

STUDENT AND SCHOOL PREDICTORS OF
PERCEIVED DISCRIMINATION

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ABSTRACT

Perceptions of discrimination have been linked to a variety of negative academic and social outcomes for adolescents. Relatively few studies have investigated school characteristics that may serve as antecedents of perceived discrimination toward Black students. Even less is known about how individual differences may interact with school characteristics to influence Black students' perceptions of discrimination. The current study examined the role of individual student and school variables as predictors of Black middle school students' perceived discrimination experiences, defined as racial hassles. The moderating role of racial identity processes was also examined. Analyses for the current study focused on 135 Black adolescents, who were recruited for the Temple University Adolescent Cognition and Emotion (ACE) Project at approximately 12 years of age, and for whom school-level data were available. Correlational and linear regression analyses indicated that school characteristics were unrelated to perceptions of discrimination. Racial identity processes did not moderate the relationship between school racial composition and perceived discrimination. Male and female students reported no differences in either perceived discrimination or reported bothersomeness. Most participants, regardless of school context, reported some discrimination. In conclusion, this study suggests that Black early adolescents perceived racial discrimination irrespective of school racial composition, school quality, and school size. Directions for future research are discussed.

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CHAPTER 1

INTRODUCTION

Racial segregation of American public schools was declared unconstitutional over half a century ago in *Brown v. Board of Education of Topeka*. Despite the gains made between the 1960s-1980s, Black American students today are disproportionately placed in lower academic tracks and experience more frequent and harsher discipline (e.g., office referrals, suspensions, and expulsions) compared to children of other races (Gregory & Weinstein, 2008; Skiba, Michael, Nardo, & Peterson, 2002). In addition, Black or Latino students in the United States are more likely than their White counterparts to attend schools with low-income peers (Orfield & Lee, 2007). This racial and economic grouping may place students at risk. The bioecological model of human development suggests that mere exposure to other students who have experienced risks such as homelessness or low maternal education just as significantly predicts poor school outcomes as the direct experience of such risks (Bronfenbrenner, 2005; Fantuzzo, LeBoeuf, & Rouse, 2013). While traditional, overt, and individual discrimination may be less common today, symbolic and institutional forms of discrimination continue to perpetuate inequalities in our educational system (Rosenbloom & Way, 2004). Institutional discrimination poses a particularly vexing problem because it can exist in situations where the perpetrators are completely unaware of their actions (Rosenbloom & Way, 2004).

The targeted individual's perceptions of discrimination can have real physical and social-psychological consequences (Dion 2003). Adolescent perceptions of racial discrimination have been linked to lower grades, increased externalizing behavior, and

diminished engagement in academics (Neblett, Philip, Cogburn, & Sellers, 2006; Sanders, 1997; Schmader, Major, & Gramzow, 2001; Sellers & Shelton, 2003; Thompson & Gregory, 2011; Wong, Eccles, & Sameroff, 2003). Nearly 50% of Black Americans who enter high school do not graduate with a high school diploma (Orfield, Losen, Wald, & Swanson, 2004). The national attrition rate for Black Americans between 9th and 10th grade is 18 to 20%, compared with between 6 and 7% for White Americans (Wheelock & Miao, 2005). These findings suggest that the beginning of high school marks a risky transition for Black American students with regard to academic engagement.

Middle school, as a time of increased awareness of one's identity and the salience of one's membership in a group, provides an ideal opportunity to study the processes of racial identity formation. In addition to undergoing substantial changes in cognitive development, including increased self-awareness, adolescents experience more frequent interactions with individuals outside their own families and a greater preoccupation with social life (Phinney, 1989). Beyond learning what their racial/ethnic label is, adolescents begin to understand the significance of their group membership (Phinney, 1989). Exposure to other races has been found to influence racial and ethnic identity development. According to the 2008 U.S. Census Bureau, racial minorities, now representing one-third of the U.S. population, are projected to be 54% of the population by 2050. Racial minorities will comprise more than half of all children in the U.S. by 2023. These predictions underscore the need for scholars and practitioners to understand how children and youth negotiate racially diverse contexts.

There has been very little research exploring the relationships between school contexts and racial/ethnic identity despite the fact that schools play a significant role in

the ecological world of students (Bronfenbrenner, 2005; Grossman & Charmaraman, 2009). Schools are often places where students are exposed to individuals of different backgrounds and where students spend much of their time, particularly during the middle and high school years. As students become increasingly attuned to social relations during adolescence, perceived discrimination from adults and peers in the school context may profoundly impact students' racial identities and other academic outcomes.

The current study would extend the literature by identifying individual and school factors that predict perceived daily discrimination experiences, defined as interpersonal hassles related to race, and examining the moderating role of racial identity, in a community sample of Black adolescents participating in the Adolescent Cognition and Emotion (ACE) Project. The current study would also move beyond broad census classifications to include an examination of racial identity processes.

CHAPTER 2

REVIEW OF LITERATURE

Defining Racial Discrimination

Discrimination is defined as “unfair behavior or unequal treatment accorded others on the basis of their group membership or possession of an arbitrary trait, such as skin color” (Dion, 2003, p. 507). Prejudice is defined as “biased and usually negative attitudes toward social groups and their members” (Dion, 2003, p. 507). Prejudice underlies racism and is believed to motivate acts of discrimination. Numerous studies suggest that racial minorities frequently experience discrimination. In a large-scale national study, 61% of the Black American participants reported daily experiences of discrimination (Kessler, Mickelson, & Williams, 1999). Among Black American college students, 41% reported having occasionally heard disparaging racial remarks and 59% reported having been the target of racial insults (D’Augelli & Hershberger, 1993). Among adolescents from a wide variety of racial/ethnic backgrounds 57% reported having been called a racially insulting name, 31% reported having been threatened by peers because of their race or ethnicity, and 42% believed they had been given a lower grade in school because of their race or ethnicity (Fisher, Wallace, & Fenton, 2000).

The sites of discrimination can range from homes to workplaces and educational sites, such as schools (Feagin, 1991). Feagin (1991) ascribes a spatial dimension to discrimination. The probability of experiencing racial discrimination is low at a relatively protected site, such as one’s home, but it increases as adolescents move to semi-public sites such as workplaces and educational settings where they typically have more contact with acquaintances and strangers. The protection weakens further in public

settings, such as large stores and public streets, where strangers react primarily based on one ascribed characteristic, such as skin color (Feagin, 1991). The more time they spend in public spaces away from the home, the more likely Black American youth are to encounter instances of discrimination. According to Gardner (1988), who studied the passing remarks made by men directed against women in unprotected public spaces, women and Black Americans are “open persons,” who are particularly vulnerable targets for harassment that violates the rules of public courtesy. During adolescence, Black American youth spend increasing amounts of time in public spaces and outside the home, placing them at increased risk for exposure to racial discrimination.

Discrimination can take many forms. Allport (1958) believed that prejudice can be expressed via a continuum of actions: antilocution, avoidance, exclusion, physical attack, and extermination. Although overt forms of discrimination continue to exist, discrimination against ethnic/racial minority youth today often entails more subtle or covert forms of behavior including being treated suspiciously in public spaces, receiving unusually harsh discipline, being talked down to, or receiving a lower grade than deserved (Fisher et al., 2000; Sellers, Copeland-Linder, Martin, & Lewis, 2006). Racial and ethnic minority youths experience discrimination in schools and other public spaces, from peers as well as adult authority figures (Kessler et al., 1999; Rosenbloom & Way, 2004)

The Consequences of Perceived Discrimination

Studies of discrimination may focus on either the psychology of the bigot or the psychology of the victim of discrimination (Dion, 2003). Until recently, much of the literature on discrimination revolved around the bigot's negative attitudes and behaviors towards the victims (Sellers & Shelton, 2003). This trend reflected the "optimistic view" that prejudice and discrimination could be reduced or eliminated if we understood the psychology of the bigot (Dion, 2003, p. 507). However, a strong case can be made for studying the psychology of the victim because it can be difficult to measure racial discrimination objectively, and prejudice and discrimination sometimes originate in structural and institutional forces, rather than in bigoted individuals only (Dion, 2003). Additionally it is important to examine the target's perspective—the phenomenology of perceived discrimination—rather than only the "psychology of the powerful" (Branscombe, Schmitt, & Harvey, 1999). Recently an increasing body of research has examined the consequences associated with the target's perspective. *Perceived discrimination* has been defined as the belief that one has been unfairly treated based on race (Stangor et al., 2003).

The Stress Model

The stress model is a theoretical perspective employed to understand the phenomenological dynamics of being a victim of discrimination. This model views the experience of perceiving oneself as a target of discrimination as a psychosocial stressor (Dion & Pak, 1992). The experience of perceiving discrimination is stressful because it leads the victim to see him or herself as the deliberate target of discriminatory behavior by the antagonist and elicits cognitive appraisals of threat. Unpredictable stress, such as

being the target of discrimination, has been shown to entail greater adaptational cost than predictable or controllable stressors (Glass & Singer, 1972). Outcomes known to result from stress include negative affect, psychological or psychiatric symptoms, lowered sense of well-being, and heightened in-group identification (Dion, 2003). Several experimental (Dion & Earn, 1975) and correlational studies (Dion & Pak, 1992; Pak, Dion, & Dion, 1991) examining the consequences of racial discrimination have found similar consequences among participants who were targets of discrimination, thus offering support for the stress model of perceived discrimination.

Types of Discrimination Stress

Discrimination stress may be experienced as major life events or as “daily hassles,” recurring irritations that arise in everyday situations (Essed, 1991). Although familiar daily stresses are less dramatic than major episodic events, research suggests that daily hassles may have the greater impact on adaptation and psychological health (Lazarus & Folkman, 1985). In a comparison of major life events and daily hassles, Lazarus and Folkman (1985) found that daily hassles more meaningfully predicted psychological and somatic symptoms. In fact, major life events had little or no impact on health outcomes independent of daily hassles (DeLongis, Coyne, Dakof, Folkman, & Lazarus, 1982; Kanner, Coyne, Schaeffer, & Lazarus, 1981).

Discrimination stress may also vary by duration. According to the stress literature, stressors that persist continuously over time (i.e., chronic stressors) are greater predictors of onset and course of illness than are time-limited ones (i.e., acute stressors) (Lazarus and Folkman., 1985; Williams, Yan, Jackson, & Anderson, 1997). Furthermore, when both chronic and acute stress affect the same life domains, chronic

stress is likely to exacerbate the effects of acute stress (Williams et al., 1997). A combination of chronic and acute perceptions of racism may be particularly toxic for Black Americans (Feagin, 1991; Sigelman & Welch, 1994). In Feagin's (1991) study of modern racial discrimination, 37 in-depth interviews were conducted with Black middle-class participants in several large cities in the United States. The participants were asked to discuss sites of discrimination, the character of discriminatory acts, and their own coping responses. The findings suggested that a single instance of discrimination that may seem inconsequential when considered in isolation by an outside observer may be perceived as significant to a person who has experienced similar slights accumulated over many years (Feagin, 1991).

The Negative Effects of Perceived Discrimination

Racial discrimination can have physical and psychosocial implications regardless of whether the targeted individual perceives a potentially discriminatory act as harmful (Clark, Anderson, Clark, & Williams, 1999). Racial discrimination against Black Americans has been linked to decreased employment, lower salaries, higher ratings of stressful life events, and lowered motivation (Dovidio & Gaertner, 1986; Fordham & Ogbu, 1986; Frieze, Olson, & Good, 1990; Tienda, Donato, & Cordero-Guzmán, 1992). Racial disparities in the delivery of health care are well-documented in the medical literature. In a survey of 720 primary care physicians, race was found to be a strong determinant of physicians' referrals for cardiac catheterization for patients experiencing chest pain after controlling for symptoms, the physicians' estimates of the probability of coronary disease, and clinical characteristics (Schulman et al., 1999). Even when the target does not perceive discrimination, institutional racism may have adverse effects on

health. When the target does perceive discrimination there may be even greater adaptational costs, particularly when the threat of discrimination is ambiguous or unpredictable (Dion & Pak, 1992).

Mental Health

The harmful effects of perceived racial discrimination on mental health have been documented in both correlational and experimental studies. A robust body of literature demonstrates positive associations between perceived discrimination and psychological distress (see Williams, Neighbors, & Jackson, 2003, for a review). In addition, perceived discrimination has been found to be associated with lower ratings of happiness and life satisfaction among Black Americans (Schulz et al., 2000; Williams et al., 1997). Other positive correlations with perceived discrimination included a diagnosis of major depression (Brody et al., 2006; T. N. Brown et al., 2000; J. Jackson et al., 1996; Kessler et al., 1999; Sanders-Thompson, 1996; Williams et al., 1997); generalized anxiety disorder (Brown, Meadows, & Elder, 2007; Dion, 2002; Williams et al., 1997); and psychiatric symptoms (Landrine & Klonoff, 1996). Some studies suggest that perceived discrimination is more strongly associated with externalizing behaviors than with internalizing behaviors (Scott & House, 2005; R L Simons, Simons, & Burt, 2006).

Physical Health

Beyond its implications for mental health, perceived racial discrimination also has significant implications for physical health. Some researchers attribute the significant disparity in physical health status between Black Americans and White Americans to racial discrimination (Clark et al., 1999; Mays, Cochran, & Barnes, 2007; Williams et al.,

2003). Perceived discrimination may have both a direct and an indirect effect on physical health (Gibbons et al., 2010).

Experimental and correlational studies have demonstrated that perceived discrimination is directly associated with physiological responses that typically accompany psychological stress (involving the immune, neuroendocrine, and cardiovascular systems; Clark et al., 1999). For example, perceived discrimination has been related to high blood pressure, which can lead to cardiovascular problems (Richman, Bennett, Pek, Siegler, & Williams, 2007; Ryan, Gee, & Laflamme, 2006).

The preponderance of literature on the physical health implications of perceived discrimination has focused on cardiovascular issues. However, perceived discrimination can also impact health indirectly through risky or unhealthy behavior, including aggressive behavior and substance use. Greater frequency of reported discrimination experiences have also been correlated with cigarette smoking (Landrine & Klonoff, 1996) and lifetime use of marijuana or cocaine (Borrell, Kiefe, Williams, Diez-Roux, & Gordon-Larsen, 2006). Prospective studies have demonstrated a link between perceived discrimination and increased substance use among Black adolescents and their parents (Gibbons et al., 2010; Gibbons, Gerrard, Cleveland, Wills, & Brody, 2004). For both adolescents and their parents, the relationship between discrimination and substance use was mediated by anger and/or hostility, while for adolescents it was also mediated by behavioral willingness and moderated by supportive parenting (Gibbons et al., 2010). Early exposure to the aversive experience of perceived discrimination may put adolescents at particular risk for subsequent drug use (Gibbons et al., 2007).

Denial of racism may also be related to harmful cardiovascular outcomes for Black Americans (Krieger & Sidney, 1996; Krieger, 1990). In Krieger's (1990) study of racial and gender discrimination as risk factors for hypertension, Black American women who recounted the fewest number of racist or sexist incidents, as well as those who typically kept quiet about and accepted unfair treatment, were at greatest risk for self-reported high blood pressure (Krieger, 1990). Black American female respondents who recounted no instances of unfair race- or gender-based treatment were 2.6 times more likely to report hypertension than those reporting one or more such instances (Krieger, 1990). Black American female respondents who typically accepted or kept quiet about unfair treatment were 4.4 times more likely to report hypertension than those who said they took action and talked to others, whereas no clear association was found among White American respondents (Krieger, 1990). Working-class Black American women and men who reported that they typically accepted unfair racial treatment, and those who reported no instances of racial discrimination, were found to have systolic blood pressure that was about 7 mm Hg higher than those who challenged unfair treatment and reported that they had experienced racial discrimination (Krieger & Sidney, 1996).

There may also be social costs to attributing a setback to discrimination, including being seen as a complainer or being evaluated less positively (Miller & Kaiser, 2001). These social costs to perceived discrimination may explain why some people from oppressed groups are reluctant to claim that they have personally experienced discrimination while reporting high rates of group discrimination (personal-group discrimination discrepancy).

Outcomes for Children & Youth

Socio-emotional Development

Of the studies examining racial discrimination and health outcomes, relatively few have focused on children or adolescents. In studies examining samples of African American, Latin American, and Asian American youth, experiences with racial/ethnic discrimination were consistently associated with more psychological distress (Benner & Graham, 2013; Benner & Kim, 2009; Brody et al., 2006; Grossman & Liang, 2008; Prelow, Danoff-Burg, Swenson, & Pulgiano, 2004; Seaton, Caldwell, Sellers, & Jackson, 2010). Perceived discrimination has also been related to internalizing symptoms (e.g., low self-esteem, depression, anxiety) among multiracial samples of youth in the United States (Fisher et al., 2000; Gibbons et al., 2004; Rumbaut, 1994; Ronald L Simons et al., 2002; Szalacha, Erkut, Coll, et al., 2003; Wong et al., 2003). Cross-sectional research has consistently found that perceived discrimination is associated with low self-esteem among youth of color in the United States (Fisher et al., 2000; Nyborg & Curry, 2003; Szalacha et al., 2003a).

In addition to internalizing symptoms, perceived discrimination has been linked to externalizing symptoms (Dubois, Burk-braxton, Swenson, Tevendale, & Hardesty, 2002; Szalacha et al., 2003). Experiences with racial discrimination strongly predicted violent behavior among Black American adolescents regardless of gender (Caldwell, Kohn-Wood, Schmeelk-Cone, Chavous, & Zimmerman, 2004). In a five-year longitudinal study, Brody et al. (2006) found that increases in perceived discrimination were associated with increased depression and conduct problems in a sample of Black American adolescents.

Academic Performance

Numerous studies have found an inverse relationship between perceived discrimination and academic outcomes (Benner & Graham, 2013; Degarmo & Martinez, 2006; Neblett et al., 2006; Schmader et al., 2001; Thompson & Gregory, 2011; Wong et al., 2003). Longitudinal research with middle school students found that higher reports of perceived discrimination predicted declines in psychological and academic functioning (Benner & Graham, 2013; Berkel et al., 2010; Greene, Way, & Pahl, 2006; Wong et al., 2003). A recent study examining different sources of discrimination experienced by Black, Latino, and Asian American adolescents found that greater perceived discrimination by school personnel was associated with poorer academic performance, while greater perceived discrimination from peers was associated with more psychological maladjustment (Benner & Graham, 2013). Among Black American youth in particular, greater perceived racial discrimination was associated with poorer academic performance (Neblett et al., 2006; Smalls, White, Chavous, & Sellers, 2007; Wong et al., 2003).

The relationship between racial discrimination and academic outcomes may look different for boys and girls (Alfaro, Umaña-Taylor, Gonzales-Backen, Bámaca, & Zeiders, 2009; Chavous, Rivas-Drake, Smalls, Griffin, & Cogburn, 2008). In a study examining school racial discrimination, academic outcomes, and gender differences among Black American students during their transition from 8th grade to high school and during the end of their 11th-grade year, Chavous et al. (2008) found that 8th grade discrimination experiences related to more academic disengagement in the 11th-grade for boys than for girls. These findings are consistent with research suggesting that

disengagement with schooling begins earlier for Black American boys than for their female counterparts (Davis, 2003; Osborne, 1999).

Similarly, in a longitudinal study of Latino American adolescents, perceived discrimination negatively predicted academic motivation for boys but not for girls. This finding suggests that perceived discrimination may also be influenced by gender socialization practices. Alfaro et al. (2009) explain that Latino parents in their sample may have socialized girls to place more importance on their families and boys to place more importance on navigating the world outside the household, thus making boys more susceptible to the influence of contextual factors, such as racial/ethnic discrimination on their academic and psychosocial outcomes.

Individual Differences in Perceived Discrimination

Relative to studies that have examined the consequences of perceived discrimination, few studies have investigated the antecedents or correlates of perceived discrimination (Benner & Graham, 2013). According to Phinney et al. (1998) two theoretical perspectives have been used to study the influence of individual characteristics on perceived discrimination: the *sociocultural* and the *attributional*. The sociocultural perspective focuses on the impact of demographic factors, such as acculturation level, language ability, socioeconomic status (SES), place of birth, age, and gender, as key characteristics in perceived discrimination. In addition to sociocultural factors, an individual's stable personality characteristics may influence whether ambiguous negative experiences, such as those oft-encountered in natural settings, are interpreted as discriminatory (i.e., the attributional perspective).

Sociocultural Perspective

Stigmatized Status

In an experimental study, (Inman & Baron, 1996) examined the influence of cultural stereotypes and personal factors (e.g., race and gender) on perceived discrimination. All participants were more likely to label White-on-Black actions as discriminatory than when the same actions involved Black-on-White, White-on-White, or Black-on-Black discrimination. Thus, classic or prototypical stereotypes affected perceived discrimination. Prototypical expectancies of racist behavior may be based on a history of racism in the US that has perpetuated status differences in our society as well as by media depictions of racist behavior. According to some researchers, these prototypical expectancies of having a stigmatized group status in society place Black Americans at risk for perceiving discrimination and disidentifying with school (Crocker & Major, 1989; Fordham & Ogbu, 1986). A limitation of this perspective is that it assumes that identifying with one's race automatically means identifying with a stigmatized status for Black Americans (Smalls et al., 2007). Most studies fail to account for the varying extents to which Black Americans define themselves in terms of their stigmatized status in society or even in terms of their race (Sellers, Chavous, & Cooke, 1998).

Acculturation/Assimilation

Greater assimilation and greater socioeconomic status have been found to result in fewer reports of perceived discrimination (Aguirre, Saenz, & Hwang, 1989; Floyd & Gramann, 1995). These findings are consistent with Gordon's (1964) ethnic enclosure hypothesis, which states that increased cultural assimilation and increased relative

socioeconomic standing of immigrants result in fewer perceptions of discrimination. According to Gordon's (1964) ethnic enclosure hypothesis, increased assimilation and socioeconomic status are inversely related to perceived discrimination because cultural assimilation is a process whereby minority group members gradually enter into mainstream society, becoming more like majority group members. Aguirre et al. (1989) tested this hypothesis by examining three generations of Mexican Americans using data from the 1979 National Chicano Survey. The study found that perceptions of discrimination against Mexican Americans declined with each successive generation. Floyd and Gramann (1995) also tested the assimilation perspective on intergroup relations by examining education attainment as an indicator of socioeconomic assimilation and Spanish language maintenance as an indicator of cultural assimilation. Their findings were consistent with the assimilationist perspective, with greater education and lower Spanish competency associated with fewer reports of perceived discrimination. Other studies, however, found that greater assimilation and socioeconomic status resulted in greater perceived discrimination (Portes, Parker, & Cobas, 1980; Portes, 1984). According to this ethnic competition perspective, increased assimilation is positively related to perceived discrimination because greater familiarity with the dominant culture leads to heightened consciousness about the realities of discrimination in society.

Socioeconomic Status

The assimilationist perspective of intergroup relations suggests that greater socioeconomic status would be associated with fewer reports of perceived discrimination because greater socioeconomic status grants minority groups membership into the mainstream society (Floyd & Gramann, 1995). Kessler et al. (1999), however, found a

weak relationship between socioeconomic status and perceived discrimination. Phinney et al. (1998) only found an indirect relationship between socioeconomic status and perceived discrimination: the higher the parents' socioeconomic status, the more competent the adolescents felt at socializing with people of other backgrounds. Intergroup competence reduced the likelihood of the youths' reporting experiences of racial/ethnic discrimination.

Gender

The findings are inconsistent with regard to gender differences in perceiving discrimination. In one experimental study of college students, women and Black participants were more likely than men and White participants to perceive discrimination (Inman & Baron, 1996). The "sensitive victim" hypothesis was applicable in this case: Participants who belonged to traditionally stigmatized groups (i.e., Blacks and women) may find the issue of prejudice to be more central and accessible and thus be particularly sensitive to identifying potential discrimination (Pearson, Turner, & West, 1995).

Several studies found no difference between men and women in perceived discrimination (Outten, Giguere, Schmitt, & Lalonde, 2010; Phinney et al., 1998; Verkuyten & Nekuee, 1999). In a study of Black and White Canadian adults, Outten et al. (2010) found that although women made slightly higher attributions to racial discrimination than men did, there were no significant interactions between gender and the factors of interest. Among Iranian adult refugees in the Netherlands, gender again showed no significant interactions (Verkuyten & Nekuee, 1999). Finally, a study in the United States of school-aged immigrants and American-born children of immigrants also

found no significant relationships between gender and perceived discrimination (Phinney et al., 1998).

Contrary to the above findings, several correlational studies focusing on students' experiences in educational settings suggest that males may perceive greater racial discrimination than females (Cassidy, O'Connor, Howe, & Warden, 2005; Sellers & Shelton, 2003; Verkuyten & Thijs, 2002). Cassidy and colleagues (2005) found this to be the case among a sample of ethnically diverse Scottish adolescents aged 14-21. Verkuyten & Thijs (2002) found similar results in a sample of ethnically diverse children aged 10-13 in the Netherlands with respect to perceived personal discrimination, but found no gender differences with respect to perceived *group* discrimination (Cassidy et al., 2005). Similar findings were reported in studies of Black students in the United States. Black American adolescent boys in a community-based longitudinal study reported far more racial discrimination in both peer and classroom domains than girls did (Chavous et al., 2008). Among a sample of Black American first-year college students attending predominantly White universities in the United States, males were again more likely to perceive racial discrimination than females were (Sellers & Shelton, 2003). According to Sellers and Shelton (2003), this finding is unsurprising and consistent with society's gendered stereotypes of Black Americans that focus primarily on men.

Age and Cognitive Development

Age and cognitive development may play a role in perceived discrimination. With the development of formal operational thought, adolescents are able to reflect on how their racial group is evaluated by society and anticipate future discrimination (Inhelder & Piaget, 1958). As children reach adolescence and have more contact with

mainstream culture while navigating public spaces on their own, they may have more exposure to discrimination (Greene et al., 2006; Phinney & Chavira, 1995). Adults may perceive adolescents of color, and especially boys, as increasingly threatening (Tatum, 1997). Finally, both cross-sectional and longitudinal research supports the theory that perceived discrimination increases with age (Fisher et al., 2000; Greene et al., 2006; Romero & Roberts, 1998; L. Szalacha et al., 2003a). Black youth in particular perceive more discrimination as they get older (Quintana, 1998). Compared to other racial groups, Black American youth may experience the steepest increase in perceived discrimination from adults as they get older (Greene et al., 2006).

Attributional Perspective

Instances of discrimination are often ambiguous, and it can be difficult to determine whether discrimination has occurred despite the real physical, social, and psychological consequences that discrimination has for individuals (Dion, 2003). Perceiving discrimination requires complex attributional processes (Szalacha et al., 2003). According to Lazarus and Folkman (1985), two psychological factors determine the attributions that individuals make for events under conditions of ambiguity: *beliefs* and *dispositions*. Beliefs are personally formed schemas about the configuration of the environment. Dispositions are stable personality characteristics of an individual. In situations characterized by high ambiguity, an individual's schemas and personality characteristics may influence perceptions of discrimination (Phinney et al., 1998, p. 938).

Personality Characteristics

Phinney et al. (1998) conducted an exploratory study to examine the individual psychological characteristics that predict perceived discrimination in natural settings

among a sample of Armenian, Mexican, and Vietnamese adolescents in the United States. They found that, although perceived discrimination was generally low, stable personality characteristics, especially sense of mastery and self-esteem, influenced adolescents' perceptions of discrimination more than demographic or sociocultural factors did. Sense of mastery and higher self-esteem had a negative effect on perceived discrimination, while sociocultural characteristics (i.e., ethnicity, gender, socioeconomic status, and birthplace) had no direct effect on perceived discrimination (Phinney et al., 1998). These findings suggest that in non-experimental contexts, individual personality differences may play an important role in perceptions of discrimination.

Depression and anxiety. Several correlational studies found a significant relationship between perceived discrimination and depression and anxiety (Kobrynowicz & Branscombe, 1997; Phinney et al., 1998). In a sample of ethnic minority students in the United States, Phinney et al. (1998) found that the students who reported more depression/anxiety also perceived more discrimination. Because the study was correlational, however, it is not possible to ascertain the direction of the effect. In other words, it is possible that increased discrimination led to more depression/anxiety and vice versa. It is also possible that there is a bidirectional effect. In a study examining perceived gender discrimination among White American college students, depression was related to perceived discrimination for women but not for men (Kobrynowicz & Branscombe, 1997). In an ethnically diverse group of Scottish adolescents, (Cassidy et al., 2005) found that anxiety had a stronger relationship with perceived discrimination than depression did. Depression, low self-esteem, and the need for approval predicted anxiety, which in turn related to higher perceived discrimination. According to Cassidy

et al. (2005) this finding is consistent with Beck's (1976) theory that anxiety is associated with thoughts focused on danger and future threat, whereas depression is instead associated with themes of loss and personal deficiency.

Adolescents with a sense of mastery felt more competent in socializing with people of other ethnic groups and in turn reported less discrimination. Adolescents with higher self-esteem had less depression and in turn perceived less discrimination. It is important to note that with cross-sectional studies, the question of causality and directionality cannot be resolved.

Self-esteem & sense of control. In experimental studies, perceived discrimination was related to higher self-esteem (Crocker, Cornwell, & Major, 1993; Crocker & Major, 1989). Empirical literature on social stigma fails to support the idea that prejudice against members of stigmatized groups results in lowered self-esteem for members of those groups (see Crocker & Major, 1989, for a review). In fact, attributing negative outcomes to arbitrary discrimination on the part of others may serve a valuable function of protecting one's self-concept (Crocker et al., 1993; Crocker & Major, 1989). It is important to note, however, that the degree of *ambiguity* in a situation can influence the attributions made to discrimination. For example, in experimental conditions where there was relatively little ambiguity that discrimination played a role in negative outcomes (i.e., conditions where Black students received negative feedback from evaluators who could see them rather than being blind to their race), events were more often attributed to discrimination and self-esteem was preserved (Crocker, Voelkl, Testa, & Major, 1991; Ruggiero & Taylor, 1995).

When discrimination is ambiguous, however, as it frequently presents itself in the world outside the laboratory, discrimination may be minimized and negative outcomes attributed to the self (Ruggiero & Taylor, 1995). Perhaps for this reason, several observational studies found that lower self-esteem and sense of mastery were positively related to perceived racial/ethnic, gender-, and age-related discrimination (Hassell & Perrewé, 1993; Phinney et al., 1998; Romero & Roberts, 2003). According to Phinney et al. (1998), subjects with a generally positive view of themselves also tended to have generally positive interpretations of real-world events, and thus were more likely to view negative events as misunderstandings rather than as deliberate discrimination. Denying discrimination may also serve a protective function by placing control over performance outcomes in the subject's own hands (Ruggiero & Taylor, 1997).

Need for social approval. In a study examining perceptions of gender discrimination, female U.S. college students with a high need for social approval were less likely to see or report personal discrimination, perhaps because they feared social censure (Kobrynowicz & Branscombe, 1997). Cassidy et al. (2005) found a different relationship in their UK sample of ethnic minority youth. High need for approval was positively related to perceived discrimination through its effect on anxiety.

Racial Identity Processes

According to Sellers et al. (1998), *racial identity* is defined as the “significance and qualitative meaning that individuals attribute to their membership within the Black racial group within their self-concepts” (p. 23). Much of the research on perceived discrimination treats racial identity as a unidimensional construct. Sellers et al. (1998), however, argues that Black American racial identity is a multidimensional construct that

consists of the qualitative meaning of being Black American beyond what many studies regard as “group identification” (Sellers, Smith, et al., 1998). For example, it is possible for two people to be equally highly identified with their group but have very distinct ideologies about what it means to be a member of that group (Sellers & Shelton, 2003). They can also have different feelings about their group and different beliefs regarding how others feel about their group (Sellers & Shelton, 2003).

Racial centrality, the most commonly studied dimension of racial identity, refers to the significance component of racial identity or the extent to which individuals define themselves in terms of their race. Racial centrality is particularly relevant during adolescence as race becomes more salient for youth (Thompson & Gregory, 2011). Many studies examining the significance of racial identity employ the term “group identification” rather than “racial centrality.” Overall, the literature suggests that there is a positive relationship between identifying with one’s group and attributing negative outcomes to perceived discrimination (Branscombe et al., 1999; Crocker & Major, 1989; Major, Quinton, & McCoy, 2002; Operario & Fiske, 2001; Shelton & Sellers, 2000). Two experimental studies examining Black and other racial minority undergraduate students demonstrated that in situations where the cues to discrimination are ambiguous, highly identified students (i.e., those with high racial centrality) were more likely to suspect bias or racial discrimination than low-identifiers (Operario & Fiske, 2001, Study 2; Shelton & Sellers, 2000, Study 2). Experimental research also suggests that increased group identification is both an outcome of and an antecedent to perceived discrimination (Branscombe et al., 1999; Major, Quinton, & Schmader, 2003). Branscombe et al. (1999) tested for a possible bidirectional relationship and found greater support for the notion

that perceived discrimination or attributional patterns influence ethnic identification. According to Branscombe et al.'s (1999) rejection-identification model, when discrimination is perceived as pervasive and stable individuals are more likely to identify with their in-group in order to protect their self-esteem. A weakness of this study, noted by Sellers and Shelton (2003), was that the identification measures more closely resembled private regard, or combined regard with centrality, thus raising some questions about what was the mediator. There is likely a "cyclical relationship" between group identification and perceived discrimination (Sellers & Shelton, 2003). In other words, racial identity may influence perceptions of discrimination, and experiences of discrimination may also strengthen racial identity.

Finally, some studies found no relationship or an inverse relationship between racial/ethnic group identification and perceived discrimination (Cassidy et al., 2005; Phinney et al., 1998). This finding might be attributable to the fact that Phinney et al.'s (1998) ethnic identity measure was a shortened (four-item) version of a longer measure, and although the measure was reliable, it may not have captured the complexity of the concept. Verkuyten (1998) also suggests that Phinney et al.'s and Cassidy et al.'s findings are not surprising because they measured perceived discrimination at the personal, rather than group, level. According to Verkuyten (1998), people are more likely to report higher levels of group discrimination than personal discrimination. Perceiving racism to be directed at oneself as an individual member of a group is not the same as perceiving discrimination directed at other members of one's group (Verkuyten & Thijs, 2002). Finally, neither Phinney et al.'s (1998) study nor Cassidy et al.'s (2005) study included Black youth in their samples of ethnic minority adolescents. Similarly, in Romero and

Roberts' (2003) study of Mexican American youth, ethnic affirmation and ethnic exploration were negatively associated with perceived discrimination, contrary to Branscombe et al.'s (1999) rejection-identification model. These findings imply that the relation between discrimination and racial/ethnic identity may vary for different racial/ethnic and age groups.

Racial ideology and *racial regard* refer to the qualitative meaning of racial identity. Outten et al. (2010) conceptualized public regard and the racial ideologies as beliefs about the *distinctiveness* of the Black experience within society. At least four racial ideologies capture Black Americans' views on what it means to be a member of their racial group and beliefs about the way Blacks should live and interact with the rest of society. They differ in terms of perceived distinctiveness of the Black experience (Sellers, Smith, et al., 1998): 1) Nationalist ideology stresses the uniqueness of being of African descent, compared to the rest of society; 2) Oppressed minority ideology stresses the similarities between Black Americans and other oppressed groups, while stressing the distinctiveness of the minority experience compared with mainstream; 3) Assimilationist ideology stresses the similarities between Blacks and American mainstream society; 4) Humanist ideology stresses the commonalities of all humans. In addition, endorsing a nationalist racial ideology predicted more perceived discrimination over the span of a year (Lalonde, Jones, & Stroink, 2008; Outten et al., 2010; Sellers & Shelton, 2003). Individuals who endorsed assimilationist and humanist racial ideologies perceived less racial discrimination (Outten et al., 2010).

According to Sellers et al. (2006), *racial regard* has public and private components. Black Americans vary in their affective and evaluative judgments of their

racial group (*private regard*), and in their beliefs about others' affective and evaluative judgments of Black Americans (*public regard*). Private regard refers to the extent to which individuals feel positively or negatively toward members of their racial group and about their own membership in that group, whereas public regard refers to the extent to which individuals feel that the broader society views their race positively or negatively (Sellers et al., 2006).

Studies have found a relationship between low public regard and perceived discrimination. When Black Canadians were presented with attributionally ambiguous intergroup scenarios, low public regard, or the belief that Blacks are viewed negatively by society, was positively associated with greater attributions to discrimination, but private regard was not significantly related (Outten et al., 2010). This relationship was only found when the subjects were exposed to intergroup contexts, consistent with Sellers et al.'s (1998) view that regard should have a greater influence on attributions in situations when individuals are more likely to categorize based on race. Sellers et al. (2006) obtained similar findings among a sample of Black American adolescents. Those who held low public regard beliefs were at greater risk of experiencing racial discrimination, possibly as a function of heightened sensitivity to racial cues and/or as a function of the way they were treated by members of other racial groups. Finally, a study of Black American college students found that racial regard moderated the relationship between perceived discrimination and subsequent distress (Sellers & Shelton, 2003).

Racial Identity as a Buffer Against the Effects of Perceived Discrimination

Overall, the growing body of evidence on the relationship between racial identity and psychological outcomes suggests that a more salient racial identity may serve a

protective function. In other words, although racial centrality is a risk factor for perceiving racial discrimination, it may also buffer against the psychological distress of experiencing racial discrimination (Sellers, Caldwell, Schmeelk-Cone, & Zimmerman, 2003). Neblett, Shelton, and Sellers (2004) found that low racial centrality predicted more stress, depressive symptoms, and anxiety as a response to daily racial hassles, whereas those who reported high racial centrality were unaffected. Sellers, Caldwell, Schmeelk-Cone, and Zimmerman (2003) found that discrimination predicted stress, which, in turn, predicted psychological distress, but only for individuals with low and medium centrality.

Studies also suggest that other dimensions of racial identity may moderate the association between racial discrimination and psychological adjustment. Sellers and Shelton (2003) found that public regard and nationalist ideology attenuated the relationship between perceived discrimination and psychological distress. Burrow and Ong (2010) and White-Johnson (2012) found that private regard protected against psychological maladjustment.

A few studies also found evidence for racial identity as a buffer against the risk for engaging in violent behaviors among males. Although experiences with racial discrimination strongly predicted violent behavior regardless of gender in Caldwell et al.'s (2004) sample of Black American adolescents, the buffering effect of racial identity was found to be particularly relevant for males. Racial centrality moderated the relationship between perceived discrimination and violent behavior for males but not for females in this sample (Caldwell et al., 2004). In other words, for Black American young

adult males who experienced discrimination, low racial centrality was associated with engagement in more types of violent behaviors.

With regard to academic outcomes, it remains unclear whether racial identity serves a protective function. One study of Black American college students found a positive association between racial centrality and academic self-concept and intrinsic motivation for females but not for males (Cokley, 2001). Another study found that centrality was positively associated with academic self-concept and academic importance for boys but not for girls in a sample of Black American students during their transition from 8th grade to high school and during the end of their 11th-grade year (Chavous et al., 2008). Thus, racial identity may have different buffering effects for Black American males and females. Finally, Thompson and Gregory (2011) in their study of American high school students found that, contrary to the above findings, racial centrality did not significantly predict student academic engagement. Although racial centrality may serve a protective function in the social domain, it may be too distal to have an impact on classroom behavior (Thompson & Gregory, 2011).

Contextual Precursors of Perceived Discrimination

Little is known about the contextual correlates of perceived discrimination among youth despite the significance of context on a variety of developmental outcomes. Ogbu (2008) argues that involuntary minority groups may develop oppositional identities in educational settings if they perceive that their efforts are unlikely to pay off within a racist society. In experimental studies, Steele (1997) found that Black-American youth are likely to underperform on tests if they perceive that testers hold race-based stereotypes. Finally, Verkuyten and Brug (2003) found that perceived discrimination

among ethnicity minority youth in The Netherlands is positively related to disengagement from school.

Source of Discrimination

Correlates of perceived discrimination may be different depending on the source of discrimination (adult vs. peers) but few studies have explored this distinction. Perceived discrimination has also been shown to vary as a function of different sources of discrimination for adolescents of different racial backgrounds. Black and Latino American adolescents reported more frequent institutional discrimination (Fisher et al., 2000; Rosenbloom & Way, 2004; Sellers & Shelton, 2003) compared to Asian American students. Asian American adolescents reported higher levels of peer discrimination compared with other adolescents (Fisher et al., 2000; Rosenbloom & Way, 2004). Greene et al. (2006) examined the trajectories of perceived ethnic/racial discrimination by adults and peers and how these trajectories are associated with change over time in psychological adjustment from middle to late adolescence among a sample of Black American, Latin American, and Asian American high school students. Perceived discrimination by adults showed a linear increase over time. Perceived discrimination by peers remained stable over time. Black American adolescents reported the steepest increase over time in levels of perceived discrimination by peers and adults.

Racial/Ethnic Composition of Schools

The school context, including student and teacher diversity, can influence the formation of in-groups and out-groups, as well as perceptions of racial discrimination among students. Overall, ethnic minority youth report more perceived discrimination in ethnically diverse schools, when the numerical representation of their own group

declines, and when the diversity of the teaching staff fails to keep pace with shifting demographics (Benner & Graham, 2011; Seaton & Yip, 2009). These findings are consistent with the idea that adolescents of color are exposed to more discrimination as they have increasing contact with members of other groups (Greene et al., 2006). Verkuyten and Thijs (2002) found that Turkish and Moroccan children reported more incidences of racism when there was a higher proportion of Dutch children in their classrooms. Jackson et al. (2006) found that compared to White American children, Black American children received more favorable peer nominations as a function of increased representation within their classroom and as a function of their teacher's race. Although the effect of teacher's race was weaker, Black children received more favorable nominations when their classrooms were headed by Black as opposed to White teachers (Jackson et al., 2006). Bellmore et al. (2012) found that individual (subjective) student perceptions of numerical ethnic majority status and of school interracial climate, as well as objective measures of school ethnic composition, were related to perceived peer discrimination. Benner and Graham (2013) note that a challenge of school diversity is that as diversity increases, a student's same-ethnic representation is likely to be lower, and having few same-ethnic peers can make one's outgroup status more salient (Benner & Graham, 2013; Linn et al., 2007).

Racial/Ethnic Composition of Neighborhoods

Two studies examining Black American families living in Iowa and Georgia showed that adolescents perceived more discrimination as neighborhood diversity increased (Martin et al., 2011; Stewart, Baumer, Brunson, & Simons, 2009). Martin et al. (2011) found that racial isolation in 1990, based on the percentage of Black individuals

living in a particular neighborhood, had a negative effect on perceived discrimination in 1997. Similarly, Stewart et al. (2009) found that Black adolescents reported more police discrimination in neighborhoods characterized by a larger proportion of white residents, higher levels of affluence, and higher rates of violence.

In contrast, Benner and Graham (2013) found that as the number of Black American and Latin American residents in their neighborhoods increased, adolescents reported seeing more signs of racism. In other words, adolescents perceived more discrimination as neighborhood diversity decreased (more minority concentration). This finding was consistent with research suggesting that neighborhoods with high concentrations of minorities are perceived as more threatening and disorderly (Sampson & Raudenbush, 2004). Similar findings were reported in Seaton and Yip's (2009) study—in neighborhoods with lower percentages of Black Americans, high school students reported fewer perceptions of racial discrimination.

School Climate

Benner and Graham (2013) examined the contextual school and neighborhood precursors of discrimination, as well as their developmental outcomes, in a sample of Black American, Latin American, and Asian American students attending public high schools in Los Angeles. Less school diversity was related to more positive perceptions of the school racial climate. Negative views of school climate were predictive of perceived discriminatory treatment by school personnel, peers, and social institutions. Negative school and peer racial climate was a mediator in the school diversity-discrimination pathway. In other words, it was not the school or neighborhood racial composition per se that impacted discrimination but rather the more negative racial climate found in more

diverse schools and neighborhoods and in settings with greater concentrations of Black and Latino American residents (Benner & Graham, 2013).

In a related finding, Stone and Han (2005) found that perceptions of poor school quality, which captured the overall quality of the teaching environment, were associated with greater perceptions of discrimination in a sample of Mexican American students in San Diego. Prior self-esteem and parents' perceptions of neighborhood discrimination were also positively related to students' perceptions of discrimination. Their findings were specific to Mexican-origin youth, and it is unclear how their results may generalize to other minority youth.

Verkuyten and Thijs (2002) found that ethnic minority primary school children in the Netherlands were more often victims of racist name-calling and social exclusion than were Dutch children. These findings, however, were moderated by children's perceptions of the teacher's reactions to racial harassment and by perceptions of multicultural education (Verkuyten & Thijs, 2002). For example, in all ethnic groups, fewer children reported experiences with racist bullying when they believed that they could tell their teacher about it and that the teacher would react. In addition, receiving multicultural education was positively related to reported experiences with racist victimization, but this effect was only found for the Dutch children (Verkuyten & Thijs, 2002). This finding highlights the significance of contextual influences on perceived discrimination.

Class/School Size

School size may account for some of the variability in racial bullying/victimization (peer racial discrimination) across schools. Citing a need for further research in this area, Larochette et al. (2010) hypothesized that smaller schools might allow for more interaction between students from different racial in-groups, thus increasing opportunities for racial bullying and victimization to occur. Sellers and Shelton (2003) found that undergraduate students in a large Midwestern institution reported being significantly less bothered by perceived discrimination than individuals at a medium-sized Southeast university (Sellers & Shelton, 2003). Continued research is needed in this area to examine which school context features can protect against perceived experiences of discrimination.

Student and School Correlates of Perceived Discrimination

Much of the literature on correlates of perceived discrimination among racial minority adolescents focuses on individual psychological processes, including demographic factors (Phinney et al., 1998; Romero & Roberts, 1998; Sellers & Shelton, 2003; Szalacha et al., 2003), personality characteristics (Phinney et al., 1998; Szalacha et al., 2003), and racial identity (Sellers & Shelton, 2003), or they have focused on contextual features, such as school size and composition. Few studies have investigated the influence of both individual characteristics and environmental factors, such as structural school characteristics, on student perceptions of discrimination.

Stone and Han (2005) examined whether student factors (e.g., ethnic identity, self-esteem, depression, etc.) and school factors (e.g., school quality, interracial harmony) predicted perceptions of discrimination among Mexican-origin eighth and ninth graders

in San Diego. They found that perceptions of poor school quality were significantly and positively related to perceptions of discrimination and school performance. The findings were specific to Mexican-origin youth, and it is unclear how the results may generalize to other minority youth.

In an experimental study examining the relationship between racial identity processes and intergroup vs. intragroup contexts among Black Canadian undergraduate and graduate students, Outten et al. (2010) found that low public regard and nationalist ideology were associated with greater perceived discrimination in both intergroup and intragroup conditions. Assimilationist and humanist ideologies were associated with less perceived discrimination. When the target and perpetrator were members of the same racial group (intragroup contexts), only racial centrality predicted perceived discrimination. In contrast, several significant correlations were found between racial identity beliefs and perceived discrimination in the intergroup contexts. It is important to note the differences in race relations between Canada and the United States. Slavery did not play as significant role in the economic development of Canada as the United States. In addition, the composition of Black individuals in Canada is more heterogeneous and generally comprised of first- or second-generation immigrants.

Overall, the research on perceived discrimination is characterized by a dearth of studies examining the influence of both individual and structural school factors on student perceptions of discrimination. Individual factors such as racial identity status, gender, age, and personality characteristics have been shown to be significantly predictive of perceived discrimination (Phinney et al., 1998; Sellers et al., 1998; Cassidy et al., 2005; Verkuyten & Thijs, 2001; Sellers & Shelton, 2003; Chavous et al., 2008;

Larochette et al., 2010). In addition, schools, as places where students spend increasingly large amounts of time as they enter adolescence and as frequent sites of intergroup contact, warrant closer investigation. Relatively little is known about the relationship between student perceptions of daily racial hassles and the racial composition, enrollment size, and academic performance of the schools attended. Even less is known about how individual differences in students (i.e., significance of racial identity) interact with structural school characteristics to influence perceptions of discrimination.

The Current Study

Purpose

The current study extended the literature by examining the role of school variables (i.e., racial/ethnic composition, enrollment size, and academic performance based on PSSA scores) as predictors of perceived daily discrimination experiences, defined as interpersonal hassles related to race. A community sample of Black American middle school students who participated in the Adolescent Cognition and Emotion (ACE) Project and completed both The Daily Life Experience (DLE) Scale and The Multidimensional Inventory of Black Identity-teen (MIBI-t) were included in the study. The moderating effect of racial identity was also examined. Exploring the combined impact of individual student racial identity and structural school factors in predicting student perceptions of discrimination may enhance prevention and intervention programs at both the individual and institutional level.

Research Questions

Question 1. Does school racial/ethnic composition predict Black American students' perceptions of discrimination?

Hypothesis 1. It was hypothesized that Black American students in schools with a high percentage of non-Black students would be more likely to perceive discrimination.

Rationale for Hypothesis 1. Overall, previous research evaluating the relationship between school racial composition and perceived discrimination indicates that higher levels of racial diversity in schools are associated with greater perceptions of discrimination (Bellmore et al., 2012; Benner & Graham, 2011; Seaton & Yip, 2009; Verkuyten & Thijs, 2002). This study extended the literature on this topic by examining the relationship between school racial composition and individual student perceptions of daily racial hassles, which have been shown to have an even greater impact on psychological and somatic outcomes compared to major life events (DeLongis et al., 1982; Kanner et al., 1981; Lazarus and Folkman., 1985). For Black students attending schools with lower proportions of Black students, race is likely a particularly salient aspect of identity. It was hypothesized that whenever race is salient, individuals are in a better position to perceive racial discrimination.

Question 2. Does racial centrality moderate the relationship between school racial composition and Black American students' perceptions of discrimination?

Hypothesis 2. The relationship between increased percentage of non-Black students in school attended and higher perceived discrimination was expected to be stronger and more salient among students with high racial centrality.

Rationale for Hypothesis 2. Overall, research examining the relationship between racial centrality and perceived discrimination indicates that the more racial minorities define themselves in terms of their race, the more likely they are to attribute negative outcomes to perceived discrimination, particularly when the discrimination cues are ambiguous (Crocker & Major, 1989; Major et al., 2002; Operario & Fiske, 2001, Study 2; Shelton & Sellers, 2000, Study 2). Although some studies focusing specifically on racial minority adolescents found no relationship or an inverse relationship between racial centrality and perceived discrimination, these studies were limited by a lack of Black youth in their samples, insufficient assessment of racial/ethnic identity, or failure to consider the influence of racial context (i.e., attending a racially heterogeneous or homogeneous school) (Cassidy et al., 2005; Phinney et al., 1998; Romero & Roberts, 2003; Seaton, Yip, & Sellers, 2009). This study further clarified and extended the research on this topic by investigating the impact of racial centrality on Black adolescents' perceptions of discrimination and the racial composition of schools attended.

Question 3. Does private regard moderate the relationship between school racial composition and Black American students' perceptions of discrimination?

Hypothesis 3. One study found that greater private regard among Black doctoral students was related to decreased perceptions of discrimination (Burrow & Ong, 2010). However, other studies found no relationship between private regard and perceived discrimination (Outten et al., 2010; Sellers et al., 2006; Sellers & Shelton, 2003). Based on these inconclusive findings and the fact that no study to date has examined the moderating role of private regard on Black adolescents' perceptions of discrimination and the racial composition of schools attended, this hypothesis was exploratory.

Question 4. Does public regard moderate the relationship between school racial composition and Black American students' perceptions of discrimination?

Hypothesis 4. The relationship between increased percentage of non-Black students in school attended and higher perceived discrimination was expected to be stronger and more salient among students with low public regard.

Rationale for Hypothesis 4. Previous research examining the relationship between public regard and perceived discrimination suggests that low public regard, or the belief that Blacks are viewed negatively by society, is positively associated with greater attributions to discrimination (Outten et al., 2010; Sellers et al., 2006). However, this relationship was only found when the subjects were exposed to intergroup contexts (Outten et al., 2010). In other words, public regard influenced perceived discrimination when individuals were more likely to categorize themselves and others based on race (Outten et al., 2010; Sellers et al., 1998). This study extended the current literature on this topic by examining public regard within the context of schools with varying levels of diversity. Specifically, this study investigated the extent to which public regard impacts the relationship between Black students' perceptions of discrimination and the racial composition of schools attended.

Question 5. Does gender influence the frequency and bothersomeness of perceived racial discrimination for Black American students?

Hypothesis 5. It was hypothesized that relative to their female counterparts, boys in our sample would be more likely to perceive discrimination and indicate that the experience of discrimination was more bothersome for them.

Rationale for Hypothesis 5. Research examining gender differences in perceived discrimination has produced mixed results. However, research examining the relationship between gender and perceived discrimination specifically in educational settings suggests that males may perceive greater racial discrimination than females (Cassidy et al., 2005; Chavous et al., 2008; Sellers & Shelton, 2003; Verkuyten & Thijs, 2002). This study sought to replicate these findings by investigating the influence of gender on the perceived racial discrimination reported by school-aged adolescents. Research investigating the relationship between racial discrimination and the health outcomes of Black adolescents suggests a clear positive relationship between perceived discrimination and negative outcomes, including increased depression and conduct problems (Brody et al., 2006). Based on this relationship, it was hypothesized that adolescent males, who were predicted to report more frequent instances of racial discrimination than the females in our sample, would also report that the experiences were more bothersome for them.

Question 6. Does school quality (as measured based on average PSSA scores) predict Black American students' perceptions of discrimination?

Hypothesis 6. Because no study to date has examined the relationship between perceptions of discrimination and standardized test performance levels, hypothesis 6 was exploratory. However, based on Stone and Han's (2005) finding that perceptions of poor school quality were positively related to perceptions of discrimination among Mexican-origin youth, it was expected that lower PSSA scores would be correlated with and predictive of perceived discrimination.

Question 7. Does school size predict Black American students' perceptions of discrimination?

Rationale for Hypothesis 7. Larochette et al. (2010) cites school size as a variable that deserves further investigation because it may account for the variation in racial conflict across schools. Because limited research exists examining the relationship between school enrollment size and perceived discrimination, this hypothesis was exploratory. In one study of undergraduate students, Sellers and Shelton (2003) found that students attending a large Midwestern institution reported being less bothered by perceived discrimination than individuals at a medium-sized Southeast university. This study extended the research on this topic by examining whether differences in school enrollment size were related to differences in perceived discrimination.

CHAPTER 3

METHODOLOGY

Overview of Project ACE

Participants for this study were recruited as part of a larger study conducted through the Adolescent Cognition and Emotion (ACE) Project, a NIMH-funded study investigating the surge in depression during early adolescents. The emergence of gender differences in depression and the generality to Black American youth were also examined in this study. Project ACE employs a large-scale prospective, longitudinal study of 600 12-13 year old community youth and has obtained Temple University Institutional Review Board approval.

Participants

Project ACE

Project ACE recruited 12- or 13-year-old adolescents, who self-identified as Caucasian American/White, African American/Black or Biracial, from Philadelphia-area public and private middle schools. Participants were recruited through school mailings and follow-up calls inviting participation and through advertisements placed in local newspapers. Exclusionary criteria included: (a) the absence of a mother or female primary caretaker available to participate; (b) either the caretaker or adolescent had an intellectual disability, severe learning disability or other cognitive impairment, a severe developmental disorder, was psychotic, or exhibited any other medical or psychiatric problem that would prevent either of them from being able to complete the study measures; and (c) either the caretaker or adolescent was unable to read or speak English, and thus unable to complete the study measures.

The sample for the current study included approximately 200 African American/Black adolescents who enrolled in Project ACE at approximately 12 years of age who completed assessments at two separate time points spaced 6 months apart. Data from all African American/Black students for whom school-level data were available were included in the analyses.

Measures

Demographic Information

Parent self-report questionnaires were used to collect demographic information, including the parents' years of education, family income, child eligibility for school lunch, and the race/ethnicity of their child.

School Characteristics

Publically available information about each school that each Project ACE participant attended was retrieved from the school district website. School level variables were: total student enrollment, racial/ethnic composition, the percentage of economically disadvantaged students, attendance rates, attrition rates, total suspensions, rate of serious incidents (i.e., related to assaults, drugs, weapons, and theft), average PSSA Math and Reading scores for the 6-8th grade, and results from the student and teacher survey reports (i.e., leadership, academic engagement, parent/teacher relationships, and safety).

The Daily Life Experience (DLE) Scale

The Daily Life Experience (DLE) subscale is a self-report measure that was adapted from the Racism and Life Experiences scale (Harrell, 1994). The DLE is a measure of daily incidents of racial discrimination that produces valid scores among Black adolescents and adults (Sellers et al., 2006). On the DLE, participants were asked

to evaluate 18 items that described events that are often considered to be racial microaggressions (e.g., “*Being accused of something, treated suspiciously, or being observed or followed while in public places.*”). Using a 6-point Likert-type scale, respondents were asked to indicate (a) how often the event occurred over the past six months, (b) the extent to which the respondents believe the event occurred because of their race, and (c) the extent to which the respondents believe the event occurred because of their gender. Using a 5-point Likert-type scale, respondents were asked to indicate the extent to which they were bothered by the event. Only scores on frequency and bothersomeness of hassles attributed to race were used in analyses.

The Multidimensional Inventory of Black Identity-teen (MIBI-t)

An abbreviated 9-item version of the Multidimensional Inventory of Black Identity-teen (MIBI-t) was developed and validated in consultation with Dr. Robert Sellers for use with Black American adolescents in the ACE study (Scottham, Sellers, & Nguyễn, 2008). The MIBI-t assesses three stable dimensions of racial identity (i.e., Centrality, Regard, and Ideology) that influence behavior within a situation and remain consistent across situations. The abbreviated version of the MIBI-t used in this study contained three subscales: Centrality, Private Regard, and Public Regard. Each subscale comprised three items. Responses to all items were made on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The Centrality scale measured the degree to which being African American is central to the respondents’ definition of themselves. The Private Regard subscale measured the degree to which respondents have positive feelings towards their own racial group. The Public Regard subscale measured the degree to which respondents feel that other groups have positive feelings towards

African Americans. Higher scores indicated higher centrality and public or private regard.

The MIBI-t has demonstrated evidence of construct validity and external validity within a community sample of 489 Black American early and middle adolescents in a small Midwestern city (Scottham, Sellers, & Nguyễn, 2008). The Cronbach alphas for the MIBI-t subscales all exceeded .70 after inter-item correlations were made for each subscale to calculate the estimated Cronbach alpha if the subscales contained the same number of items as the original MIBI (Scottham et al., 2008): Centrality (.78); Private Regard (.87); and Public Regard (.79),.

Procedure

Student-level data used in this study were collected in the Mood and Cognition Lab at Temple University. Only data from Time 1 and Time 2 were used. The assessments were spaced 6 months apart in a prospective design. The adolescents completed self-report questionnaires evaluating dimensions of their racial identity (MIBI-t) at Time 1 and Time 2. At Time 2, participants completed self-report questionnaires assessing perceived racial hassles that occurred between the Time 1 and Time 2 assessments. Participants were compensated for their participation at each study visit. Publically available school-level data were retrieved from the school district website.

Data Analysis

Analyses were conducted examining the school-level data as a continuous variable. Pearson correlations coefficients were calculated to examine the relationship between various school characteristics (i.e., school racial/ethnic composition, student enrollment, and PSSA scores) and Black students' perceptions of discrimination.

Subsequently, linear regression analyses were conducted to evaluate the predictive relationship between school characteristics and Black students' perceptions of discrimination.

To test the hypothesis that racial centrality moderates the relationship between school racial composition and Black students' perceptions of discrimination, hierarchical linear regressions were conducted. In the first step, school racial composition and student racial centrality were entered. The variables were centered to avoid high multicollinearity. The interaction term between school racial composition and racial centrality were entered in the final step of the regression analysis. The same analyses were conducted to examine the moderating effects of private regard and public regard on the relationship between school racial composition and student perceptions of discrimination.

To examine potential gender differences in the frequency and reported bothersomeness of perceived discrimination, independent samples t-tests were conducted. Specifically, they were used to examine whether perceptions of discrimination, and the degree to which students feel bothered by perceived discrimination, differ for males and females in our sample.

CHAPTER 4

RESULTS

Preliminary Analyses

Missing Data

The initial sample used in the current study consisted of student participants in the Temple Adolescent Cognition and Emotion (ACE) Project who identified as Black and for whom school information was available ($n = 135$). A final sample of 99 participants were available for hypothesis testing after listwise deletion excluded any cases which did not have complete data on both the dependent and independent variables implicated in each hypothesis. For Question 5 only, analyses focused on all participants who completed the Daily Life Experiences (DLE) questionnaire ($n = 202$), regardless of available school data. Relatively few cases (less than 10%) were missing the racial identity variables. Due to this low rate, missing values on the racial identity variables were imputed using the Expectation-Maximization (EM) algorithm (Schafer, 1997). Examination of missing data across all the variables indicated that the data were missing completely at random (MCAR: Little, 1988).

Descriptive Statistics

The descriptive statistics for all variables are reported in Table 1. The data for perceived discrimination, bothersomeness, and school racial composition variables did not meet assumptions of normality applying a cutoff range of -1 to +1 for deviations in skewness and kurtosis (Bulmer, 1979). All other variables were within an acceptable range for assuming a normal distribution. A log transformation was applied to the perceived discrimination, bothersomeness, and school racial composition variables in

order to meet the assumptions of normality. Prior to all regression analyses, the assumptions of regression were examined through visual assessment of scatterplot and other methods. Multivariate outliers were screened using the Mahalanobis distance test.

Table 1. *Descriptive Statistics for Outcome, School, and Racial Identity Variables*

	M	SD	Skew	Kurtosis
<i>Outcome Variables</i>				
Frequency of Racial Hassles	6.44	5.52	1.07	2.62
Bothersomeness	5.41	7.53	1.77	2.52
<i>Student Variables</i>				
Centrality	11.16	2.41	-.58	.20
Private Regard	12.97	2.44	-.92	-.29
Public Regard	8.76	2.55	-.16	-.25
<i>School Variables</i>				
% Non-Black	63.69	20.61	-1.55	1.78
% Proficient in Reading	72.78	16.45	.27	-1.16
% Proficient in Math	76.40	15.27	.00	-1.08
Student Enrollment	910.39	322.27	-.286	-1.39

Pearson correlation coefficients were calculated to evaluate the relationship between school characteristics and the outcome variables of perceived discrimination and bothersomeness. Bivariate correlations between variables are provided in Table 2. A

weak positive correlation was found for the relationship between racial centrality and frequency of racial hassles ($r = .24, p = .001$), and for the relationship between racial centrality and bothersomeness ($r = .17, p = .017$). Enrollment size and bothersomeness of perceived discrimination also had a weak positive correlation that was significant, $r = .29, p = .004$. No other variable was significantly correlated with either frequency of racial hassles or bothersomeness.

Table 2. *Bivariate Correlations Between Outcome, School, and Racial Identity Variables*

Variable	1	2	3	4	5	6	7	8	9
1 Frequency of Race Hassles	-								
2 Bothersomeness	.13	-							
3 Percent Non-Black	.00	.01	-						
4 Enrollment	.20	.29**	.12	-					
5 Reading Proficiency	.20	.19	.34***	.32***	-				
6 Math Proficiency	.19	.15	.44***	.33***	.97***	-			
7 Racial Centrality	.24**	.17*	.05	.02	.12	.12	-		
8 Private Regard	-.03	-.03	-.03	.00	.04	.07	.34	-	
9 Public Regard	-.06	-.12	.16	.03	.02	.04	-.05	.12	-

*** $p < .001$, ** $p < .01$, * $p < .05$

Research Question 1

Linear regression analyses were conducted to predict Black American students' perceptions of discrimination based on their school's racial composition, operationalized as the percentage of non-Black students in schools attended. Using the Mahalanobis distance test, one multivariate outlier was identified and removed from the analyses for a resulting sample size of 98. Model parameters remained unchanged after the outlier was removed and analyses rerun. The relationship between reported frequency of racial hassles and the percentage of non-Black students in schools attended was non-significant ($F(1,97) = .001, p = .97$) with an R^2 of .000.¹ Therefore, the percentage of non-Black students in schools is not a significant predictor of frequency of racial hassles. Findings are reported in Table 3.

Table 3. *Linear Regression for Racial Composition Predicting Perceived Discrimination*

Variable	B	β	p
Percent Non-Black	-.006	-.004	.97

* $p < .05$

Research Question 2

Hierarchical linear regression analyses were conducted to examine whether racial centrality moderates the relationship between school racial composition and Black American students' perceptions of discrimination. Variables were centered in order to

¹ Analyses for Question 1 were rerun using both transformed and untransformed data with no differences in the findings.

avoid problems with multicollinearity with the interaction term (Aiken & West, 1991). Multicollinearity diagnostics indicated that the mean centered data met the assumption of non-collinearity. One multivariate outlier was identified using the Mahalanobis distance test. The outlier was removed and analyses rerun with a sample size of 98. In the first step, two variables were included: Percent of non-Black students and racial centrality. No significant main effects were found for percent non-Black ($\beta = -.01, p = .92$) or for racial centrality ($\beta = .077, p = .45$). In the second step, a school racial composition X racial centrality interaction term was added to the model. Racial centrality did not interact with the percentage of non-Black students in schools ($\beta = -.027, p = .80$) to predict the frequency of racial hassles, suggesting that the relationship between school racial composition and perceived discrimination does not depend on racial centrality. Findings are reported in Table 4.

Table 4. *Regression of Racial Centrality as a Moderator in School Racial Composition and Perceived Discrimination Relationship*

Variables	R ²	R ² Δ	FΔ	B	β	p
Step 1	.006	.006	.285			
Percent Non-Black (centered)				-.015	-.01	.92
Racial Centrality (centered)				.033	.077	.45
Step 2	.007	.001	.065			
Percent Non-Black (centered)				-.018	-.012	.91
Racial Centrality (centered)				.03	.072	.50
Racial Centrality X Percent Non-Black				-.018	-.027	.80

* $p < .05$

Research Question 3

Hierarchical linear regression analyses were conducted to examine whether private regard moderates the relationship between school racial composition and Black American students' perceptions of discrimination. Variables were centered in order to avoid problems with multicollinearity with the interaction term (Aiken & West, 1991). Multicollinearity diagnostics indicated that the mean centered data met the assumption of collinearity. Five multivariate outliers were identified using the Mahalanobis distance test in the original regression model. The outliers were removed and analyses rerun with a sample size of 94. In the first step, two variables were included: Percent of non-Black students and private regard. No significant main effects were found for percent non-Black ($\beta = -.066, p = .52$) or for private regard ($\beta = -.189, p = .07$). In the second step, a school racial composition X private regard interaction term was added to the model. Private regard did not interact with percentage of non-Black students in schools ($\beta = .050, p = .64$) to predict the frequency of racial hassles, suggesting that the relationship between school racial composition and perceived discrimination does not depend on private regard. Findings are reported in Table 5.

Table 5. *Regression of Private Regard as a Moderator in School Racial Composition and Perceived Discrimination*

Relationship

Variables	R ²	R ² Δ	FΔ	B	β	<i>p</i>
Step 1	.038	.038	1.850			
Percent Non-Black (centered)				-.107	-.066	.52
Private Regard (centered)				-.085	-.189	.07
Step 2	.041	.002	.226			
Percent Non-Black (centered)				-.096	-.059	.57
Private Regard (centered)				-.082	-.180	.09
Private Regard X Percent Non-Black				.034	.050	.64

* *p* < .05

Research Question 4

Hierarchical linear regression analyses were conducted to examine whether public regard moderates the relationship between school racial composition and Black American students' perceptions of discrimination. Variables were centered in order to avoid problems with multicollinearity with the interaction term (Aiken & West, 1991). Multicollinearity diagnostics indicated that the mean centered data met the assumption of non-collinearity. Two multivariate outliers were identified using the Mahalanobis distance test in the original regression model. The outliers were removed and analyses rerun with a sample size of 97. In the first step, two variables were included: Percent of non-Black students and public regard. No significant main effects were found for percent non-Black ($\beta = -.024, p = .81$) or for public regard ($\beta = -.054, p = .60$). In the second step, a school racial composition X public regard interaction term was added to the model. Public regard did not interact with percentage of non-Black students in schools ($\beta = -.016, p = .89$) to predict the frequency of racial hassles, suggesting that the relationship between school racial composition and perceived discrimination does not depend on public regard. Findings are reported in Table 6.

Table 6. *Regression of Public Regard as a Moderator in School Racial Composition and Perceived Discrimination*

Relationship

Variables	R ²	R ² Δ	FΔ	B	β	p
Step 1	.004	.004	.176			
Percent Non-Black (centered)				-.037	-.024	.81
Public Regard (centered)				-.022	-.054	.60
Step 2	.004	.000	.020			
Percent Non-Black (centered)				-.037	-.024	.81
Public Regard (centered)				-.025	-.060	.59
Public Regard X Percent Non-Black				-.011	-.016	.89

* $p < .05$

Research Question 5

Independent-samples t tests were conducted to compare male students and female students on the frequency of perceived discrimination and reported bothersomeness. A larger sample size was used to answer Question 5 ($n = 202$) because analyses did not necessitate the exclusive focus on participants for whom school information was available. No significant difference was found on perceived discrimination ($t(200) = 1.23, p = .68$) or bothersomeness ($t(200) = -.98, p = .33$). On reported frequency of racial hassles, the mean of males ($M = 1.71, SD = 1.01$) was not significantly different from that of females ($M = 1.53, SD = 1.01$). Furthermore, the mean of males ($M = 1.23, SD = .98$) was not significantly different from that of females ($M = 1.36, SD = 1.03$) on reported bothersomeness. These results indicate that males and females had no differences in their perceptions of discrimination or reported bothersomeness. Findings are reported in Table 7.

Table 7. Comparison of Perceived Discrimination and Bothersomeness by Gender

	Gender	N	Mean	SD	<i>t</i>	<i>p</i>	95% Confidence Interval
Racial Hassles					1.23	.68	-.11-.45
	Male	98	1.71	1.01			
	Female	104	1.53	1.01			
Bothersomeness					-.98	.33	-.42-.14
	Male	98	1.23	.98			
	Female	104	1.37	1.03			

* $p < .05$

Research Question 6

Linear regression analyses were conducted to predict Black American students' perceptions of discrimination based on school quality, based on PSSA proficiency. An average school performance variable was computed using two variables, Percent Proficient in Math and Percent Proficient in Reading, due to their strong positive correlation ($r(135) = .965, p = .00$).² Prior to analyses, the assumptions of regression were examined through visual assessment of scatterplot and other methods. Multivariate outliers were screened using the Mahalanobis distance test, and none were identified. The relationship between reported frequency of racial hassles and schoolwide PSSA proficiency was not statistically significant ($F(1,97) = 3.534, p = .06$) with an R^2 of .035. Therefore, PSSA proficiency is not a significant predictor of frequency of racial hassles. Findings are reported in Table 8.

Research Question 7

Linear regression analyses were conducted to predict Black American students' perceptions of discrimination based on their school's total student enrollment. Prior to analyses, the assumptions of regression were examined through visual assessment of scatterplot and other methods. Multivariate outliers were screened using the Mahalanobis distance test, and none were identified. The relationship between reported frequency of racial hassles and school enrollment was not statistically significant ($F(1,97) = 1.957, p = .17$) with an R^2 of .02. Therefore, student enrollment is not a significant predictor of frequency of racial hassles. Findings are reported in Table 9.

² Analyses were rerun using percent reading proficiency and percent math proficiency as separate predictor variables. Findings remained unchanged.

Table 8. *Linear Regression for PSSA Proficiency Predicting Perceived Discrimination*

Variable	B	β	p
PSSA Proficiency in Math & Reading	.074	.187	.06

* $p < .05$

Table 9. *Linear Regression for Student Enrollment Predicting Perceived Discrimination*

Variable	B	β	p
School Size Based on Student Enrollment	.003	.141	.17

* $p < .05$

CHAPTER 5

DISCUSSION

The present study focused on Black students and investigated inter-relationships among school factors, student factors, racial identity, and perceptions of daily discrimination experiences (i.e., interpersonal hassles related to race). The data were examined to determine whether school and individual characteristics predicted student perceptions of discrimination, and whether student racial identity processes moderated the relationship between school racial composition and perceived discrimination.

Relationship Between School Characteristics and Perceived Discrimination

It was hypothesized that a significant relationship would exist between perceived discrimination and various school factors, including racial composition, school size (i.e. total student enrollment), and academic quality based on school-wide standardized test scores. Specifically, it was hypothesized that (a) Black American students in schools with a high percentage of non-Black students would be more likely to perceive discrimination (hypothesis 1); (b) lower PSSA scores at the school level would be predictive of perceived discrimination (hypothesis 6); and (c) smaller schools based on total student enrollment would be predictive of perceived discrimination (hypothesis 7). Analyses yielded no support for the aforementioned hypotheses, indicating that none of the school factors investigated in this study predicted perceived discrimination for Black American students.

School Racial Composition as Predictor of Perceived Discrimination

Interestingly, previous research evaluating the relationship between the racial composition of schools and perceived discrimination found an association (small effect)

between greater school diversity and higher perceived discrimination (Benner & Graham, 2013; Seaton & Yip, 2009) or between moderate diversity and higher levels of discrimination (Bellmore et al., 2012). However, these findings were not replicated in the current study. This discrepancy could be explained by a variety of factors, including differences in the measurements of racial composition and perceived discrimination, and differences in the study samples.

Whereas previous studies used an index to assess overall school ethnic diversity, the current study analyzed participants' minority status, defined by the percent of students *not* of the participants' race in a given school. It was hypothesized that Black students attending schools with fewer Black students would have a greater number of experiences in which their racial identity was salient, and furthermore that there would be more perceived racial discrimination under such circumstances. However, Black students' numerical representation in schools was found to be unrelated to perceptions of discrimination in the current study. Contrasting these findings with those of the previous studies, it may be considered that the diversity of other (i.e., non-Black) racial groups composing a school environment may play a significant role in predicting perceptions of discrimination. However, future research is needed to examine this question.

In addition to examining school ethnic diversity, Bellmore et al. (2012) also examined numerical representation and found that both having and perceiving more peers of the same ethnicity predicted lower levels of discrimination. However, the outcome variable in Bellmore et al.'s study was specifically *peer* discrimination, as opposed to daily hassles pertaining to race as in the current study. Furthermore, the sample was a diverse sample of ethnic minority students, rather than Black students only.

Finally, student perceptions of discrimination may be influenced by *perceptions* of racial numerical minority/majority status, rather than actual student counts. For example, perceptions of racial composition in schools have been found to be related to perceived peer discrimination (Bellmore et al., 2012). Along these lines, it may not be a school's racial composition per se that impacts perceived discrimination, but the racial climate. Specifically, racial climate has previously been found to mediate the relationship between racial composition and perceived discrimination (Benner & Graham, 2013).

School Quality and School Size as Predictors of Perceived Discrimination

Very limited research to date has examined the relationship between perceived discrimination and either school-wide standardized test performance or school size (i.e., total student enrollment); therefore, hypotheses 6 and 7 were exploratory. The current study found no relationship between perceived discrimination and PSSA scores or total student enrollment.

Racial Identity as Moderator

When testing the interaction of racial identity processes on the relationship between school racial composition and student perceptions of discrimination (hypotheses 2-4), the results were nonsignificant. These findings were expected given the lack of significant results obtained in the previous analyses investigating the predictive relationship between school factors and perceived discrimination. Interestingly, no significant main effect was found for any of the racial identity statuses, including racial centrality, on perceived discrimination. Some previous studies indicated that racial minorities for whom race is a highly central component of their identity are more likely

to attribute negative outcomes to perceived discrimination, particularly in ambiguous conditions (Operario & Fiske, 2001, Study 2; Shelton & Sellers, 2000, Study 2). However, these studies were experimental in nature and focused on older samples of undergraduate students. The results of the current study were consistent with studies that found no relationship between racial centrality or ethnic identification and perceived discrimination (Cassidy et al., 2005; Phinney et al., 1998; Romero & Roberts, 2003; Seaton & Yip, 2009). Previous studies that found no relationship between racial centrality and perceived discrimination were limited by a lack of Black youth in their samples, insufficient assessment of racial identity, or failure to consider the influence of context. The current study evaluated racial identity as a multidimensional process, as well as school racial context (i.e., the degree to which Black American students were in the numerical minority or majority), and found no effect. One possible explanation for the lack of significant findings, proposed by Seaton et al. (2009) is that perceptions of racial discrimination may be linked to racial identity *development*, not racial identity *content* (i.e., racial centrality and private regard). In other words, racially discriminatory experiences might trigger an exploratory phase, consistent with the nigrescence model of racial identity development (Cross, 1991). At ages 12-13, students in the current sample were in their early adolescence, a developmental period characterized by nascent racial identity construction (Cross, 1991; Tatum, 1997). In the early stages of this process, race may not have particular salience until a destabilizing event, such as a serious encounter with discrimination, activates the complex process of constructing a Black identity (Cross, 1991). While no relationship was found between racial identity status and perceptions of discrimination in the current study, it is possible that the young

participants in the current sample were actively undergoing a process of racial identity construction.

Yet another explanation for this result is that the questionnaire used in this study to assess perceived discrimination may have left little room for ambiguity in the interpretation of discrimination. Experimental studies have found that highly identified individuals were more likely to perceive discrimination in ambiguous situations, whereas low identifiers displayed awareness of discrimination only in unambiguous conditions (Operario & Fiske, 2001; Shelton & Sellers, 2000). The wording of the questionnaire items assessing perceived discrimination may have led the participants to focus on unambiguous situations only (e.g., participants were asked to report how often they were ignored, overlooked, treated rudely or disrespectfully, or not given service because of being Black). The impact of racial centrality may not have been discovered due to the absence of ambiguous situations that only highly identified individuals would have noticed. Findings might have been different with respect to the predictive role of racial identity if participants had been presented with more nuanced situations (e.g., vignette models depicting ambiguously racial scenarios) to assess their perceptions of discrimination.

No significant main effect was found for private regard or public regard. Hypothesis 3 was exploratory given the lack of studies examining the moderating role of private regard on perceived discrimination. Previous research examining the relationship between public regard and perceived discrimination found an inverse relationship (Outten et al., 2010; Sellers et al., 2006). In these studies, participants who believed that other groups hold negative attitudes toward Black Americans perceived greater discrimination.

This finding was not replicated by the current study, which used a younger sample than the previous studies. It is possible that middle school students, who were the focus of the current study, are cognitively less likely to make attributions to discrimination than older students or adults, who are both more cognitively developed and have greater exposure to public contexts where discrimination might occur. Early adolescence, which characterizes the students in the current study, marks the very beginning of formal operational thought, which allows individuals to imagine and reflect on how their racial group may be evaluated by others (Inhelder & Piaget, 1958). In addition, youth of color, and especially Black adolescents, have been shown to experience a steep increase in perceived discrimination as they get older (Brody et al., 2006; Greene et al., 2006).

Gender Differences

Gender differences were also hypothesized to exist in the reported frequency and bothersomeness of perceived discrimination (hypothesis 5). The results of analyses examining gender differences were not significant, indicating that male and female students in our sample reported no differences in their perceptions of discrimination or the degree to which they felt bothered by their perceived discrimination experiences. The finding that boys and girls reported no differences in their perceptions of discrimination is consistent with those obtained in studies of adults (Landrine & Klonoff, 1996). This finding was also consistent with Phinney et al.'s (1998) study, which found no effect of demographic factors, including gender, on perceived discrimination for school-aged ethnic minority children in the United States. On the other hand, psychological variables, such as depression and anxiety and intergroup competence, did have a direct effect on perceived discrimination in Phinney et al.'s (1998) study. However, this finding is

inconsistent with previous research conducted in educational settings suggesting that males and females differ in their perceptions of racial discrimination (Chavous et al., 2008; Sellers & Shelton, 2003; Verkuyten & Thijs, 2002). This discrepancy may be due to the fact that participants in the current study were not asked to report experiences of discrimination specific to their educational settings, but to recall general daily racial hassles irrespective of context.

It was also hypothesized that boys would report that the experience of racial discrimination would be more bothersome for them, based on research suggesting that the relationship between perceived discrimination and increased conduct problems was stronger for boys than for girls (Brody et al., 2006). However, the current study found no gender differences in the reported bothersomeness of perceived discrimination. An explanation for this lack of significant finding is that perceiving discrimination as bothersome may not necessarily be related to adopting aggression as a coping mechanism (i.e., increased conduct problems). Indeed, Brody et al. (2006) also found that there were no gender differences in the link between perceived discrimination and *depression*, suggesting that perceived discriminatory experiences may affect boys and girls similarly.

Limitations

This study has several notable limitations. First, the small sample size may have affected the results. Some of the findings approached statistical significance, which may have been detected using a larger sample. Additionally, the sample utilized in this study consisted of adolescents who were ages 12-13 at baseline; thus, the findings cannot be generalized to students of other ages or different stages of development. As Black American youth in particular experience a steep increase in perceived discrimination as

they get older, as their social networks expand to include a wider range of adults and place them at risk for negative racial interactions (Brody et al., 2006; Greene et al., 2006), the findings of this study should be investigated further using developmentally varied samples of youth.

A third limitation was the particular selection of school factors included in the current study. Objective measures of school racial composition, standardized test performance, and size may contribute differently than subjective perceptions of these factors to perceptions of discrimination. For example, actual school racial compositions may differ from students' perceptions of their racial numerical minority or majority status. Subjective perceptions of school diversity, quality, and interracial climate have been found to be significantly related to student experiences of discrimination in previous research (Bellmore et al., 2012; Stone & Han, 2005). However, the current study did not include any subjective measures of school characteristics.

A fourth limitation pertains to the measurement of racial identity. The Multidimensional Inventory of Black Identity-teen (MIBI-t) used in the current study was an abbreviated version of a longer measure. In addition, although the MIBI-t demonstrated adequate construct validity and internal consistency within a sample of Black American early and middle adolescents in a small Midwestern city (Scottham et al., 2008), it may not have captured the racial identity processes unique to the urban public school students examined in this study. For instance, contextual differences between a small, relatively homogeneous city and a large, racially heterogeneous city may result in differences in the way students conceptualize racial identity, particularly if students experience different levels of interracial contact in their environment.

An additional limitation was that the outcome variable was measured at the *individual* rather than at the *group* level. Because perceiving discrimination directed at oneself may be more difficult than perceiving discrimination directed at other members of one's group, it is possible the findings would have been different if perceptions of cultural racism or discrimination, rather than the perception of individual discrimination had been the outcome variable. In fact, previous studies have shown that perceived group discrimination tends to be higher (Seaton & Yip, 2009; Verkuyten & Thijs, 2002; Verkuyten, 1998).

Lastly, the current study did not distinguish between different sources of discrimination. Studies have found that adolescents perceive differing rates of discrimination from peers and from adults over time; thus, the source of perceived discrimination merits greater attention (Bellmore et al., 2012; Greene et al., 2006).

Future Research

Future studies should include a wider age range of adolescents attending schools from both affluent and low-income districts, both public and independent, to enhance external validity and generalizability. Given the fact that Black American adolescents have been shown to report the steepest increase over time in levels of perceived discrimination (Greene et al., 2006), it would be interesting to compare rates of perceived discrimination across age groups and within the same cohort over time. An older sample of students would also allow for the inclusion of additional school factors of interest, such as the percentage of Black American students enrolled in Advanced Placement courses or engaged in extracurricular activities.

Relatedly, future studies should more closely examine school context as the setting of perceived discrimination. The outcome variable should be expanded to include perceived discrimination experiences perpetrated by peers or by school staff, given the fact that discrimination by adults has been found to increase and discrimination by peers has been found to decline or remain stable for minority youth over time (Bellmore et al., 2012; Greene et al., 2006). Perceived discrimination should also be measured at the individual and at the group level in light of research suggesting that individuals tend to perceive greater discrimination directed at other members of one's group than discrimination directed at oneself (Verkuyten & Thijs, 2002; Verkuyten, 1998). When examining the school factors, additional measures are needed. Racial composition of the study body should be compared to that of the teaching staff, given the potential buffering experience of a diverse teaching staff (Benner & Graham, 2011). Perceptions of racial composition and perceptions of school quality should be measured alongside objective measures of these variables. Finally, the process by which school factors affect perceived discrimination should be examined, as negative school climate has been found to be a mediator in the relationship between school factors and perceived discrimination (Benner & Graham, 2013). Thus, a careful examination of school racial climate should be incorporated into future studies.

Conclusion

Student perceptions of discrimination have been linked to negative academic and social outcomes for adolescents (Neblett et al., 2006; Sanders, 1997; Schmader et al., 2001; Sellers & Shelton, 2003; Thompson & Gregory, 2011; Wong et al., 2003). Despite the increasing significance of schools over time in the ecological world of students, few

studies have explored the relationships between school context and racial identity (Bronfenbrenner, 2005; Grossman & Charmaraman, 2009). The purpose of the current study was to identify individual and school factors that predicted perceived daily discrimination experiences for Black American adolescents. A strength of this study was its inclusion of multidimensional aspects of racial identity in the analyses, an approach that that is often recommended in the discrimination literature but less frequently adhered to in favor of broad classifications of racial group membership (Bellmore et al., 2012; Phinney, 1990).

Overall, the findings of this study suggest that a school's racial composition, size, and academic quality based on standardized test scores have little influence on student perceptions of racial hassles for a sample of early adolescent Black American students attending urban public schools. This study also found no differences between boys and girls in their perceptions of discrimination or the degree to which they feel bothered by discrimination experiences. However, these findings in no way indicate that students do not experience discrimination, or that they do not experience discrimination in their schools. An examination of frequency scores indicated that, on average, participants reported seven days of race-related hassles out of the six-month period. The most frequently experienced event was, "*Being treated as if stupid, being talked down to, having ideas ignored, or not being taken seriously*" (7 days). Although the particular school factors that predict discrimination remain uncertain, the perception of discrimination, such as being talked down to or having one's ideas ignored due to race, may be an issue that permeates multiple different school contexts. Thus, all schools should consider ways to protect Black students against discrimination. Given the

limitations of this study, additional research is needed to further explicate the relationship between school characteristics, student characteristics, and perceived discrimination among Black American youth.

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