6.47; $P = .005$) that were significantly lower than those of the AA children. However, the MR children's scores of perceived discrimination at school (4.37) and perceived threat (4.57) were not significantly different from those of the AA children. There were no significant differences between the EA children and the MR children on any of these measures. The results indicate, in general, that the AA children perceived more stigmatization and exclusion/rejection than the other 2 groups of children and more discrimination and threats of aggression than the EA children.

Associations between CPEDQ-CV and child outcomes: analytic strategy

Pearson product-moment correlations were used to examine the strengths of the association between the T3 CPEDQ-CV and T3 Child mental health and social relations measures within each of the 3 family groups.³⁶ Fisher z tests were conducted to determine whether there were significant differences in the strength of those correlations between the 3 groups of children. All Fisher z test results reported are 2-tailed. Figures 1 through 7 illustrate the correlational and Fisher z test analyses.

Attitude to teachers

There was a strong association between the AA children's negative attitude toward their teachers and their perceptions of discrimination at school (see Figure 1). There were moderate links between the AA children's negative attitude toward their teachers and both fear of aggression and sense of exclusion/rejection. There was a weaker correlation between the AA children's negative attitudes toward their teachers and feeling stigmatized. Fisher z tests indicated the AA children had a significantly stronger correlation than the EA children between negative attitudes toward teachers and the children's perception of discrimination at school. The link was very weak between the EA children's negative attitude toward teachers and feelings

of discrimination at school, feelings of stigmatization, fear of aggression, and exclusion. The MR children's negative attitude toward their teachers was moderately correlated with their perceptions of discrimination at school, feeling stigmatized, and fear of aggression. The MR children had a weak correlation between their negative attitude toward their teachers and feelings of exclusion/rejection.

Social stress

As can be observed in Figure 2, descriptive analyses of these correlations suggest that there was a large association between the AA children's social stress and their perceptions of being stigmatized, fear of aggression, and sense of exclusion/rejection. There was a moderate correlation between the AA children's social stress and their perceptions of discrimination at school. While EA children reported a strong association between social stress and a sense of exclusion/rejection, Fisher z tests indicated that the AA children had a significantly greater correlation between social stress and perceptions of exclusion/rejection than both the EA and MR children. It is also notable that AA and EA children's social stress was significantly more correlated with fear of aggression than that of MR children.

Self-esteem

When AA children reported higher rates of fear of aggression and exclusion/rejection, they also reported lower self-esteem (Figure 3). There was a weaker association for the AA children's sense of stigmatization and lower self-esteem. The EA children's fear of aggression and sense of exclusion/rejection were moderately linked to lower self-esteem. The correlation between the EA children's sense of stigmatization and lower self-esteem was weak. The MR children's discrimination at school was significantly more correlated with lower self-esteem than either the AA children or the EA children. The MR children had moderate correlations between lower self-esteem and both their sense of

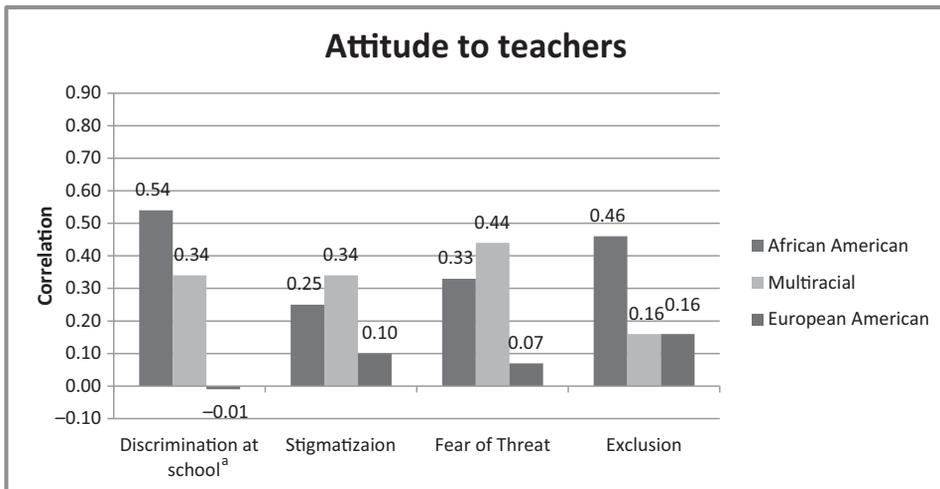


Figure 1. Comparison of correlations of children’s attitude to teachers and perceived discrimination scale variables by racial group (N = 88). ^aP < .05.

stigmatization and fear of aggression. The MR children’s lower self-esteem was weakly correlated with their perceptions of exclusion/rejection.

Interpersonal relations

When the AA children reported better interpersonal relations, their fear of aggression and feelings of exclusion/rejection were

much lower, while their sense of stigmatization was moderately lower (Figure 4). There was very little association between the AA children’s interpersonal relations and their sense of discrimination at school. Likewise, when the EA children reported better interpersonal relations, they were much less likely to fear aggression or feel excluded/rejected. The link between the EA children’s positive rating of their interpersonal relations and

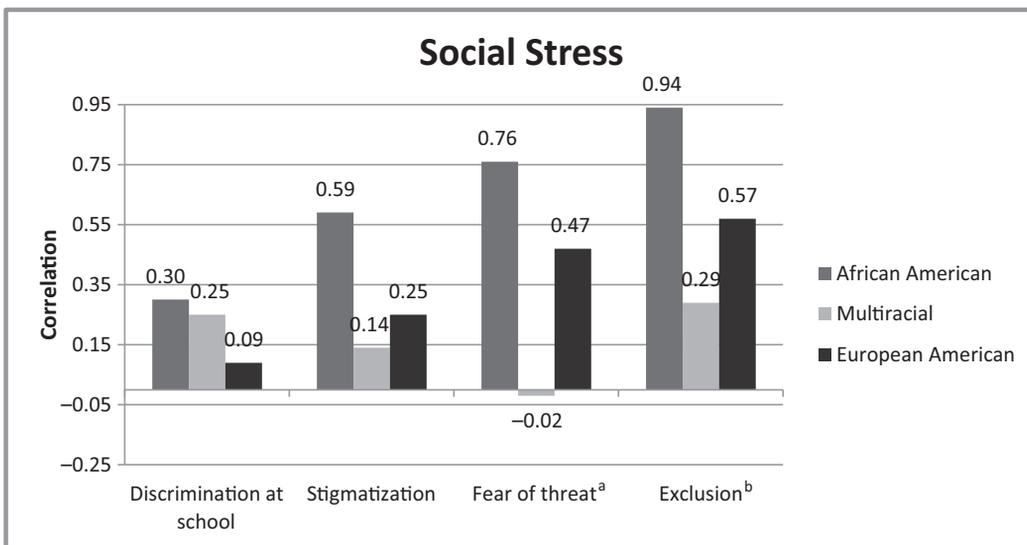


Figure 2. Comparison of correlations of children’s social stress and perceived discrimination scale variables by racial group (N = 88). ^aP < .05; ^bP < .001.

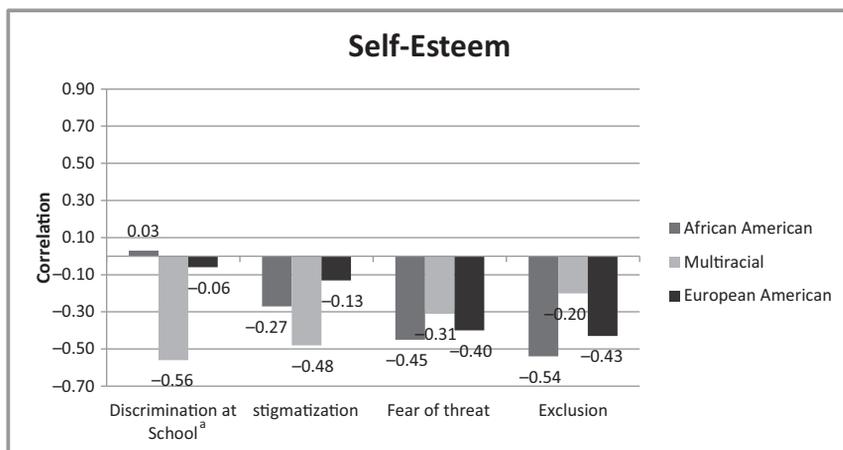


Figure 3. Comparison of correlations of children’s self-esteem and perceived discrimination scale variables by racial group (N = 88). ^a*P* < .05.

lower sense of stigmatization was weaker, and there was very little association between their rating of interpersonal relations and sense of discrimination at school. When the MR children reported better interpersonal relations, they were much less likely to sense discrimination at school, fear aggression, or feel excluded. A Fisher *z* test indicated that the link between interpersonal relations and a sense of discrimination at school was significantly greater for the MR children than for the AA children. The correlation between the MR children’s positive rating of their interpersonal relations and sense of stigmatization was weak.

Relations with parents

When the AA children reported better relations with their parents, the children also reported much lower discrimination at school, feelings of stigma, fear of aggression, and feelings of exclusion/rejection (Figure 5). The EA children had negligible correlations between the quality of their relationship with their parents and their reports of discrimination at school, feeling stigmatized, threats of aggression, and exclusion/rejection. Fisher *z* tests indicated that the correlations for AA children were significantly stronger than those for the EA children for the links between reports

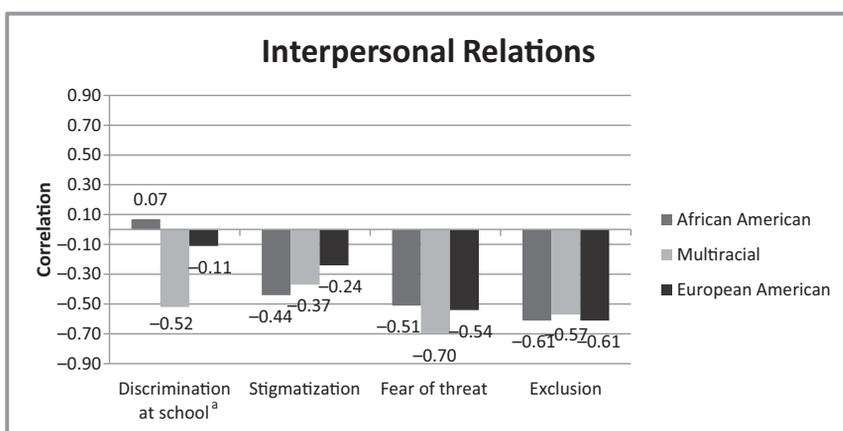


Figure 4. Comparison of correlations of children’s interpersonal relations with parents and perceived discrimination scale variables by racial group (N = 88). ^a*P* < .05.

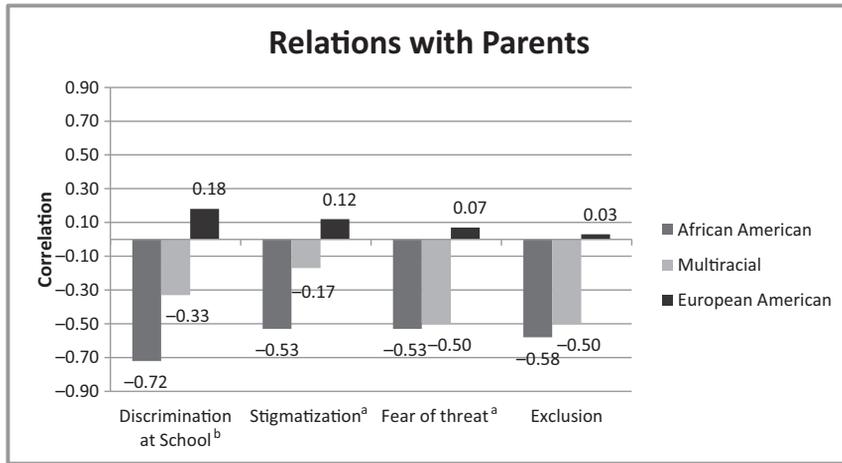


Figure 5. Comparison of correlations of children’s relations with parents and perceived discrimination scale variables by racial group (N = 88). ^aP < .05; ^bP < .001.

of good relationships with their parents and lower reports of discrimination at school, feelings of stigma, threats of aggression, and feelings of exclusion/rejection. The MR children had significantly stronger correlations than the EA children between good relationships with their parents and both lower threats of aggression and feeling excluded/rejected. The MR children had moderate correlations between good relationships with their parents and feelings of discrimination at school. The correlations for the MR children between good relationships with parents and feeling stigmatized were weak.

Anxiety (Revised Children’s Manifest Anxiety Scale)

There was a strong association between the AA children’s reports of anxiety and sense of exclusion/rejection, while the correlations were moderate between anxiety and both feeling stigmatized and fear of aggression (Figure 6). The link between the AA children’s anxiety and their perceptions of discrimination at school was weak. There were strong associations between the EA children’s anxiety and both a fear of aggression and sense of exclusion/rejection; in fact, the EA children’s reports of anxiety were significantly more correlated with fear of aggression than were the

MR children’s reports. The link between the EA children’s anxiety and both perceiving discrimination at school and being stigmatized was weaker. The MR children’s reports of anxiety were moderately correlated with their sense of exclusion and weakly correlated with their perceptions of being discriminated at school.

Depressive symptoms (Reynolds Child Depression Scale)

Figure 7 indicates the moderate to strong associations between the AA children’s reports of depressive symptoms and their perceptions of discrimination at school, being stigmatized, fear of aggression, and sense of exclusion/rejection. The EA children’s threats of aggression and perceptions of exclusion were strongly associated with their depressive symptoms, while feeling stigmatized was moderately correlated with depressive symptoms. The EA children’s correlations between depressive symptoms and fear of aggression were significantly stronger than those of the MR children. The MR children’s reports of depressive symptoms were moderately correlated with their perceptions of discrimination at school. However, the MR children had weak correlations between their reports of depressive symptoms and both

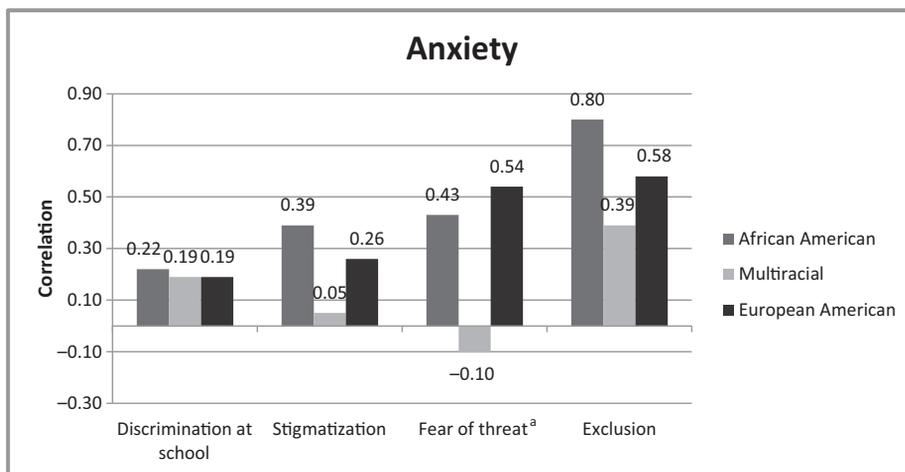


Figure 6. Comparison of correlations of children’s anxiety and perceived discrimination scale variables by racial group (N = 88). ^a*P* < .02.

feelings of stigmatization and perceptions of exclusion.

DISCUSSION

The results of the study are consistent with previous research that found that AA children perceive greater discrimination at school than EA children.⁷ What is a new insight is that at least in this group of children, there were no

significant differences between EA and MR children in the level of perceived discrimination at school. The AA children also had a significantly stronger association between social stress and a sense of exclusion/rejection than either of the other 2 groups. Our findings also highlight the possible importance of good relationships with parents buffering the impact of perceived ethnic discrimination for both AA and MR children. A small sample size

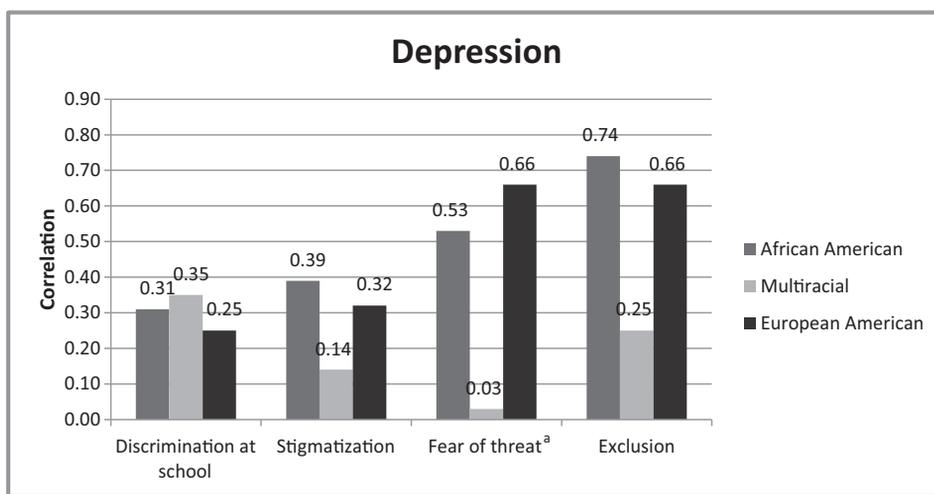


Figure 7. Comparison of correlations of children’s depression and perceived discrimination scale variables by racial group (N = 88). ^a*P* < .05.

prevents us from conducting meditational analyses to test this idea (even using bootstrap techniques).³⁷ However, stressing the importance of this possible buffering relationship with families of color may help enhance mental health-related outcomes.

It is also interesting to observe that perceptions of discrimination at school, and correlations with self-esteem were significantly greater for the MR children than the other children, and the MR children's link between perceptions of discrimination at school and interpersonal relations was significantly greater for the MR children than for the AA children. This might suggest that for MR children, in contrast to AA children, perceived discrimination may be more personal and interfere with peer relationship. This may be due to the more amorphous sense of identity that MR children have relative to both these other groups. As Brondolo and her colleagues¹⁵ observed, children's effective coping with discrimination is often linked to racial identity. Children of Multiracial heritage are less likely to identify with a specific racial or ethnic group. In their 5-year longitudinal study, Hitlin and his colleagues³⁸ found that Multiracial adolescents were likely to change their racial/ethnic identity over time. Qian³⁹ found that interracial couples tended to provide racial/ethnic identities for their children on the census, often based on the racial and/or ethnic identity of the parents. Multiracial children with an African American parent were more likely to be identified as black, while Asian American/European American and Hispanic/European American Multiracial children were more likely to be identified as white—especially in more affluent communities. Herman⁴⁰ found similar fluidity in the racial identity chosen by Multiracial adolescents that was associated with racial identity of their father or mother, their phenotypic appearance, and socioeconomic status.

Although EA children do not perceive greater amounts of discrimination, their stress and anxiety levels appear to be linked with feelings of threat and exclusion. While AA and MR children also have links between prob-

lematic outcomes and threats of aggression or exclusion, these negative social pressures appear to be the major ones experienced by the EA children.

The effects of perceived discrimination on mental and physical health have been well documented in the scholarly literature. Perceived discrimination has been linked to a number of youth outcomes including risky behaviors, aggression, anger, sleep disturbance, and substance use.⁴¹⁻⁴³ Our findings add to this record specifically in the area of anxiety, depression, social stress, and social exclusion. Depressive symptoms have specifically been linked to perceived discrimination and our findings support this association.⁸ For children of color, who are already affected by historical exclusion and disenfranchisement related to their ethnic and/or racial group, and who belong to racial groups long affected by a litany of health disparities, diagnoses such as depression and anxiety may further weaken their ability to rebound from such experiences.

Added to these negative outcomes is the problem of social exclusion, which may be better understood as either a lead-up to or as a proxy for bullying. There is documentation that an increase in their awareness of racial group identity may be related to increased bullying and discriminatory practices during adolescence.⁴⁴ While our study did not specifically explore bullying as a variable, the studied measure of social exclusion, in both intent and effects, is similar.

Other studies have found similar associations. For example, in their latent class analysis in 4 areas (racial discrimination, low discrimination, sexual orientation, and an intersectional class), Garnett and colleagues⁴⁴ found that discrimination and bullying co-occur in adolescents, and that these experiences may be associated with depression, suicidal behavior, and deliberate self-harm, particularly in students who may identify with more than 1 latent class. Peer aggression in adolescents can be a risk factor for depression and other mental health diagnoses, affecting both the aggressor and the victim.⁴⁵

Therefore, an important role for nurses and other health care providers is to ask children about their experiences with perceived discriminatory acts and practices, including microaggressions that may occur in school and play settings.

LIMITATIONS, CONCLUSIONS, AND IMPLICATIONS FOR NURSING RESEARCH AND PRACTICE

One of the greatest limitations of the current study is the sample size available to use in the analyses ($N = 88$ families who had complete data for T3. The original sample at T1 was $N = 129$). An examination of the patterns in the data pointed to the possibility that parents played an important buffering role for AA children between perceived discrimination and negative outcomes. However, we did not have the sample size to conduct meditational analysis, even using bootstrapping techniques that address smaller sample sizes.³⁷ In our T1 interviews with parents regarding how they coached their children about emotions, we observed that African American parents, both in African American families and in Multiracial families, in which 1 parent was African American, usually taught their children to have pride and feel good about themselves regardless of how they were treated by peers and figures of authority (eg, teachers). The parents in EA families were more likely to treat pride as a sign of self-centered arrogance and something that should be suppressed. Qualitative analyses of these data on parents' emotion coaching associated with the child's sense of pride might be able to shed greater light on important parenting behaviors that could buffer the impact of perceived discrimination on children's well-being and mental health outcomes.

Interviewing the children about their perceptions of discrimination, in addition to administering the self-report perceived discrimination questionnaire, would have allowed us to gain a better understanding of the children's experience of discrimination. There

were numerous incidents of children talking to the research team members about the kinds of discrimination they experienced, after the children had filled out the perceived discrimination questionnaire. The research teams' notes about such incidents were spotty but suggested that future studies would do well to interview the children about the kinds of discrimination they experienced (eg, the kids tease me about my big lips, kids say I smell funny, the other kids make fun of my hair, etc). As we examined the patterns in the data used for this article, we found ourselves wondering whether the kinds of discriminatory behaviors the EA children experienced were most likely to be bullying from other children. We also speculated about the possible, partial overlap between bullying and ethnically based discriminatory behaviors. We found that at T1 (when the children were primarily in grades 2-4), when we interviewed the children about their emotions, they were very self-aware about their emotions and the behaviors of peers and parents. We anticipate that there is much to be learned in future cross-cultural studies that include interviews with elementary school-aged children about their experiences with discrimination.

In addition to the myriad of reasons (eg, ethical, moral, responding to injustices) for nurses and other providers to disrupt and confront ongoing discriminatory practices against children, the long-term effect of perceived discrimination on child health is central. The transgenerational transmission of stress and trauma is an important aspect to consider when working with children exposed to discriminatory acts and practices. There is room for additional education about child mental health problems and outcomes for elementary education faculty and staff in order to provide them with the tools to help children experiencing discrimination in school.⁴⁶

Similar to the emphasis in adult primary care to reduce interpersonal violence, developing screening tools that assess childhood safety in school and social settings is needed. New assessment tools can explore whether

children feel safe from peers and authority figures in school and other social settings (eg, intermural sports, after school programs). Microaggressions, which can contribute to social stress, are currently being assessed in young adult and adult populations^{47,48} but not in children. As a preventative measure, it is essential to assess whether elementary and preadolescent children are experiencing

these situations, as they can contribute to later poor mental health outcomes. Such assessment tools need to be developed for younger populations. In addition, the need for training for teachers, school nurses, and other authority figures is an important step that allows for early intervention with children who are both victims and who may be carrying out these insensitive behaviors.

REFERENCES

1. U.S. Department of Health and Human Services. *Healthy People 2020*. Washington, DC: U.S. Department of Health and Human Services; 2014.
2. Braveman P, Barclay C. Health disparities beginning in childhood: a life-course perspective. *Pediatrics*. 2009;124(suppl 3):163-175.
3. *Pediatrics* [entire supplement]. 2009;124(suppl 3).
4. DC Baltimore Research Center on Child Health Disparities Writing Group. Starting early: a life-course perspective on child health disparities—research recommendations. *Pediatrics*. 2009;124(suppl 3): S257-S261.
5. Bowie BH, Carrère S, Cooke C, Valdivia G, McAllister B, Doohan E. The role of culture in parents' socialization of children's mental health. *West Jour Nurs Res*. 2013;35(4):514-533.
6. Chou T, Asaanai A, Hofman SG. Perception of racial discrimination and psychopathology across three U.S. ethnic minority groups. *Cultur Divers Ethnic Minor Psychol*. 2012;18(1):78-81.
7. Hwang WC, Goto S. The impact of perceived racial discrimination on the mental health of Asian American and Latino college students. *Asian Am J Psychol*. 2009;(suppl 1):15-28.
8. Coker TR, Elliott MN, Kanouse DE, et al. Perceived racial/ethnic discrimination among fifth-grade students and its association with mental health. *Am J Public Health*. 2009;99(5):878-884.
9. Shonkoff JP, Boyce WT, McEwen BS. Neuroscience, molecular biology, and the childhood roots of health disparities: building a new framework for health promotion and disease prevention. *JAMA*. 2009;301(21):2252-2259.
10. Hertzman C, Boyce T. How experience gets under the skin to create gradients in developmental health. *Annu Rev Public Health*. 2010;31:329-347 3p following 347.
11. D'Angiulli A, Herdman A, Stapells D, Hertzman C. Children's event-related potentials of auditory selective attention vary with their socioeconomic status. *Neuropsychology*. 2008;22:293-300.
12. Braveman P, Egerter S, Williams DR. The social determinates of health: coming of age. *Ann Rev Public Health*. 2011;32:381-398.
13. Jones CP. Levels of racism: a theoretic framework and a gardener's tale. *Am J Public Health*. 2000;90(8):1212-1215.
14. Contrada RJ, Ashmore RD, Gary ML, et al. Ethnicity-related sources of stress and their effects on well-being. *Curr Dir Psychol Sci*. 2000;9(4):136-139.
15. Brondolo E, Brady N, Pencille M, Beatty D, Contrada R. Coping with racism: a selective review of the literature and theoretical and methodological critique. *J Behav Med*. 2009;32(1):64-88.
16. Grollman EA. Multiple forms of perceived discrimination and health among adolescents and young adults. *J Health Soc Behav*. 2012;53(2):199-214.
17. Burrows AL, Hill PL. Flying the unfriendly skies?: the role of forgiveness and race in the experience of racial microaggressions. *J Soc Psychol*. 2012; 152(5):639-652.
18. Jernigan MM, Daniel JH. Racial trauma in the lives of Black children and adolescents: challenges and clinical implications. *J Child Adolesc Trauma*. 2011;4:123-141.
19. Carter R. Racism and psychological and emotional injury: recognizing and assessing race-based traumatic stress. *Couns Psychol*. 2007;35(1):13.
20. Smedley BD, Stith AY, Nelson AR. *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care*. Washington, DC: Institute of Medicine; 2003.
21. Biernat M, Dovidio JF. Stigma and stereotypes. In: Heatherton TF, Kleck RE, Hebl MR, Hull JG, eds. *The Social Psychology of Stigma*. New York, NY: Guilford Press; 2000:88-125.
22. Sue DW, Capodilupo CM, Torino GC, et al. Racial microaggressions in everyday life: implications for clinical practice. *Am Psychol*. 2007;62(4):271-286.
23. Carter Andrews DJ. Black achievers' experiences with racial spotlighting and ignoring in a predominantly white high school. *Teach Coll Rec*. 2012; 114(10):1-46.

24. Brody GH, Chen Y, Murry VM, et al. Perceived discrimination and the adjustment of African American youths: a five-year longitudinal analysis with contextual moderation. *Child Dev.* 2006;77(5):1170-1189.
25. Sellers RM, Copeland-Linder N, Martin PP, Lewis RL. Racial identity matters: the relationship between racial discrimination and psychological functioning in African American adolescents. *J Res Adolescence.* 2006;16(2):187-216.
26. Nyborg VM, Curry JF. The impact of perceived racism: psychological symptoms among African American boys. *J Clin Child Adolesc Psychol.* 2003;32(2):258-266.
27. Bowie BH. Emotion regulation related to children's future externalizing and internalizing behaviors. *J Child Adolesc Psychiatr Nurs.* 2010;23(2):74-83.
28. Carrère S, Bowie BH. Like parent, like child: parent and child emotion dysregulation. *Arch Psychiatr Nurs.* 2012;26(3):e23-e30.
29. Brondolo E, Kelly KP, Coakley V, et al. The perceived ethnic discrimination questionnaire: development and preliminary validation of a community version. *J Appl Soc Psychol.* 2005;35(2):335-365.
30. Contrada RJ, Ashmore RD, Gary ML, et al. Measures of ethnicity-related stress: psychometric properties, ethnic group differences, and associations with well-being. *J Appl Soc Psychol.* 2005;31(9):1775-1820.
31. Reynolds CR, Kamphaus RW. *BASC Behavior Assessment System for Children.* Circle Pines, MN: American Guidance Service, Inc.; 1988.
32. Kamphaus RW, Reynolds CR, Hatcher NM, Kim S. Treatment planning and evaluation with the Behavior Assessment System for Children (BASC). In: Maruish ME, ed. *The Use of Psychological Testing for Treatment and Planning and Outcome Assessment, Volume 2: Instruments for Children and Adolescents.* 3rd ed. Mahwah, NJ: Lawrence Erlbaum, Associates, Inc.; 2004:331-354.
33. Reynolds CR, Kamphaus RW. *Behaviour Assessment System for Children Manual.* 2nd ed. Circle Pines, MN: American Guidance Service; 1998.
34. Reynolds CR, Paget KD. National normative and reliability data for the revised Children's Manifest Anxiety Scale. *School Psychol Rev.* 1983;12(3):324-336.
35. Reynolds WM, Graves A. Reliability of children's reports of depressive symptomatology. *J Abnorm Child Psychol.* 1989;17(6):647-655.
36. Field A. *Discovering Statistics Using SPSS.* 3rd ed. Thousand Oaks, CA: Sage; 2009.
37. Hayes A, Scharkow M. The relative trustworthiness of inferential tests of the indirect effect in statistical mediation analysis: does method really matter? *Psychol Sci.* 2013;24(10):1918-1927.
38. Hitlin S, Scott Brown J, Elder GH. Racial self-categorization in adolescence: multiracial development and social pathways. *Child Dev.* 2006;77(5):1298-1308.
39. Qian Z. Options: racial/ethnic identification of children of intermarried couples. *Social Science Quarterly.* 2004;85(3):746-766.
40. Herman M. Forced to choose: some determinants of racial identification in multiracial adolescents. *Child Dev.* 2004;75(3):730-748.
41. Simons RL, Simons LG, Burt CH, et al. Supportive parenting moderates the effect of discrimination upon anger, hostile view of relationships, and violence among African American boys. *J Health Soc Behav.* 2006;47:373.
42. Galliher RV, Jones MD, Dahl A. Concurrent and longitudinal effects of ethnic identity and experiences of discrimination on psychosocial adjustment of Navajo adolescents. *Dev Psychol.* 2011;47(5):509-526.
43. Grandner MA, Petrov ME, Rattanaumpawan P, Jackson N, Platt A, Patel NP. Sleep symptoms, race/ethnicity, and socioeconomic position. *J Clin Sleep Med.* 2013;9(9):897-905.
44. Garnett BR, Masyn KE, Austin SB, Miller M, Williams DR, Viswanath K. The intersectionality of discrimination attributes and bullying among youth: an applied latent class analysis. *J Youth Adolesc.* 2014;43(8):1225-1239.
45. Moore SE, Norman RE, Sly PD, Whitehouse AJO, Zubrick SR, Scott J. Adolescent peer aggression and its association with mental health and substance use in an Australian cohort. *J Adolesc.* 2014;37:11-21.
46. Powers JD, Wegmann K, Blackman K, Swick DC. Increasing awareness of child mental health issues among elementary school staff. *Families in Society. J Contemp Soc Ser.* 2014;95(0):1-8.
47. Huynh V. Ethnic microaggressions and the depressive and somatic symptoms of Latino and Asian American Adolescents. *J Youth Adolesc.* 2012;42(7):831-846.
48. Henfield MS. Black male adolescents navigating microaggressions in a traditionally White middle school: a qualitative study. *J Multicult Couns Devel.* 2011;39(3):141-115.