Defying the Odds: The Resilience of African American Youth in the Face of Differential Treatment in the Classroom

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DEFYING THE ODDS: THE RESILIENCE OF AFRICAN AMERICAN YOUTH IN THE
FACE OF DIFFERENTIAL TREATMENT IN THE CLASSROOM
by
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B.S. May 2014, Old Dominion University
M.A. May 2016, Old Dominion University
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ABSTRACT

DEFYING THE ODDS: THE RESILIENCE OF AFRICAN AMERICAN YOUTH IN THE FACE OF DIFFERENTIAL TREATMENT IN THE CLASSROOM

Frank R. Wood, Jr.
Old Dominion University, 2020
Director: Dr. Elizabeth Monk-Turner

In the education system, African American youth are confronted by deficit-based narratives of intellectual inferiority and defiance that inform teaching pedagogies, curricula, and classroom management strategies, such as school discipline practices. In light of available research documenting the deleterious effects of low expectations and treatment by teachers on the academic outcomes of African American youth, this body of knowledge also underscores the importance of racial socialization and positive perceptions of school bonding in safeguarding the academic achievement and success of African American youth. However, the lack of criminological inquiry into the complex associations between perceptions of differential treatment by teachers, perceptions of school bonding, negative emotions, behavior (i.e., deviant and prosocial), involvement in school discipline, and grades, particularly amongst a nationally representative sample of African American youth, represents a gap in available literature. Hence, the current study adds to the current literature by utilizing general strain theory (GST), a criminological perspective associating strain and deviance, and a conceptual framework of race-based traumatic stress (RBTS) to explore these complex associations for a nationally representative sample of African American youth. Using data from the National Survey of American Life (NSAL), Adolescent Supplement for 2001-2004, findings from this study suggest that perceptions of differential treatment from teachers is a risk factor for the underachievement of African American youth, particularly for those youth who ‘act out’ in response to their negative emotions and weakened school bonds. Nevertheless, findings reveal that receiving messages promoting Black pride and possessing strong school bonds that encourage student engagement negates the deleterious effects
of perceived differential treatment by teachers on the academic achievement of African American youth. When considered with opportunities to continue learning, school suspension results in positive academic outcomes. Thus, findings from this study reinforce the need to eradicate deficit-based narratives of underachievement and failure through counternarratives of resilience and success and improvements to school climate. This study further points to the need for criminological theorizing within education research.
I dedicate this dissertation to my nieces and nephews. Your education matters. Your minds and lives have value and importance.
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CHAPTER I
INTRODUCTION

As stated by Nelson Mandela, “Education is the most powerful weapon which you can use to change the world” (Kifner, 1990, para 2). More specifically, by facilitating economic mobility through employment opportunities and higher wage earnings, and promoting social mobility by enhancing financial, human, social, and cultural resources and capital, education has the potential to empower racial minorities, particularly Black Americans, to liberate themselves from socially defined positions within society (Gagné & Tewksbury, 2003; Sernau, 2006; Royce, 2015). For Black Americans in the United States, as educational attainment increases their opportunities for employment and higher wages, as well as their level of civic engagement increases (U.S. Bureau of Labor Statistics, 2015; Thom, 2018; Brundage Jr., 2020). In support of King (2017), educational attainment and the associated economic, political, and social benefits afford Black Americans with the opportunity to challenge and dismantle racialized power structures.

In 1967, Dr. Martin Luther King Jr. stated that, “Discrimination is a hell hound that gnaws at Negroes in every waking moment of their lives to remind them that the lie of their inferiority is accepted as truth in the society dominating them.” (para 12). For Black Americans in the United States, discrimination is a salient issue. In their analysis of a nationally representative sample of American respondents taken from the 2016 Pew Research Center’s Racial Attitudes in America Survey, Lee, Perez, Boykin, and Mendoza-Denton (2019) found that, compared to Whites, racial minorities experienced more racial discrimination. According to the Pew Research Center (2019), approximately 63 percent of Black Americans believe that the legacy of slavery continues to impact the human condition of Black Americans within the United States. Even more, approximately 76 percent of Black Americans indicate experiencing discrimination, with approximately 63 percent
indicating experiences from time to time and approximately 13 percent indicating regular experiences with discrimination, net their level of education and their self-reported gender (Anderson, 2019). Accounting for differences by educational attainment, compared to Black Americans with less than a high school diploma, Black Americans with some college and/or an associate degree and those possessing college degrees reported experiencing more forms of discrimination, particularly forms of discrimination involving heightened suspicions by other people (71%) and perceived low intelligence (67%) (Anderson, 2019). Additionally, of those college educated Black Americans experiencing discrimination, more than half (57%) indicated that their race membership undermined their success (Anderson, 2019). The implications of these perceptions of Black Americans has been documented by empirical research.

As indicated by research scholarship, experiences with racial discrimination negatively affects the psychological and emotional well-being of Black Americans (Franklin-Jackson & Carter, 2007; Pieterse, Todd, Neville, & Carter, 2012; Carter, Johnson, Roberson, Mazzula, Kirkinis, & Sant-Barker, 2017; Kirkinis, Pieterse, Agiliga, & Brownell, 2018; Carter, Kirkinis, & Johnson, 2019; Polanco-Roman, Anglin, Miranda, et al., 2019). For instance, in their investigation on the parallel effects of race-based traumatic stress (i.e., three memorable events of racism or discrimination individuals experienced) on symptomologies of race-based traumatic stress (i.e., intrusion, hypervigilance, and avoidance) and symptoms associated with the PTSD definition of trauma (i.e., anxiety, depression, dissociation, sexual problems, sleep disturbances, and trauma history) for a community-based sample of 421 adults, Carter and colleagues (2019) found that racial discrimination significantly increased the risk of respondents developing PTSD-like symptoms, particularly dissociation, anxiety, depression, and a mixed array of symptoms associated with sexual problems and sleep disturbances (Carter et al., 2019). In their exploratory study on the link between experiences of racial discrimination and personal outcomes amongst a sample of 312 Black Americans residing in Detroit, Michigan, Broman,
Mavaddat, and Hsu (2000) found that nearly 60 percent of their sample perceived an experience as discriminatory in the past three years of data collection, with those experiencing racial discrimination being more likely to experience lower levels of mastery (i.e., self-efficacy; being able to solve problems, control future, do things in life) and greater psychological distress (i.e., depression, anxiety, crying spells, withdrawal, and poor appetite). For Black youth in the United States, perceived experiences with discrimination are also salient.

According to Seaton, Caldwell, Sellers, and Jackson (2008), using a nationally representative sample of 810 Black youth drawn from the National Survey of American Life – Adolescent Supplement, approximately 87 percent of Black youth reported experiences of discrimination, with roughly 67 percent indicating encounters that involved “people act as if they’re better than you are,” and more than half indicated encounters reinforcing a lack of respect for them (51%) and a lack of courtesy (55%) (1293). Using longitudinal data from the Family and Community Health Study (FACHS), Assari, Gibbons, and Simons (2018) found that, over the course of 18 years, for a cohort of 889 children aged 10-12 years old during the first wave, perceptions of discrimination increased, with factors of gender, socioeconomic status (SES), place, and age impacting changes in perceived discrimination over time. Additional empirical evidence accentuates the pervasiveness of discrimination in the lives of Black youth in the United States (Harris-Britt, Valrie, Kurtz-Costes, & Rowley, 2007; Smith-Bynum, Lambert, English, & Ialongo, 2014; Lanier, Sommers, Fletcher, Sutton, & Roberts, 2017). The likely consequence of perceived discrimination on the mental and physical health of Black youth, as well as their experiences in school is also captured by empirical scholarship.

Empirical evidence has documented the extent to which perceived discrimination exerts a deleterious effect on the emotional and psychological well-being of Black youth, particularly by increasing depressive symptomologies, augmenting suicidal ideations, and lowering self-esteem (Wong, Eccles, & Sameroff, 2003; Sellers, Copeland-Linder, Martin, & Lewis, 2006; Neblett, White,
Ford, Phillip, Nguyen, & Sellers, 2008; English, Lambert, & Ialongo, 2014; Assari, Lankarani, & Caldwell, 2017). As well, empirical evidence has acknowledged the degree to which perceived discrimination compromises the educational attainment of Black youth by diminishing their capacity to learn, lowering academic achievement, and heightening their engagement in negative behavior (Benner, Wang, Shen, Boyle, Polk, & Cheng, 2018). Though literature is sparse on the effects of perceived discrimination on exclusionary school discipline (Butler-Barnes & Innis-Thompson, 2020), empirical evidence recognizes the detrimental effects of exclusionary school discipline on the capacity of youth to actively engross themselves in the construction knowledge through learning (Lamont, Devore, Allison, Ancona, et al., 2013; Moreno & Gaytan, 2013; Lacoe & Steinberg, 2018). However, while perceived and/or actual experiences of discrimination have been found to engender negative effects on the mental health and educational experiences of Black youth (Benner et al., 2018), additional factors such as growing up in poverty and the lack of resource investments that enhance academic abilities, as well as exposure to suboptimal conditions, to include, exposure to environmental toxins, structural problems within homes and schools, high rates of crime and violence within homes and communities, involvement with the juvenile and criminal justice systems, as well as involvement with the child welfare system conflate to further impede on the educational attainment of impoverished and racial minority youth within the United States (Landsford, Dodge, Pettit, Bates, Crozier, and Kaplow, 2002; Bradshaw, Rodgers, Ghandour, and Garbarino, 2009; Francois, Overstreet, and Cunningham, 2012; Borofsky, Kellerman, Baucom, Oliver, and Margolin, 2013; Duncan, Magnuson, and Votruba-Drzal, 2017; Fry, Fang, Elliot, Casey, Zheng, Li, Florian, and McCluskey, 2018).

Taken together, as a stressor, discrimination, perceived or otherwise, has the potential to, not only engender emotional and psychological injury to Black youth (APA, 2013; Carter, Kirkinis, & Johnson, 2020), but prevents the acquisition of knowledge through learning thereby “dooming the
Negro to a brain-washed acceptance of the inferior role assigned to him by the dominant race” (Woodson, 1933, p.1).

While empirical evidence underscores the deleterious effects of perceived discrimination on the educational experiences of Black youth, a growing body of empirical evidence has stressed the resilience-enhancing effects of racial socialization, to include academic aspirations, on the effects of perceived discrimination on Black youth (Neblett Jr., Philip, Cogburn, & Sellers, 2006; Dotterer, McHale, & Crouter, 2009; Burt, Simons, & Gibbons, 2012; Burt & Simons, 2015; Leath, Mathews, Harrison, & Chavous, 2019). Additionally, a body of empirical evidence suggests that school bonding, conceptualized as school connectedness, school engagement, school belonging, and student engagement, fosters academic achievement, promotes student engagement in learning, strengthens self-efficacy, and lowers negative student behaviors (Roeser, Eccles, & Sameroff, 2000; Maddox & Prinz, 2003; Crosnoe, Johnson, and Elder Jr., 2004; Oelsner, Lippold, & Greenberg, 2011; Jose, Ryan, & Pryor, 2012; Bryan, Moore-Thomas, Gaenzle, Kim, Lin, & Na, 2012; Yang & Anyon, 2016; Rose, Lindsey, Xiao, Finigan-Carr, & Joe, 2017).

Notwithstanding empirical evidence illuminating the disadvantageous effects of perceived discrimination on the socioemotional well-being and academic success of Black youth in the United States, this body of research is limited. First, while these studies illuminate the adverse consequences of perceived discrimination on the educational experiences of Black youth, few studies have utilized a nationally representative sample of Black youth in the United States (Seaton et al., 2008; Assari et al., 2018). Also, while available studies have examined the direct effects of perceived differential treatment from teachers on the educational experiences of Black youth (Wang & Huguley, 2012; Brittian & Gray, 2014), to include the role of school bonding as a potential mediator (Dotterer et al., 2009; Bryan, Williams, Kim, Morrison, & Caldwell, 2018), few studies have explored the extent to which perceptions of differential treatment from teachers negatively affects the academic success of Black
students through pathways involving perceptions of school bonding, negative emotions, and school suspension. Furthermore, there is a paucity of criminological inquiry on the effects of perceived discrimination on the educational experiences of Black youth (Unnever, Cullen, & Barnes, 2016).

SIGNIFICANCE OF THE STUDY

Hence, this study aims to add to a burgeoning body of literature examining the effects of perceived discrimination on the educational outcomes of Black youth. Specifically, by utilizing Agnew’s (2006, 2013) general strain theory (GST hereafter), which argues that strain produces negative emotional state that likely leads to deviant or prosocial coping, and Robert Carter’s (2007) conceptual framework of race-based traumatic stress (RBTS hereafter), which posits that the effects of race-based incidents are emotionally and psychological injurious to racial minorities, this study explores both the direct association between Black students’ perceptions of differential treatment from teachers and their self-reported academic achievement (i.e., grades), as well as the indirect associations between Black students’ perceptions of differential treatment from teachers and their self-reported academic achievement through perceptions of school bonding and student homework behavior, negative emotions and negative student behavior, perceptions of school bonding and negative student behavior, and school suspension and student homework behavior. In addition, this study explores the potential moderating effects of deviant peer associations, academic aspirations, student resilience, and racial socialization (i.e., Black pride) on both the proposed direct and indirect associations linking Black students’ perceptions of differential treatment from teachers and academic achievement. If findings show that perceived differential treatment from teachers exerts a negative effect on academic achievement, either directly or indirectly through perceptions of school bonding, negative emotions, and/or school suspension, then schools have the potential for adopting interventions that focus on strengthening student-teacher interactions, improving perceptions of school bonding, enriching the socioemotional learning of Black students, and supplementing school suspension with opportunities
to further engage in the learning process outside of school. However, if results reveal a buffering effect involving deviant peer associations, racial socialization (i.e., Black pride), academic aspirations, and student resilience on either the direct and/or indirect associations linking Black students’ perceptions of differential treatment from teachers and academic achievement, then schools will have the capacity to adopt targeted practices and policies that encourage students to pursue post-secondary education, reinforce the history and legacy of African American achievement and triumph, and enhance the resiliency of Black students.

PURPOSE OF THE STUDY

Using data drawn from the National Survey of American Life – Adolescent Supplement, 2001-2004, which provides a framework for identifying early onsets of adult mental disorders among a nationally representative sample of adolescent Black and Caribbean youth in the United States, this study seeks to answer the following research questions,

1. Are Black students’ perceptions of differential treatment from teachers directly associated with their academic achievement (i.e., self-reported grades)?
2. To what extent, if any, does deviant peer associations, racial socialization (i.e., Black pride), academic aspirations, and student resilience buffer the direct association between Black students’ perceptions of differential treatment from teachers on their academic achievement?
3. In what way(s) do perceptions of school bonding mediate the association between Black students’ perceptions of differential treatment from teachers on their academic achievement?
4. In what way(s) do negative emotions mediate the association between Black students’ perceptions of differential treatment from teachers on their academic achievement?
5. In what way(s) does school suspension mediate the association between Black students’ perceptions of differential treatment from teachers on their academic achievement?
The next chapter provides a review of the available literature examining the effects of perceived discrimination on the educational experiences of Black youth in the United States.
CHAPTER II
LITERATURE REVIEW

This chapter provides a survey of the literature examining the effects of perceived discrimination on the education experiences of Black youth. This chapter begins with a critical appraisal of race and education in the United States. Afterwards, a survey of the literature is presented, followed by a summary and critique of the available literature. Finally, the theoretical framework guiding this study is discussed, to include the presentation of the research questions and hypotheses.

A CRITICAL APPRAISAL OF RACE AND EDUCATION IN AMERICA

Deconstructing Race as a Construct

As a fundamental basis for constructing systems of power and inequality, race plays an essential role in structuring opportunities, resources, and power dynamics (Anderson & Collins, 2015). As a biological and hierarchical construct grounded in Darwinism and Cuvier’s idea of classifying animals by their phenotype, race is an arbitrary term for relegating individuals into different “subspecies” of humankind (Penha-Lopez, 1996, p.811). During the era of European colonialism and expansion, race as a biological construct was used as justification for establishing a hierarchical order that afforded Whites with power, privilege, and authority as a result of their civilized polities in comparison to the savagery of inferior races (Penha-Lopez, 1996; Smedley, 1998; Elliot & Hughes, 2019). Specifically, following 1550 when English colonizers first encountered Africans, the English described Africans based on skin tone, particularly referring to them as “Black” (James, 2001, p.236). This form of labeling supported a “perverse negation” to English normative standards of beauty being of “fair complexion of rose and White” (James, 2001, p.237). During the philosophical period of the Enlightenment, notions of the innate inferiority of Negroes were advanced by Hume (1997) and Kant (1997).
As mentioned by Hume (1997:33), “I am apt to suspect the negroes and in general all other species of men to be naturally inferior to Whites.” Kant (1997:55) extends this to further claim that “The Negroes of Africa have by nature no feeling that rises above the trifling […] not a single one was ever found who presented anything in art or science or any other praise worthy quality […]” For Du Bois (2015:17), this “doctrine of the Superior Race” advanced the notion that “by birth and natural gift” people of Europe were considered as “rulers of mankind; rulers of their own suppressed labor classes and, without doubt, heaven-sent rulers of yellow, brown, and black people.” This dehumanization reinforced the hegemony of Whites as “natural and inborn” and characterized Blacks as possessing “low mentality and natural immorality” (Du Bois, 2015, p.27). Such an understanding of Blacks relegated them to a position that “falls outside of a universe of obligation” (Owusu-Bempah, 2017, p.27). In this dehumanized state of existence, Blacks “no longer elicit legal protection, compassion, or other moral responses […]” (Owusu-Bempah, 2017, p.27). Though biological conceptualizations of race have gradually been replaced with social constructions of race, the significance of race in the structuring of social institutions, to include education systems, and the implications on the lives of Black Americans, more broadly, and Black youth, more specifically, warrants attention (Omi & Winant, 1994; James, 2001; Smedley & Smedley, 2005).

Critical Analysis of Education and the Experiences of Black Youth in Schools

The seminal works of Woodson (1993), Du Bois (1925, 2001, 2013), and Fanon (2008) echoes education as a potential source of liberation for Black Americans. In *Mis-Education of the Negro*, Woodson (1993:2) describes that “real education means to inspire people to live more abundantly…to learn begin life as it is and make it better” through unbridled thinking. For Du Bois (2013:9), the power of education, the “ideal of book learning” is one that endows upon Black people “dawning self-consciousness, self-realization, self-respect,” to introspectively see within oneself “his power, of his mission,” to remain true to who he is and not be something that he is not (9). For Black Americans,
Du Bois (2013) states have an extensive history of striving to achieve a holistic, self-conscious personhood grounded in a deep understanding of our individual and collective positionality and acceptance of our power to change it. It enables us, as Du Bois (2015:56) notes, to “use labor of all men without enslaving or brutalizing; gives us poise to encourage prejudices that bulwark society; stamp out those that in sheer barbarity” render us blind to our brethren, imprisoned within a veil of ignorance and self-compromise. Collectively, these seminal works suggest that education has the capacity to liberate, transform, and elevate the consciousness of Black Americans that affords Black Americans to “overcome ignorance…lessening of poverty [through] effective work…lessening of crime [through] control over social forces which produce crime” (Du Bois, 1925, p.1).

In *Black Skin, White Faces*, Fanon (2008) speaks of two opposing truths with regards to education. First, Fanon (2008) notes that there is the normalization of Eurocentric epistemology as the golden standard. Under this guise, “White men consider themselves superior to Black men” in all areas of intellectual thought and development (Fanon, 2008, p.3). Second, Fanon (2008:3) notes that, “Black men wants to prove to White men, at all costs, the richness of their thought, equal values of their interest.” Ergo, in attempting to demonstrate their intellectual equivalence, Black Americans are expected by the world of White men “to behave like a black man – or at least like a nigger” (Fanon, 2008, p.86). Furthermore, Fanon (2008:86) accentuates how these expectations reinforce conceptualizations of Blackness as “bad…mean…ugly.” Be that as it may, these opposing truths likely introduce a hidden curriculum, which Noguera (2003:444) argues reinforces and maintains “racial categories and the stereotypes associated with them,” with the potential for describing the conflict between Black students and teachers and the likely miseducation of Black students.

In the words of Manning (2001:8), “The Black child attending public school is burdened immediately with an educational pedagogy which rests on the assumption of his/her cultural and intellectual inferiority.” As noted by Rudd (2014) this cultural deficit thinking manifest negative
perceptions and misunderstandings about the abilities, cognitions, behaviors, and nature of Black American youth within the education system. According to Lewis, James, Hancock, and Hill-Jackson (2008:141), “this ideology of African American and other ethnic-minority students’ intellectual and cultural inferiority infects teachers, curriculum development, administrators, school policies, and students’ academic progress.” In illustration of this, Ferguson (2001) conducted interviews with 20 preadolescent Black boys to ascertain the meaning associated with getting into trouble, both from the standpoint of the Black boys themselves and school administration and staff. In line with Rudd (2014), Ferguson (2001:581) found that negative perceptions of Black American boys shaped the administration of school discipline in a way that was disproportionate to their representation in the school system, as well reinforced underlining conceptions of Black masculinity as being “criminally inclined” (581). Similarly, Giroux (2003:562) observed that portrayals of Black youth as sources of “public fears and a threat to public school safety” necessitated the use of “racialized codes and race-based moral panics” to indicate the need for surveillance and adoption of zero tolerance policies, to include suspensions and expulsions as forms of punishment for perceived misbehavior. Using a sample of 219 black adolescent males to examine the influence of structural conditions in schools on vulnerable and successful academic outcomes, Swanson, Cunningham, and Spencer (2003) found that the academic outcomes of Black males was influenced by negative stereotyping and tracking. In their use of a mixed-methods approach, Fredricks, Parr, Amemiya, Wang, and Brauer (2019) explored the influences on the engagement and disengagement of a racially diverse sample of middle school and high school students (13 Black students, 2 Mixed students, and 7 White students). According to Fredricks and colleagues (2019:502), for youth in the “unengaged group,” which was comprised of “four White, seven African American” students, disengagement stemmed from perceptions that “teachers did not trust or respect them, judged them unfairly, and made assumptions about their achievement and behavior based on other students’ behavior in school.” Through BlackCrit
ethnography, Coles (2020:1) organized the significance of blackness and anti-blackness on the “urban schooling social education” of nine Black youth at an urban high school (1). As reflected by Sonia’s response to the question, “How does it feel to be Black in America?”

When you think about it we got to fight for stuff like…This boy came here this year, we was like ‘Why you come here senior year?’ He was like…ain’t nobody gonna help me get into college…But I feel like at a white school, that’s expected […] (Coles, 2020, p.17).

Taken together, this hidden curriculum of marginalization, buttressed by misconceptions of the ability, cognition, and behaviors of Black youth that likely shape the expectations and interactions of teachers in the classroom, echoes the seminal works of Woodson (1993), Du Bois (1925, 2001), and Fanon (2008) that coalesce to argue that school systems, as microcosms of the larger macrocosm, are reflections, if not extensions, of prevailing social forces and processes at the societal and intellectual level.

Consequently, discrimination by teachers becomes a potential mechanism within the education system for advancing the intellectual inferiority of Black students. Empirical evidence has illustrated the negative effects of perceived discrimination on the academic success of Black youth (Smalls, White, Chavous, & Sellers, 2007; Benner et al., 2018; Varner, Hou, Hodzic, Hurd, Butler-Barnes, & Rowley, 2018). For instance, Assari and Caldwell (2018), in their investigation of the effects of perceived teacher discrimination on school performance for a nationally representative sample of Black youth, found that discrimination significantly lowered levels of school performance, measured by grade point average. Benner and Graham (2013:1608) found that Black, Latino, and Asian students who “perceived greater discrimination from school personnel” did not perform well academically. Specifically, students reported lower grade point averages, did not engage in upper-level math courses (i.e., Calculus), were less attentive in class, and did not complete assignments in time (Benner & Graham, 2013). Royce (2015:213) describes how the educational potential of socioeconomically depressed and racial minority students is undermined by “persistent disparities in per-pupil spending
substandard physical structure, crowded classrooms, lower teacher expectations, fewer supplies and facilities...Teachers have a higher turnover rate, have less training, experience...deficient...in overall level of student safety, comfort, and well-being.” As noted by Woodson (1993:1), the depravity experienced by Black youth given “the neglect of Afro-American history and distortion of facts concerning negroes...signals education systems failure.” For Fanon (2008, p.xiv), this transforms Black youth into the “idealized Negro ... constructed not as a real person with real history but an image.” For, education, then, becomes, as Woodson (1993:3) states and Du Bois (2015) corroborates, “the perfect tool for control without.” On the grounds of this, it is likely that the education system functions to reinforce the negative perceptions of Black youth in society.

As suggested by Woodson (1993) and Du Bois (2001), acts of discrimination within the education system functions to forestall the mental, intellectual, and social development of Black youth. This further provides a foundation for possibly understanding the behavioral responses of Black youth to these conditions. Accordingly, per Du Bois (2001:25), disobedience conveys a potential outcry of Black youth to “a policy of harsh repression and gentle discouragement.” Even more, disobedience, similar to crime, represents “the open rebellion of an individual against his social environment” (Du Bois, 2007, p.166). Noguera (2003:445) further makes the argument that the engagement of Black youth, males more specifically, in oppositional behaviors stems from “the culture that is operative within schools” that likely relegate Black youth “into marginal roles and to be discouraged from challenging themselves by adults who are supposed to help them.” For Shedd (2015), currents of frustration, disengagements, and acts of delinquency represent responses from students to organizational features that diminish the importance of schools as a site for the cultivation of knowledge and promotion of education. As stated by Unnever and Gabbidon (2011:166), the immersion of Black youth within a racialized society characterized by “chronic systematic exposure to racial discrimination” weakens ties to “conventional institutions” thereby increasing the likelihood
that Black youth engage in problem behaviors. In this vein, if disobedience is, as Fanon (2008: xiv) argues, an attempt by Black youth to “say no […] to those who attempt to build a definition of [them],” conversely systems of school-based discipline function to silence these outcries.

**Historical Context of the Education of Black Americans**

As stated by Frederick Douglas (1894:14),

> Education…means emancipation […] To deny education to any people is one of the greatest crimes against human nature. It is to deny them the means of freedom and the rightful pursuit of happiness, and to defeat the very end of their being. They can neither honor themselves nor their Creator. Than this, no greater wrong can be inflicted […].

Since the inception of slavery in the United States in 1619, Africans in bondage were denied the knowledge that would afford them the potential for freedom (McWorter, 2000). However, in spite of their forced enslavement, Africans condemned to slavery “carried with them memories of loved ones and communities, moral values, intellectual insight, artistic talents and cultural practices, religious beliefs and skills,” as well as the knowledge and resources necessary to regain the freedom that they knew before (Elliot & Hughes, 2019, p.9). Nonetheless, in bondage, Africans were conditioned to disregard education, as well laws were implemented to, not only prevent Africans from attending school, but to criminalize and punish those Africans engaged in learning (i.e., reading and writing) (Brown & Beckett, 2007). Rooted in “fear of the educated Negro,” the structuring of society during slavery ensured the exclusion of Africans from opportunities at knowledge construction (Butchart, 1988, p.335). According to Brown and Beckett (2007), in bondage, Africans were relegated to a second-class, dehumanized position as chattels of white slave masters who actively ensured that their property remained illiterate. However, increasing attempts at exclusion conveyed to Africans the power of education and literacy in potentially liberating themselves from the chains of bondage and oppression imposed upon them by the regime of slavery (Brown & Beckett, 2007). Stated differently, education afforded Africans in bondage with a “tangible” alternative to the servitude and disenfranchisement of enslavement (Morris, 2016, p.5). Despite the conditions of slavery in
undermining their intellectual development, some Africans, in bondage, taught themselves how to read and write, becoming literate and establishing schools to teach other slaves. As referenced by Morris (2016:6), education was “a critical tool for advancement in a society that regularly practiced discrimination against women and against people of color.” Thus, by the time of Emancipation, “despite increasing White hostility, between 7 and 10 percent of the Black population were literate” (Brown & Beckett, 2007, p.69). Furthermore, Black parents “[began] their own schools, using the church and other institutions to promote education, [lobbied] white school leaders for school reform measures…engaged in direct protest measures” that provided their children with an opportunity for education (Brown & Beckett, 2007, p.73). As a collective, Negroes and their White allies mobilized around “the traditional ideology that linked schooling and republic citizenship” and actively pushed for schools that were modeled after the “best Northern state systems” (Tyack & Lowe, 1986, p.238).

As the era of Reconstruction came into focus, attempts in state constitutions and statutes “for a time source of hope and instruments for restricting the social order” became increasingly disadvantageous and reinforced the subordination of Negroes (Tyack & Lowe, 1986, p.239). However, those Negroes who had gained some degree of political influence continued to press the integration of constitutional provisions supportive of “free public schools open to all children” (Levine & Levine, 2014, p.449). Though “white Southerners had developed a consensus…They permitted the education of the Negro, but they rejected the idea that this should be done at public expense,” as well waves of White resistance and White terror “undercut the full implementation of rights guaranteed by…the 13th, 14th, and 15th amendments to the Constitution” (Levine & Levine, 2014, p.449). In other instances, Whites, particularly those in the South, “burned schoolhouses, ostracized or beat teachers, and sought to intimidate the families who went to school” (Tyack & Lowe, 1986, p.242). In the words of Morris (2016:6), “to be educated remained a threat to the power structure,” and attempts by Whites
to further suppress the Black vote through tactics of harassment and violence advanced the doctrine of “separate but equal” and segregated schools (Levine & Levine, 1986, p.450).

During the era of Jim Crow, a period of enforced racial segregation, education was essential to “insisting upon [them] the sanctity of knowledge and innate humanity” that would empower them to dismantle laws, systems, and ideologies aimed at disenfranchising the Negroes (Brown & Beckett, 2007, p.75). Under the regime of Jim Crow, irrespective of region (i.e., North and South), Black Americans were subjected to suboptimal conditions with regards to education (Levine & Levine, 2014; Flynn, Holmberg, Warren, & Wong, 2017). Specifically, Tyack and Lowe (1986:251) noted that legislatures in the South, in seeking to modernize education though the provisions of “new services as busing or guidance or technical training,” investments in modernizing schools “went first to white schools, thereby increasing fiscal gap between white and black schools.” In detailing the explicit exclusion of Blacks from opportunities of learning during Jim Crow, Flynn and colleagues (2017:96) described how “curriculum offered little beyond basic literacy and numeracy…preparing students for domestic or agricultural work.” Furthermore, “disparities of up to ten to one in some of the states in the Deep South” were characteristic of States’ per-pupil spending (Flynn et al. 2017:96). In both the North and the South, “Black schools were frequently overcrowded, poorly built, and minimally equipped,” to include Black students using “secondhand textbooks discarded by White schools” (Levine & Levine 2014:450). Lacking the necessary capital and resources to engender substantive changes in policy and structure, “the best available remedy was court action” (Tyack & Lowe, 1986, p.252).

unconstitutionality of the separate but equal doctrine, which supported segregated schools (Boozer, Krueger, Wolkon, 1992). As a result of this landmark case, it was proven that segregated schools was not equal, regardless of the quality (Ashenfelter, Collins, & Yoon, 2006). Following the Supreme Court ruling in *Brown vs. Board of Education*, the National Association for the Advancement of Colored People (NAACP) litigated for the implementation of desegregated schools, which aided by the Civil Rights Act that prohibited federal funding to schools segregated by race and President Lyndon Johnson’s 1965 Elementary and Secondary Education Act (ESEA), quickly became a reality (Ashenfelter et al., 2005; Flynn et al., 2017). As captured by Orfield (2009:12), “From 1970 to 2004, black students in the South were actually less segregated than those in any other region” due in part by *Brown vs. Board of Education* and the enforcement of desegregation at the federal level. In consequence of desegregation, Black Americans experienced an increase in educational and occupational attainment, improvements in college quality and adult earnings, decrease in the likelihood of being incarcerated, and improvements in quality of adult health (Johnson, 2015). Considering these gains, an era of resegregation has emerged (Flynn et al., 2017).

While the Supreme Court decision in *Brown vs. Board of Education* may have dismantled forms of *de jure* segregation, *de facto* segregation, more specifically residential segregation, persisted (Massey & Denton, 1993; Conley, 2000; Gagné & Tewksbury, 2003; Royce, 2015). As mentioned by Rothstein (2017:XII), “Racial segregation in housing […] was a nationwide project of the federal government” that utilized “racially explicit laws, regulations, and government practices to create a nationwide system of urban ghettos, surrounded by white suburbs.” This, according to Rothstein (2017: XVII), has “created a caste system in this country, with African Americans kept exploited and geographically separate by racially explicit government policies.” As a result of residential segregation, African Americans are concentrated within a social environment where educational failure prevails (Massey & Denton, 1993; Flynn et al., 2017). Particularly, inequities in the funding to school systems located
within poor communities, characterized by a depressed tax base that, in comparison to the substantive tax base within middle-class communities that were populated by whites, rendered the potential for establishing an infrastructure supportive of enhancing the quality of education within these communities difficult (Gagné & Tewksbury, 2003; Royce, 2015). In addition, compared to the educational experiences of White students attending schools in more funded, middle-class communities, inequities in school funding, instructional quality, and the omnipresent disadvantage of the student body deny poor and racial minority students an “equal opportunity to realize their educational potential” (Royce, 2015, p.214). Moreover, as a result of desegregated schools, Black American students are marginalized in White classrooms, where underlining biases and racialized notions of intellectual inferiority lowered expectations of academic success from Black students by their White teachers (Manning, 2001; Brown & Beckett, 2007; Levine & Levine, 2014; Flynn et al., 2017). As well, “too many White teachers seemed unable or unwilling to establish the types of relationships” that would, otherwise, encourage the learning of Black students (Brown & Beckett, 2007, p.75).

Beyond this, Flynn and colleagues (2017) note that experiences with school resegregation and residing in communities of concentrated disadvantage renders students, particularly underprivileged Black youth “less likely to have literate parents, adequate housing, or quiet places to study, and their families have fewer resources to dedicate to education” (p.100). As suggested by empirical evidence, children who hail from economically challenged families are more likely than wealthier counterparts to underperform academically on standardized test scores, possess a greater likelihood of dropping out of school, feeling disengaged and alienated in school, have a negative sense of school climate, engage in defiant and deviant behaviors in the classroom, have discipline problems, and/or be suspended or expelled from school (Duncan and Magnison, 2011; Fabelo, Thompson, Plotkin,
Exclusionary School Discipline and the Education of Black Youth

Groundbreaking changes to federal policies in the 1980s that aimed at addressing the degenerative effects of the crime, violence, and drugs ushered in an era of zero tolerance policy within the United States (Skiba & Peterson, 2000). As this wave of intolerance towards civil disobedience and rule-breaking was being reinforced across the country, school systems, fearful of the prospect of violence and the potential threat to the physical and socioemotional safety of students, integrated zero tolerance ideals into school policies (Skiba & Peterson, 2000). Described by Skiba and Peterson (2000:2) as “no-nonsense responses,” the adoption of zero tolerance policies into school systems targeted violence, gangs, and weapons, to include “smoking and school disruptions.” Under the guise of zero tolerance, severe and punitive sanctions are applied “regardless of the gravity of behavior, mitigating circumstances, or situational context” to individuals engaging in behaviors related to weapon carrying, drugs, gang-related activity, and less serious infractions, such as school disruption, smoking, and dress code violations (American Psychological Association Zero Tolerance Task Force, 2008, p.852). In 1994, the Clinton Administration signed the Gun Free Schools Act, a nationally mandated law that required schools to expel any student in possession of a firearm from school for one academic school year (Skiba & Peterson, 2000; Kang-Brown, Fratello, & Daftary-Kapur, 2013; Skiba & Losen, 2016). The advent of zero tolerance policies also introduced exclusionary school discipline, particularly suspensions and expulsions, into school systems that aimed to address student behavior perceived as “less harmful than bringing a weapon to school,” to include conduct and aggressive behaviors (Kang-Brown et al., 2013, p.2). As suggested by Ferguson (2001), Giroux (2003), and Morris (2016), perceptions of Black youth as defiant and deviant influenced how suspensions and expulsions were applied in school systems.
Consequently, a substantial disparity exists in the application of suspension and expulsion on Black American youth (Fabelo, et al., 2011; Losen & Martinez, 2013; O’Connor, Porowski, & Passa, 2014; Smith & Harper, 2015; U.S. Department of Education, Office for Civil Rights, 2019). For instance, in their analysis of suspension and expulsion data retrieved from the Texas Education Agency (TEA) and Texas Juvenile Probation Commission (TJPC), Fabelo et al. (2011) found that while African American students represented approximately 14% of the student populace, they accounted for approximately 75% of students experiencing exclusionary disciplinary actions, compared with White students who accounted for 43% of the student populace and approximately 47% of students involved in the school disciplinary system. In addition, Smith and Harper (2015), in examining the impact of school discipline practices and policies on Black students, found that African American students comprised approximately 24 percent of the student populace for the 2011-2012 academic school year, yet were disproportionately represented in rates of suspension and expulsion. Specifically, approximately 48 percent of African American students, in grades K-12, were suspended from school while approximately 49 percent of African American students, in grades K-12, were expelled during the 2011-2012 academic school year (Smith and Harper, 2015). The disproportionate application of exclusionary school discipline practices on Black students disadvantages these students by diminishing their capacity for learning by removing these students from constructive and stimulating learning environments (Bottiani, Bradshaw, & Mendelson, 2017). According to Fricker (1998), this denies Black students the opportunity to engage in knowledge construction, as well as denies them epistemic credibility and intelligibility. Arguably, for Black youth involved in suspensions and/or expulsions, the potential for education to be a force of liberation is delayed, but not denied.

Having contextualized the educational experiences of Black Americans, historically, and Black youth contemporarily, attention is warranted to available research scholarship examining the effects of perceived discrimination on the educational experiences of Black youth.
As a concept, discrimination has been defined in a variety of ways. In his seminal work exploring the nature of prejudice and discrimination, Gordon Allport (1954:51) defined discrimination as the denial of “individuals or groups of people equality of treatment which they may wish.” Feagin and Eckberg (1980:9) defined discrimination as “the practices and actions of dominant race-ethnic groups that have a differential and negative impact on subordinate race-ethnic groups.” According to Jones (1997:4), discrimination is defined as “those actions designed to maintain own-group characteristics and favored position at the expense of the comparison group.” For Dovidio, Hewstone, Glick, and Esses (2010:10), discrimination is conceptualized as “behavior that creates, maintains, or reinforces advantage for some group and their members over other groups and their members.” The National Research Council (2004) defines discrimination as disparate treatment and disparate impact treatment. More specifically, disparate treatment “occurs when a member of one racial group is treated less favorably than a similarly situated member of another racial group and suffers adverse or negative consequences” (National Research Council, 2004, p.40). The latter “includes instances in which treatment based on inadequately justified factors other than race results in adverse racial consequences…that generates differential racial effects.” (National Research Council, 2004, p.40). For Pager and Shepard (2008:182), focusing on the disparate impact “broadens its scope to include decisions and processes that may not themselves have any explicit racial content but that have the consequence of producing or reinforcing racial disadvantage.” Nevertheless, as a whole, these conceptualizations advance discrimination as the manifestation of prejudice through behavior, thus distinguishing the construct from “racial prejudice (attitudes), racial stereotypes (beliefs), and racism (ideologies)” (Pager & Shepard, 2008, p.182).
Adolescence represents a critical period of significant developmental and social changes. During this stage of development, youth are experiencing an increase in cognitive and executive functioning that enables them to understand the dynamics of social categories and the role of bias in shaping interactions (Seaton et al., 2008; Umaña-Taylor, 2016). As a period of social change, adolescence is characterized by greater levels of autonomy and roles and responsibilities that influence identity formation (Agnew, 2003; Hoffman, 2010). Furthermore, adolescence is distinguished by a growth in social and academic demands that have the potential to reduce levels of supervision; in addition, during this period, youth are immersed within an expanding diverse, peer-oriented social world likely to introduce them to negative interpersonal relationships with others (Hoffman, 2010).

Conceivably, as a result of adolescence, youth manifest an outlook of society that is “self-directed and introspective” (Hoffman, 2010, p.107). For Black youth, however, the added pressures of constructing a holistic racial identity while navigating through social institutions and engaging in potentially discriminatory interactions with others presumably makes adolescence a stressful, if not traumatic experience (Jernigan & Henderson, 2011; Helms, Nicolas, Green, 2012; Carter, Mazzula, Victoria, Vazquez, Hall, Smith et al., 2013; Smith-Bynum et al., 2014). Accordingly, a burgeoning body of empirical literature has examined the impact of perceived discrimination on the mental health and educational outcomes of Black youth within the United States (Benner et al., 2018).

Perceived Discrimination, Mental Health, and Black Youth

Ialongo, 2009; Seaton, 2009; Seaton, Caldwell, Sellers, & Jackson, 2010; Cooper, Brown, Metzger, Clinton, & Guthrie, 2013; English, Lambert, Ialongo, 2014; Benner et al., 2018). For instance, in their study of approximately 350 Black and White early adolescent youth, Du Bois and colleagues (2002) investigated the extent to which racial discrimination negatively impacted their psychological and behavioral well-being. Conceptualized as the daily hassles associated with race, Du Bois and colleagues (2002) found that discrimination significantly increased emotional problems amongst Black youth, irrespective of gender. However, Du Bois and colleagues (2002:1584) found that “the path from prejudice/discrimination events to emotional problems was…not significant for White females and White males.” A subsequent study by Copeland-Linder, Martin, and Lewis (2006:198) examined the associations between racial discrimination, operationalized as “the frequency and impact of 17 microaggressions because of race in the past year,” racial identity, measured as centrality (i.e., significance of race to self-concept), regard (i.e., feelings towards Blacks from the individual and society as a whole), and ideology (i.e., assimilation, humanist, minority, and nationalist), and indicators of mental health, measured as perceived stress, depression, and psychological well-being for a sample of approximately 314 Black youth. Findings from their study indicated that “racial discrimination was associated with higher levels of depression […] also was positively associated with perceived stress” (Copeland-Linder et al., 2006, p.202). As well, findings revealed that “for individuals who believed that other groups hold more positive attitudes towards African Americans,” or the more that Black youth perceived high public regard, the stronger the “deleterious relationship between racial discrimination and depressive symptoms…perceived stress…psychological well-being” (Copeland-Linder et al., 2006, p.203).

In another study, Seaton and colleagues (2008) utilized a nationally representative sample of 810 Black American and 360 Caribbean Black youth, drawn from the National Survey of American Life, Adolescent Supplement (NSAL-A), to examine ethnic, gender, and age differences of the
association between perceived discrimination, defined as everyday forms of discrimination, and mental health indicators, which included depression, self-esteem, and life satisfaction. Findings from Seaton et al. (2008) showed that Black American and Caribbean Black youth experiencing perceived discrimination were more likely to be depressed, have low levels of self-esteem, and consider their lives as unsatisfying. Additional studies conducted by Seaton and colleagues (2011, 2014) further underscore the deleterious effects of discrimination on the mental health of Black youth. In their 2011 study, Seaton, Neblett, Sellers, Upton, & Hammond utilized a sample of 560 Black youth to longitudinally examine the moderating effects of racial identity on the association between perceived racial discrimination, measured as the “frequency of an bother associated with discriminatory experiences,” and indicators of psychological well-being, which encompassed “self-acceptance, positive relationship with others, autonomy, environmental mastery, purpose in life, and personal growth” (p.1854). Findings from their study showed that “frequency of discrimination at Time 1 was not found to predict changes in the rate of psychological well-being...over time” (Seaton et al, 2011, p.1858). Instead, Seaton and colleagues (2011:1858) found that, cross-sectionally, “individuals with higher reported frequency levels of racial discrimination had lower initial levels of psychological well-being.” Proposed as a moderator, racial identity was not found to significantly “moderate the relation between racial discrimination and rate of change in psychological well-being” (Seaton et al, 2011, p.1861).

In their 2014 study, Seaton, Upton, Gilbert, and Volpe examined a proposed moderated mediation involving perceived racial discrimination, measured the frequency of discrimination, general coping strategies of active, distracting, avoidant, and support-seeking, which served as mediators, racial identity dimensions of centrality, public and private regard, and ideologies (i.e., assimilationist and humanist), which served as moderators, and depression. Using a sample of approximately 314 Black youth, Seaton and colleagues (2014:886) found that Black youth reporting experiences of racial
discrimination “were more likely to display depressive symptoms.” In addition, Seaton and colleagues (2014:886) found that “avoidant coping partially mediated the relation between racial discrimination and depressive symptoms.” Results from their study further indicated that the “use of avoidance coping strategies was more strongly related to depressive symptoms among participants with moderate to high levels of endorsement of minority/oppressive ideology” (Seaton et al, 2014, p.886). Alongside other researchers, Smith-Bynum and colleagues (2014) conducted a longitudinal analysis on patterns of perceived discrimination and the associated psychological and behavioral trajectories for a sample of 504 Black urban youth. Perceived discrimination was conceptualized as everyday incidents of race-based discrimination, while psychological trajectories assessed levels of depression and anxiety and behavioral trajectories emphasized aggressive behaviors reported by teachers (Smith-Bynum et al., 2014). In all, results from Smith-Bynum et al. (2014) indicated that, over time, as Black urban youth perceived more of their interactions to be discriminatory, these youth were 4 times more likely than youth not reporting experiences of discrimination to develop depressive and anxiety-related symptoms.

In addition, Lanier and colleagues (2017) investigated the extent to which the effects of racial discrimination, measured in terms of frequency of experience(s), on psychological well-being, measured as depression and self-esteem, were mediated by the stress of experiencing racial discrimination for a diverse sample of 72 students enrolled in grades 6-8. Findings from their study revealed that both the frequency at which students experienced racial discrimination and the associated stress of the encounter significantly increased depression and lowered self-esteem (Lanier et al., 2017). Additionally, Lanier and colleagues (2017:224) found that “the direct relationship between Rdfreq and depression is partially mediated when controlling for Rdstress.”

In a cross-sectional, comparative analysis of the impact of perceived discrimination on the mental health condition of a nationally representative sample of Black and Caribbean Black youth,
Pathcer, Caldwell, Jackson, and Bernstein (2018:5) found that, for both Black and Caribbean Black youth, an increase in perceived discrimination was significantly associated with an increase in rates of major depression and anxiety “both lifetime and in the last 12 months, after controlling for gender, age, and ethnicity.” Ethnic differences were noted also; Patcher et al. (2018:5) found that “ethnicity did moderate the effects of perceived discrimination on lifetime anxiety disorder...among Afro Caribbean youth compared to African Americans.”

Perceived Discrimination, Deviance, and Black Youth

As indicated by available research, perceived racial discrimination exacerbates externalizing behavioral responses in Black youth (Wong et al., 2003; Caldwell, Kohn-Wood, Schmeelk-Cone, Chavous, & Zimmerman, 2004; Martin, McCarthy, Conger, Gibbons, Simons, Cutchon, & Brody, 2011; Burt, Simons, & Gibbons, 2012; Roberts, Gibbons, Gerrard, Weng, Murry, Simons, Simons, & Lorenz, 2012; Fuller-Rowell, Cogburn, Brodish, Peck, Malanchuk, & Eccles, 2012; Tobler, Maldonado-Molina, Staras, O'Mara, Livingston, & Komo, 2013; Smith-Bynum et al., 2014; Benner et al., 2018). In testing general strain theory, Simons, Chen, Stewart, and Brody (2003) examined, over time, the extent to which incidents of discrimination, measured in terms of frequency, increased the propensity of Black children towards delinquency amongst a sample of approximately 700 Black youth. In addition, Simons and colleagues (2003:835) examined the potential mediating effects of “anger, depression, system blaming, and belief in the legitimacy of aggression” on the proposed association between perceived discrimination and delinquency. In their analysis, Simons et al. (2003) found that perceived discrimination was directly and indirectly associated with delinquency. Directly, perceived discrimination was significantly associated with Black girls being involved in delinquent behaviors, such as shoplifting, physical assault, and animal cruelty, just to name a few, over time (Simons et al., 2003). For Black boys, however, perceived discrimination was associated with an increased risk for delinquency through attitudes justifying the use of anger as a response, anger as a
negative emotional state, and depression, over time (Simons et al., 2003). Similarly, for Black girls, perceived discrimination was indirectly associated with delinquency through all of the mediators, except justifications for the use of violence in response to anger (Simons et al., 2003).

In their longitudinal analysis, Brody et al. (2006) explored the links between perceived racial discrimination and later depressive symptoms and conduct problems for a sample of 714 Black youth. In assessing mediation, Brody and colleagues (2006) examined the potential moderating effects of involved parenting, affiliation with prosocial peers, and academic performance on the longitudinal links of perceived racial discrimination and later depression and conduct problems (i.e., shoplifting, physical assault, vandalism, and animal cruelty). Perceived racial discrimination was operationalized as “the frequency in the past year” that Black youth perceived “specific discriminatory behaviors…racially based slurs and insults…physical threats, and false accusations from…law enforcement officials” (Brody et al., 2006, p.1176). Over time, Brody and colleagues (2006) found that changes in perceived racial discrimination significantly predicted changes in youths’ propensity for conduct problems and depression. Even more, Brody et al. (2006:1182) found that “the effect of perceived discrimination on the development of conduct problems was significantly weaker for youths in the high groups for nurturant-involved parenting, school efficacy, and affiliation with prosocial peers.” Over time, Brody et al. (2006:1183) found that, for Black youth who were in the “high nurturant-involved parenting and school efficacy,” the association between perceived discrimination and conduct problems weakened.

In a longitudinal study examining the effects of perceived racial discrimination on violent behavior amongst a sample of approximately 332 Black youth, Simons and colleagues (2006) also examined the potential mediation effect of anger and hostile view of relationships on the association between perceived discrimination and delinquency, with consideration for the buffering effects of supportive parenting. Like Simons et al. (2003), Simons et al. (2006) incorporates an understanding of
delinquency grounded in general strain. Results from Simons and colleagues (2006:382) revealed that “a (standardized) unit increase in discrimination augments the expected count of violent delinquency by more than 44 percent […]”. Additionally, Simons et al. (2006:382) found that “supportive parenting buffers the effect of discrimination on violence” such that “a standardized increase in supportive parenting is associated with a 14 percent decrease in the expected count of violent delinquency.” Anger and hostile views of relationships emerged as significant mediators, for “much of the effect of discrimination on violent delinquency is indirect through anger and hostile view of relationships” (Simons et al., 2006, p.383). Furthermore, Simons and colleagues (2006) found that supportive parenting reduced the likelihood that discrimination would engender violence, manifest feelings of anger, and promote hostile views of relationships.

As suggested by the findings from Roberts and colleagues (2012) longitudinal study examining the effects of perceived racial discrimination on risky sexual behaviors in a diverse sample of 745 Black youth, over time, perceived racial discrimination significantly increased the likelihood of Black youth engaging in risky sexual behaviors characterized by frequent engagement in sex without a condom and using alcohol/drugs during sex. As well, findings from Roberts et al. (2012) showed that anxiety and depression, as well as deviant peers and attitudes accepting sex before 15/16 as right mediated the effects of perceived racial discrimination on risky sexual behaviors, with attentive parenting buffering the effects of perceived racial discrimination on risky sexual behavior.

In another study, Burt and Simons (2015) used a social schematic theory of crime to examine the effects of perceived racial discrimination on propensities for delinquency in a sample of Black female youth. The researchers also investigated the extent to which a cultural knowledge structure (CKS), conceptualized as “hostile views of relationships, discounting the future, and disengagement from conventional norms,” mediated the effects of perceived racial discrimination on delinquency, with consideration for the likely moderating effects of familial cultural socialization and preparation
for bias (Burt & Simons, 2015, p.543). Findings revealed that perceived racial discrimination significantly augmented CKS, “which in turn has a strong influence on delinquency…net effect prior delinquency and age” (Burt & Simons, 2015, p.553). This association was also noted for Black males, who the researchers stated are “doubly deviant” (Burt & Simons, 2015, p.557). For both males and females, Burt and Simons (2015:555) found that “the effect of racial discrimination on offending is buffered by preparation for bias.” For Black females, Burt and Simons (2015:555) found that “the effect of racial discrimination on increasing the CKS is weaker among females who have received higher levels of preparation for bias.” For Black males, however, preparation for bias buffers the effects of perceived racial discrimination on delinquency by accentuating the “association between the CKS and offending,” thus “preparation for bias has an analogous reduction effect on the criminogenic effects of racial socialization…in gendered ways” (Burt & Simons, 2015, p.559).

In 2016, Unnever, Cullen, and Barnes (2016) tested a theory of African American offending by focusing on the effects of perceived racial discrimination on problematic behaviors, accounting for the potential mediating effect of school bonding. Perceived racial discrimination was measured in a similar way as Simons et al. (2006) and Burt & Simons (2015) wherein youth were asked to indicate “if [they] have felt discriminated against in the past year […]” because of their race/ethnicity, color, language, and country of origin (Unnever et al., 2016, p.147). School bonding is measured as “attachment to school, attachment to teachers, educational commitment” and students’ attitudes and affinity towards school and their teachers (Unnever et al., 2016, p.148). Findings from their study indicated that “the more African American youth perceive being discrimination against, the more likely they are to engage in externalizing behaviors over time” (Unnever et al., 2016, p.152). Additional findings showed that the effect of perceived racial discrimination on changes in externalizing behaviors between wave 1 and wave 3 “was reduced by 23 percent” as indicators of school bonding were included as mediators (Unnever et al., 2016, p.154). In their empirical test of the theory of African
American offending, which involves an examination of the direct effect of perceived racial discrimination, operationalized as “have felt discrimination against in the past year” because of race/ethnicity, color, country of origin, or language and the place where it occurred, on delinquency for a cohort of Black youth who participated in the Project on Human Development in Chicago Neighborhoods, Unnever and colleagues (2017:364) found that perceived racial discrimination had a positive and significant association with offending, as well findings showed that “the impact of racial discrimination on offending may partially operate through delinquent peers …”

*Perceived Discrimination, School Discipline, and Black Youth*

Empirical scholarship on the effects of perceived discrimination on school discipline for Black youth is nascent (Cooper et al., 2013; Bell, 2020; Butler-Barnes & Inniss-Thompson, 2020). In their exploratory study investigating the association between perceived racial discrimination and the mental health (i.e., depression), learning (i.e., school engagement), and behavioral outcomes (i.e., getting suspended) of 1,942 Black youth, Cooper and colleagues (2013:18) found that perceived racial discrimination, measured as “the frequency of routine and more subtle experiences of unfair treatment,” significantly increased the number of suspensions for Black boys and girls. Even more, Cooper and colleagues (2013:19) found that, for Black girls, “greater closeness with their fathers” exacerbated the positive effect of perceived racial discrimination on the number of suspensions. For Black boys, Cooper et al. (2013) found that not having a community mentor and having little to no religious connections increased the number of suspensions. Using a nationally representative sample of Black and Caribbean Black female youth, Butler-Barnes and Inniss-Thompson (2020) showed that perceived teacher discrimination significantly increased Black and Caribbean Black girls being suspended from school for one or more days.

All the same, empirical scholarship has accentuated the extent to which negative perceptions of Black youth increase their likelihood of being suspended from school (Ferguson, 2001; Noguera,
negative conceptions of Black youths’ behavior informs how teachers administer school punishment. As Ferguson (2001:586) noted, “systematic racial bias” embedded in school systems reinforce Black youth as “troublemakers,” providing justifications for the suspension and expulsion of Black youth. For instance, qualitative findings from Thompson and Gregory (2011:16), who examined associated risks of perceived discrimination on the academic potential of 46 underperforming black youth, indicated that perceptions of “unfair discipline practices in their classrooms…indicate racial bias.” More explicitly, Thompson and Gregory (2011) found that, “When asked whether race or gender impacts how discipline is handled in the classroom,” one student stated, “that persons Black so [teachers think they] might have trouble out of this person so they’ll just be aware of and be ready for something to happen…that’s it.” (p.16)

In interviews with thirty Black youth and thirty Black parents, Bell (2020:3) conducted a “critical qualitative study that focused on Black students’ and parents’ perceptions of out-of-school suspensions.” Findings from Bell (2020:4) indicated that students felt “targeted for out-of-school suspension based on their style of dress, hair, and music preference.” Take for instance the student Marcus (Bell, 2020). In his description of Marcus, Bell (2020:5) noted the difficulties that Marcus experienced with regards to his learning capabilities and that Marcus had been the recipient of “twenty out-of-school suspensions and repeating two grades because of an expulsion” (p.5). Now older, with long dreads, Marcus felt that,

the reason I was getting suspended is half the time it wasn’t me, but half the time I see it was – they was just profilin me and labeling me as, a certain bad person. Like, you know… Yeah, I was doin my work. In um, Math, certain classes they made me feel like I didn’t belong in there. So, I was skippin … I really didn’t want to skip Math, she made me wanna skip it. (Bell, 2020, p.5)

As argued in Baker’s (2019:108) conceptual framework of defiance and school discipline, as a result of “subtle, stunning, often automatic, verbal and nonverbal exchanges” that reinforce a positionality
of inferiority for Black youth, Black youth internalize underlining notions illustrative of deficit thinking, which, over time and at higher frequencies, contributes to their externalizing behaviors, which in turn, increases their risk of being suspended or, otherwise, disciplined by school faculty, staff, and administration.

A body of empirical literature indicates that Black youth involved in school discipline have the potential of experiencing academic failure due to a diminished capacity to engage in learning, as well having to repeat a grade, and dropping out (Fabelo et al., 2011; Lamont et al., 2013; Morris & Perry, 2016). As noted by Balfanz and colleagues (2013), each additional suspension received by a student decreased their odds of graduating high school by 20% and decreased their odds of enrolling in post-secondary schooling by 12%. In addition, just one suspension in 9th grade was associated with a twofold increase in the chance of students dropping out of school.

**Perceived Discrimination, Learning, and Black Youth**

As stated by Alexander, Schallert, and Reynolds (2009:186),

> Learning is a multidimensional process that results in a relatively enduring change in a person or persons, and consequently how that person or persons will perceive the world and reciprocally respond to its affordances physically, psychologically, and socially. The process of learning has as its foundation the systemic, dynamic, and interactive relations between the nature of the learner and the object of the learning as ecologically situated in a given time and place as well as over time.

The extent to which perceived discrimination deleteriously affects the learning outcomes of Black youth has received attention by available research literature (Neblett Jr., Philip, Cogburn, & Sellers, 2006; Smalls, White, Chavous, & Sellers, 2007; Thomas, Caldwell, Faison, & Jackson, 2009; Cooper et al., 2013; Griffin, Cooper, Metzger, Golden, & White, 2017; Assari & Caldwell, 2018; Benner et al., 2018; Varner et al., 2018). For instance, between October 1993 and January 1994, Sanders (1997:87) collected interview data from a sample of 28 Black American eighth graders, aged 12 to 15, enrolled in an urban school district on the development of an achievement ethos and the implications of this ethos on students’ academic performance, to include the extent to which “race and racism affect
African Americans’ ability to achieve in the United States?” Of those interviewed, Sanders (1997:89) found that seven students exhibited racial attitudes characteristic of “minimalization or denial of racism and racial barriers,” with ten students demonstrating a “strong awareness of racism and the challenges it presents to them and to other African Americans.” For the remaining eleven students, these youth were described as possessing moderate-to-low awareness of racism and racial barriers. It is within the high awareness category that Sanders (1997:90) revealed the extent to which racial discrimination increased levels of “motivation and academic effort” to the point that,

I want to come to school so that I can get an education, and make the White man know that just because he says that Black people are not going to succeed, doesn't make it so. I want to show him different (Beverly, 14 years old, 2.75 GPA)

In their study, Wong and colleagues (2003:1206, 1208) examined the association between perceived school discrimination, measured as “adolescent reported frequency they experienced negative treatment at school because of their race by their peers and by their teachers,” and indicators of school adjustment, which included, academic motivation (i.e., utility of school-based learning activities and education as a whole to future goals and aspirations; perceived self-competency in academic abilities), academic achievement (i.e., grade point averages), and mental health (i.e., depression, anger, and self-esteem) for a sample of 629 Black American youth. Wong and colleagues (2003) also accounted for the potential moderating effect of racial identity (i.e., private regard – youth’s feeling of positive connection to ethnic group) on the perceived school discrimination – student adjustment association. According to their findings, perceived teacher discrimination significantly lowered academic motivation, self-competency, self-esteem, and emotional resilience (Wong et al., 2003). Furthermore, Wong et al. (2003) found that perceived teacher discrimination was significantly associated with an increase in negative emotional states (i.e., anger and depression), deviant peer associations, and problem behaviors (i.e., damaging property, skipping class, physical assault). Findings from Wong et al. (2003:1214) revealed that for students who felt connected to their ethnic group, perceived school
discrimination resulted in “smaller decreases in self-concept of ability...school achievement [...]” For Wong and colleagues (2003:1214), this indicated that youth perceiving high rates of school discrimination and possessing a close connection with their ethnic were performing “as well or almost as well as their counterparts who perceived very little or no discrimination.”

For their study, Chavous, Rivas-Drake, Smalls, Griffin, & Cogburn (2008) examined the relationship between racial identity, perceived school discrimination, and academic engagement amongst a sample of 410 Black youth, noting the extent to which racial identity buffered the association between perceived school discrimination and indicators of academic engagement differently for boys and girls. Here, school discrimination was measured as “youths’ perception of negative peer treatment due to their race [...] perceptions of discrimination in class settings by teachers” in 8th and 11th grade (Chavous et al., 2008, p.642). Academic engagement was measured as “youths’ beliefs about the utility of school for the future [...] beliefs about their ability to do well in their classes in general and in comparison, with other students at their school” and students’ level of performance (i.e., grades in core academic subject areas for their 11th grade year) (Chavous et al., 2008, p.642). In other words, Chavous et al. (2008) operationalized academic engagement as school importance, academic self-concept, and school performance. Racial identity was measured the centrality of Blackness to youths’ self-concept (Chavous et al., 2008).

For Black boys, Chavous and colleagues (2008) found that school discrimination significantly reduced the importance youth attributed to school, as well compromised their academic self-concept. For Black girls, Chavous and colleagues (2008) found that school discrimination significantly lowered their GPA and level of importance attributed to school. Racial centrality was found as a protective factor for both Black boys and Black girls (Chavous et al., 2008). Specifically, this finding indicated that, even in the context of school discrimination, Black boys and girls with racial identities centered on the importance of their Blackness experienced significantly greater levels of academic (Chavous et
For Black girls, Chavous et al. (2008) found that, even in the face of high levels of perceived peer discrimination in school, as long as their identities were grounded in their blackness, these youth were significantly more likely to attribute importance and value to their education and possess a positive academic self-concept.

In another investigative study on the effects of perceived discrimination on learning outcomes for Black youth, Dotterer and colleagues (2009) examined the association between perceived racial discrimination on indicators of school engagement amongst a sample of 148 Black youth in Grades 6-12. Perceived racial discrimination was operationalized as Black youths’ perceptions of “discrimination by peers and teachers against their racial group in general,” as well as personal discrimination, measured as “experiences with prejudice and discrimination directed at themselves by peers and teachers” (Dotterer, McHale, & Crouter, 2009, p.8). School engagement was operationalized as levels of school self-esteem, school bonding (i.e., sense of belonging), and grades (Dotterer et al., 2009). Results from their study showed that perceived school-based discrimination significantly lowered student-reported self-esteem and levels of school bonding (i.e., sense of belonging). Using a sample of 46 low performing Black youth, Thompson and Gregory (2011) examined the associated risks of perceived discrimination on indicators of learning, to include the role of school racial support and adolescent identity, which encompassed youths’ identification with academics and racial centrality, for the first two years of high school. Perceived discrimination was measured as the frequency by which Black youth perceived unfair treatment due to their race (Thompson & Gregory, 2011). The outcome measure of classroom engagement was operationalized as “their level of classroom engagement, effort, and motivation to complete tasks in the classroom” (Thompson & Gregory, 2011, p.12).

Findings indicated that, over the course of 2 years, “students who reported experiences of discrimination in their 1st year of high school reported being less engaged during their 2nd year of high
school” (Thompson & Gregory, 2011, p.14). Furthermore, Thompson and Gregory (2011:15) found that identification with academics significantly accentuated the effects of perceived discrimination on classroom engagement, such that, “despite the negative consequences of perceived discrimination,” low-achieving Black youth, irrespective of gender, who “identified with the importance of schooling were more likely to be engaged in their classrooms in the 10th grade.” In their longitudinal analysis of an economically diverse sample of 630 Black youth, Wang and Huguley (2012) explored the effects of school-based discrimination, which the researchers operationalized as “students’ perceptions of discrimination in class settings by teachers [and] youths’ perceptions of how often they experienced negative peer treatment due to their race,” on indicators of educational success (i.e., academic achievement, educational aspirations, sense of belonging and value of education, & self-regulation and initiative-taking) (p.1720). Findings from Wang and Huguley (2012) revealed that, longitudinally, perceived school-based discrimination, particularly perceived teacher discrimination, significantly lowered Black youths’ grade point averages and educational aspirations, to include, weakening their sense of school belonging and the value they attributed to education, as well as diminishing their capacity for self-regulation and initiative-taking. These negative effects were found to be “more pronounced for African American males than for females” (Wang & Huguley, 2012, p.1728).

While their study, which relied on a sample of 160 Black youth, focused on the degree to which racial socialization, more so cultural socialization, buffered the effects of perceived school discrimination, which the researchers measured as “the frequency of students’ perceptions of teacher-based discrimination in class settings” and their negative interactions with other students “because of their race,” on future academic expectations, Trask-Tate and colleagues (2014:286) found that perceived teacher discrimination significantly lowered youths’ academic aspirations. Banerjee and colleagues (2018) examined the relationship between perceived school-based discrimination, which measured the frequency to which Black youth experienced negative treatment by their teachers and
peers in the school setting, indicators of academic achievement (i.e., academic persistence, academic self-efficacy, and academic self-concept) for a sample of 74 Black youth. In their study, academic persistence was measured as “adolescents’ re-engagement with material after difficulty or failure,” academic self-efficacy was measured as “children’s beliefs about their abilities to successfully complete their schoolwork,” and academic self-concept was measured as “children’s perceptions of their own academic abilities in school subjects relative to their age mates” (Banerjee, Byrd, & Rowley, 2019, p.5). Findings from their study indicated that perceived teacher and peer discrimination significantly lowered levels of academic persistence and academic self-efficacy while also compromising the academic self-concept of Black youth.

While investigating the association between perceived school discrimination and academic engagement in a sample of 1,659 Black youth enrolled in a predominately white, middle class school district (PWSD) and a predominately black, working-class school district (PBSD), Leath and colleagues (2019) also explored the likely buffering effect of racial identity. Perceived school discrimination was measured as the frequency at which Black youth perceived unfair treatment by their teachers and peers, with academic engagement being measured as “academic curiosity and academic persistence, or the extent to which students continue class effort in the face of challenges” (Leath, Mathews, Harrison, & Chavous, 2019, p.1331). Racial identity was subdivided into racial centrality or the extent to which “youth view their racial identity as an important part of their self-concept,” and public regard, “the affective meanings youth attach to their racial identity…how others in society view Black people, reflecting youths’ awareness of societal racial bias” (Leath et al., 2019, p.1321). Based on findings from Leath et al. (2019), perceived school discrimination, irrespective of school districts, negatively impacted indicators of academic engagement. For instance, in District 1 (PBSD), results indicated that teacher and peer discrimination significantly lowered levels of academic curiosity in both Black boys and girls (Leath et al., 2019). Only peer discrimination was found to
significantly lower levels of academic persistence for boys and girls attending school in District 1 (PWSD) (Leath et al., 2019).

For Black youth enrolled in District 2 (PBSD), findings showed that perceived teacher and peer discrimination significantly lowered levels of academic curiosity or the willingness of Black youth to start something new in class; however, when Black girls possessed lower levels of racial centrality, even with high levels of perceived teacher discrimination, academic curiosity increased (Leath et al. 2019). Only for Black boys with high levels of race centrality, in the face of high perceived teacher discrimination, did Leath and colleagues (2019) find that academic curiosity increased. For Leath and colleagues (2019), these findings indicated that a racial identity grounded in public regard functions as a protective factor for Black boys, while for Black girls, racial centrality promotes academic curiosity. In a recent study by Gale and Dorsey (2020), the effects of perceived racial discrimination, both in-school and out-of-school, on the academic and non-academic outcomes of 557 Black 9th grade students, with consideration for the role of context and gender, were examined. Perceived in-school discrimination measured how often Black 9th grade students felt that they were being treated unfairly because of their race; conversely, perceived out-of-school discrimination measured “how often adolescents were discrimination against because of their race” (Gale & Dorsey, 2020, p.5). Grades, academic persistence, and perceptions of school climate were indicators for academic outcomes, while youths’ psychological well-being served as an indicator for non-academic outcome (Gale & Dorsey, 2020).

Findings from Gale and Dorsey (2020) showed that perceived in-school racial discrimination significantly lowered grades and diminished Black students’ ability to persist with academic tasks in the face of difficulty or initial failure, irrespective of gender. Further, findings indicated that “in-school racial discrimination appeared to have a stronger association with academic persistence,” while neither differed in their effects on grades (Gale & Dorsey, 2020, p.11). As a moderator, however, gender
significantly buffered the effects of perceived in-school racial discrimination more than perceived out-of-school racial discrimination on perceptions of school climate, such that “among girls, decreases in in-school racial discrimination were associated with high school climate” (Gale & Dorsey, 2020, p.10). Though no gender differences were noted, Gale and Dorsey (2020) found that perceived in-school racial discrimination and perceived out-of-school racial discrimination significantly compromised the psychological well-being of Black 9th grade students.

The Role of School Bonding on the Educational Outcomes of Black Youth

According to Maddox and Prinz (2003:31), school bonding constitutes the “connections that youth have with their schools and various aspects of their academic lives.” More specifically, school bonding accentuates the attachment that youth have to their school and teachers, their level of investment in school activities and the prioritization of education as valuable to future life goals, and their participation in and endorsement of school activities (Maddox & Prinz, 2003; Libbey, 2004; Bryan et al., 2018). In citing Cernkovich & Giordano (1992), Maddox and Prinz (2003:32) states that, as a construct, school bonding is integrated into conceptions of school commitment given “low empirical support as an independent dimension.” Operationally, however, various approaches for measuring school bonding have emerged (Maddox & Prinz, 2003; Libbey, 2004). Nevertheless, Maddox and Prinz (2003:38) argue that, as a result of the “few measures devoted exclusively to school bonding” and that these measures “usually derived from items that are part of a larger measure,” empirical scholarship assessing school bonding focus on “an aspect of school bonding as part of a larger matrix of constructs rather than on fully assessing school bonding per se.” Thus, it is likely that measures of school bonding function more as proxies that possess some degree of construct validity yet are subjected to criticisms.

Nevertheless, empirical scholarship has examined the impact of school bonding on the educational outcomes of Black youth (Crosnoe et al., 2004; Oelsner et al., 2011; Bryan et al., 2012;
Jose et al., 2012; Yang & Anyon, 2016). For instance, in applying a dual-factor model of mental health, which accounts for indicators of subjective well-being and psychopathology, Rose and colleagues (2017) explored, through latent class analysis, the association between patterns of mental health and educational experiences among a nationally representative sample of 1,170 Black youth. Data for their study is drawn from the National Survey of American Life – Adolescent Supplement (NSAL-A).

School bonding was operationalized as “the close ties students have with school, the investment they make in school, and their positive views of the school environment…consistency with norms and values” (Rose et al., 2017, p.2322). According to their findings, “compared to adolescents in the positive mental health group, youth in the vulnerable mental health group and the symptomatic but content group had lower odds of reporting high school bonding…Thus, higher school bonding was significantly associated with better mental health” (Rose et al., 2017, p.2329). Furthermore, findings showed that youth characterized as troubled had “lower odds of reporting higher school bonding, and higher odds of reporting high suspension compared to those in positive mental health group….as school bonding decreased, the odds of being in the troubled mental health group increased” (Rose et al., 2017, p.2330).

Using a sample of 12th graders from the Educational Longitudinal Study of 2002, Bryan and colleagues (2012) examined the extent to which school bonding affected math achievement scores. Operationalized as attachment to teachers, school commitment (i.e., beliefs and behaviors), and attachment to school (i.e., satisfaction, perceived fairness, and perceptions of safety), Bryan and colleagues (2012) found that school bonding significantly improved academic achievement for 12th graders. Specifically, “students who did not like school at all had significantly lower academic achievement than those who liked school a great deal,” and students who “possess appropriate school commitment behaviors” were significantly more likely to report higher math achievement scores (Bryan et al., 2012, p.474-475).
Additionally, empirical evidence has demonstrated the extent to which perceived discrimination impacts levels of school bonding for Black youth, specifically, racial minority youth, broadly (Bryan et al., 2018). In their examination of the effects of perceived school-based discrimination and other educational barriers on the propensity of Latina/o students dropping out of high school, McWhirter, Garcia, and Bines (2018) found that school bonding, conceptualized as school connectedness mediated the relationship between perceived school-based discrimination and thoughts of dropping out of high school. In assessing the impact of perceived racial discrimination on indicators of academic engagement for a sample of 148, 6th through 12th grade Black youth, Dotterer and colleagues (2009:10-11) found that “general experiences with discrimination were significantly and negatively related to school self-esteem and to school bonding…personal discrimination was [significantly] and negatively related to school self-esteem and school bonding […] more discrimination was associated with less school bonding.”

In their study exploring the effects of perceived teacher discrimination on levels of school bonding, with consideration for the potential buffering effects of racial pride and religiosity, for a nationally representative sample of 810 Black and Caribbean Black youth, Butler-Barnes and colleagues (2018) found that, for Black and Caribbean Black youth, perceived teacher discrimination significantly lowered levels of school bonding. In addition, findings showed that Black youth with “moderate levels of private regard and perceiving more teacher discrimination had higher school bonding,” while those with lower levels of private regard and high perceptions of teacher-based discrimination “reported lower school bonding” (Butler-Barnes et al., 2018, p.35-36). For Caribbean Black youth, moderate levels of subjective religiosity and high perceptions of discrimination from teachers significantly lowered levels of school bonding (Butler-Barnes et al., 2018). Recently, a study conducted by Butler-Barnes and Inniss-Thompson (2020), which used a nationally representative sample of Black and Caribbean Black girls to assess the impact of perceived teacher discrimination on
school discipline, found that high levels of school bonding significantly reduced the likelihood that Black girls would be subjected to school discipline.

*Racial Socialization as a Protective Factor for Black Youth*

According to Peters and Massey (1983:210), as a result of “knowledge that in America there is a pervasive negative stigma attached to being Black,” Black families and members of extended kinship networks have adapted to this reality through racial socialization. Hughes and colleagues (2006) conceptualize this culturally specific practice as the transmission of information, values, and perspectives that promote a sense of racial pride and knowledge by reinforcing the importance of racial heritage and culture to identity exploration and development. Available research has underscored the importance of racial socialization in promoting academic success amongst Black youth experiencing discrimination, both in general and within the school system (Dotterer et al., 2009; Thomas et al., 2009; Benner & Graham, 2013; Banerjee et al., 2018). For instance, findings from Sanders (1997) revealed that nature of racial socialization as a source of intrinsic motivation for Black youth experiencing perceived discrimination in the class setting. As one student commented,

> I will never forget who I am…I have been taught…When I was little, my dad said, ‘These are White people and these are Black people. You are Black. Blacks and Whites are equal. White people remember who they are, and Blacks need to remember who they are. It is important to remember. Even though Whites and Blacks are different, they still have to interact.’ I think he gave pretty good advice. (Sanders, 1997, p.90).

In their study, which examined the links between perceived racial discrimination and school engagement, Dotterer and colleagues (2009:11) found that “adolescents who received more preparation for bias from their parents reported greater school self-esteem,” as well, for Black boys, “cultural socialization was significantly related to school bonding.” Wang and Huguley (2012:1721), in their investigative study of the effects of perceived racial discrimination on the educational success of Black youth, found that perceived teacher discrimination significantly increased the educational success of Black youth when youth received racial messages that “promote feelings of racial
knowledge, pride, and connection.” Even more, in the face of high levels of perceived peer discrimination, Black youth socialized to take pride and have a connection with their Black heritage were significantly more likely to report higher GPA, an indicator of academic achievement (Wang & Huguley, 2012). Additionally, in assessing the moderating effects of cultural socialization and preparation for bias, indicators of racial socialization, Banerjee et al. (2018) found that at high levels of perceived peer discrimination, Black youth with high levels of preparation for bias and high levels of cultural socialization were significantly more likely to possess an academic self-concept, perceive their academic ability more positively, and report higher levels of academic persistence (Banerjee et al., 2018). In terms of perceived teacher discrimination, findings showed that, for students with higher levels of cultural socialization and higher perceived levels of teacher discrimination, these students were more likely to demonstrate positive academic outcomes (Banerjee et al., 2018). Racial socialization also emerges as a significant moderator to the effects of perceived racial discrimination on delinquency in Black youth (Burt et al., 2012; Burt & Simons, 2015).

As captured by Hope and colleagues (2014), racial socialization provides a means by which Black youth are socialized to cope with perceived discrimination and other challenges through academic aspirations. In their qualitative inquiry into the realities of discrimination and inequality within schools from the perspective of eight Black students participating in a Youth Participatory Action Research (YPAR) program, Hope and colleagues (2014) explored the various ways that these eight Black youth, conceptualized issues of racial discrimination and inequality within their schools, as well the implications of parental and community socialization on their social consciousness (i.e., their ability to critically analyze and evaluate these issues and address them). In all, while findings from semi-structured interviews reinforced the saliency of racial discrimination within the lives of these eight Black youth, results revealed the extent to which racial socialization processes by parents and community members that facilitated “an awakening, where students understand that their race does
not serve as a legitimate basis for unequal treatment, but their lived experiences serve as counterclaims to the myth of a post-racial society” (Hope et al., 2014, p.18). One student, Jenna, described how, despite negative stereotypes of Black students, her father,

will talk about um what Black people have to go through, and that, how the economy is, how we have to, like I said, put ourselves out there more. Cause like there’s a stereotype saying that um, white people are better that Black people still going on. So we have to put ourselves out there actually you know, try, that’s why they have to get good grades and go to college. And they said college is no option, you have to go so. (Hope et al., 2014, p.18)

SUMMARY AND CRITIQUE OF THE LITERATURE

Available scholarly research has revealed that perceptions of discrimination, in-school and/or out-of-school, impairs the mental health of Black youth by increasing levels of perceived stress, manifesting currents of anger, depression, and anxiety, as well as lowering psychological well-being (i.e., self-acceptance, autonomy, perceived positive relationships with others, and personal growth) and overall satisfaction with life (Seaton et al., 2008; Seaton et al., 2011; Seaton et al., 2014; Smith-Bynum et al., 2014; Lanier et al., 2017; Patcher et al., 2018; Benner et al., 2018). In addition, available research scholarship has shown that perceived discrimination, both within school and outside of school, encourages negative behaviors by Black youth, such as delinquency, violence, problem and aggressive behaviors, and deviant health risk behaviors, as responses to perceived discrimination (Simons et al., 2003; Caldwell et al., 2004; Brody et al., 2006; Burt et al., 2012; Fuller-Rowell et al., 2012; Roberts et al., 2012; Unnever et al., 2016). Furthermore, available empirical scholarship revealed that perceptions of discrimination, within school and outside of school, augments the risk of Black youth being involved in school discipline (Cooper et al., 2013; Bell, 2020; Butler-Barnes & Inniss-Thompson, 2020). Finally, available research literature has found that perceptions of discrimination within schools and outside of schools diminishes the capacity of Black youth to engage and commit to their learning and achieve academically (Wong et al., 2003; Neblett Jr. et al., 2006; Chavous et al., 2008; Thompson & Gregory, 2011; Wang & Huguley, 2012; Assari et al., 2018; Leath et al., 2019; Gale
& Dorsey, 2020). Together, this body of available research suggests that perceptions of discrimination, both within the context of schools and outside of school, represent a risk to the academic success and positive youth development of Black students.

School bonding, conceptualized as attachments to school and teachers, educational commitment and involvement, and the value utility that racial minority students, more so Black students, attribute to education, has emerged as a potential mediator to the effects of perceived discrimination on learning outcomes (Bryan et al., 2018; McWhiter et al., 2018). As suggested by findings from Butler-Barnes and Inniss-Thompson (2020), school bonding also has the capacity to lower the risk of Black students, particularly Black female students, from being disciplined in school. Considering the effects of perceived discrimination on problem behaviors through school bonding, Unnever and colleagues (2016) found that weakened school bonds increased the likelihood that Black youth perceiving discrimination engaged in problem behaviors. As a protective factor, available research literature has demonstrated the extent to which racial socialization by parents in the form of cultural socialization and preparation for bias reduces the effects of perceived discrimination (i.e., in-school and/or out-of-school) on the mental health outcomes of Black youth (Seaton et al., 2014; Harris-Britt et al., 2017), as well reduces the effects of perceived discrimination on negative student behavior (Burt et al., 2012; Burt & Simons, 2015) and learning outcomes (Dotterer et al., 2009; Hope et al., 2014; Banerjee et al., 2018) for Black youth. Arguably, available research literature suggests that academic aspirations likely has a potentially buffering effect on the association between perceived discrimination and learning outcomes (Hope et al., 2014) and mental health outcomes (Gaylord-Harden & Cunningham, 2009; Lambert et al., 2009; Seaton et al., 2014).

Though illuminating to the effects of perceived discrimination on the educational experiences of Black youth, the available research literature has some identifiable gaps warranting attention. First, while available research literature examines the effects of perceived discrimination, broadly defined,
on negative behavior in Black youth through negative emotional state (Simons et al., 2003; Simons et al., 2006; Burt & Simons, 2015), few studies have isolated the effects of perceived teacher discrimination on negative behavior in a nationally representative sample of Black students through negative emotional state. In addition, while their study revealed that lower levels of school bonding mediated the effects of perceived discrimination on problem behaviors in Black youth, Unnever and colleagues’ (2016) suggest that more research is needed to account for the effects of perceived discrimination on Black youths’ behaviors in school.

Another gap in the available research literature is the lack of study on the effects of perceived discrimination, more broadly, perceived teacher discrimination, more specifically, on the risk of Black youth being suspended from school, to include identifying mechanisms likely to explain or mediate this association, as well moderate this association. In their study, Butler-Barnes and Inniss-Thompson (2020) found that greater levels of school bonding reduced the likelihood of Black girls being disciplined in school. Provided research scholarship emphasizing how Black youths’ behavior is considered as cause for the use of suspensions and other forms of school-based discipline, the degree to which negative student behavior influences the association between perceived teacher discrimination and the application of school discipline is also lacking. Baker (2019) proposes in her model that defiant behaviors by racial minority students likely plays a role in how teachers sanction the behaviors of racial minority students.

While available empirical scholarship examined the effects of perceived school-based discrimination, broadly, and perceived teacher discrimination, in particular, on the learning outcomes of Black youth, with attention to the role of racial socialization and racial identity as potential buffers (Sanders, 1997; Trask-Tate et al., 2014), few studies have explored intervening mechanisms such as school bonding. According to findings from Bryan and colleagues (2018), for Black and Caribbean Black youth the effects of perceiving discrimination by their teachers on academic achievement was
mediated by significantly greater levels of school bonding. Also, available scholarship has found that being disciplined in school lowers the academic success of students (Fabelo et al., 2011; Balfanz et al., 2013; Morris & Perry, 2018), as well that Black youth are disproportionately suspended and expelled from school than their White counterparts (Smith & Harper, 2015; U.S. Department of Education, Office of Civil Rights, 2019). Hence, it is likely that being suspended from school for one or more days mediates the effects of perceived teacher discrimination on learning outcomes for a nationally representative sample of Black youth.

While racial socialization, conceptualized and measured as the exchange of beliefs, attitudes, and behaviors from parents that coincide with aspects of cultural socialization and preparation for bias, has been found by available research to buffer the effects of perceived discrimination on the mental health outcomes and behavior of Black youth (Dotterer et al., 2009; Burt et al., 2012), according to Brown and colleagues (2020:149), current conceptualizations and measurements of racial socialization are based on “parental influence exclusively...ignore frequency of message transmission...neglect anticipatory race socialization and the most useful message received ... and disregard that race socialization can involve harmful messages.” Furthermore, it is conceivable that academic aspirations illustrate a form of active coping likely to be socialized to Black youth from their parents, specifically, but from other sources of socialization (Hope et al., 2014). However, few available studies have examined the potential role of academic aspirations as a buffer to the effects of perceived teacher discrimination on levels of school bonding, the likely manifestation of negative emotional state, and/or investment in student learning through levels of school bonding.

Finally, studies utilizing a criminological perspective to examine the effects of perceived discrimination on student behavior focuses on negative or deviant behaviors, such as delinquency or aggressive behaviors (Simons et al., 2003; Burt et al., 2012; Unnever et al., 2016; Unnever et al., 2017). Few studies have considered the extent to which perceived discrimination, more specifically perceived
teacher discrimination, not only increases the likelihood of Black students engaging in problem or negative behaviors but has the potential of resulting in prosocial or positive behaviors that reinforce Black youths’ investment in learning as a form of prosocial coping.

In addressing these gaps, the current study utilizes a nationally representative sample of Black youth to explore the direct and indirect effects of perceived teacher discrimination on the educational experiences of Black youth. This study employs Agnew’s (1992, 2006) general strain theory as a guiding theoretical framework for investigating the extent to which perceived teacher discrimination, as an inescapable negative stimulus, engenders negative emotional state, which in turn, not only leads to the potential for disobedience, but likely results in Black youth investing time in their learning as a form of prosocial coping. As well, under the guise of this criminological theory, this study integrates school bonding as a potential mediator to the effects of perceived teacher discrimination on disobedience. Also, given the educational context, this study considers the role of school bonding as an intervening factor in explaining the manifestation of negative emotional state likely to stem from perceptions of discrimination by teachers. In addition to adding to available research literature on the effects of perceived discrimination on negative student behavior through negative emotional state and school bonding, this study also contributes to available research literature by exploring the extent to which perceived teacher discrimination increases the risk of Black students being suspended from school for one or more days through levels of school bonding and negative emotional state, with disobedience as a potential moderator. Finally, this study adds to the available research literature by exploring the role of school bonding as a mediator to the effects of perceived teacher discrimination on Black youths’ investment in learning through time spent doing homework.

Two theoretical perspectives guide this dissertation. First, Agnew’s (1992, 2006) general strain theory (GST) serves as the theoretical framework that explains perceived teacher discrimination as a source of strain likely to impede upon the learning of Black youth by augmenting negative emotional
state, which in turn, engenders negative student behavior, as well likely results in prosocial student behavior, such as investing time in doing homework outside of school. Second, and equally important is Carter’s (2007) conceptual framework of Race-Based Traumatic Stress (RBTS), which provides a supplement to understanding how perceived teacher discrimination, as a potential source of traumatic stress, harms the emotional and psychological wellbeing of Black youth and likely informs their behaviors. Thus, linking these two theoretical perspectives provides a unique understanding of the complex effects of perceived teacher discrimination on the educational experiences of a nationally representative sample of Black youth in the United States.

THEORETICAL FRAMEWORK

In 1992, Robert Agnew refashioned classical strain theories of Merton (1938), Cohen (1955), and Cloward and Ohlin (1960) by incorporating the transactional model of stress and coping, as well as integrating research scholarship focusing on justice/equity and aggression. Coined, General Strain Theory (GST hereafter), this emerging theoretical paradigm linked stress or strain to deviance/crime. In doing this, GST provides an appropriate framework for understanding the association between racial discrimination and deviance/crime. Furthermore, Agnew (1992, 2001) unearths the types of strain likely to engender negative emotional states, which in turn, manifest in potential criminogenic responses. Thus, GST is distinguished from classical strain theories due to its emphasis on “negative relationships with others and its insistence that such relationships lead to delinquency through the negative emotional affect … anger… they sometimes engender” (Agnew, 1992, p.49).

Stress plays a central role in GST; stress or stress functions as the antecedent factor influencing crime and delinquency (Agnew 1992, 2013). Agnew (2001) demarcated strain as: a failure to achieve positively valued goals, the removal of positive stimuli, and the presence of noxious stimuli. Traditional strain theories of Merton (1938), Cohen (1955), and Cloward and Ohlin (1960) stress that an inability to achieve monetary success explains individual propensities for crime and deviance. GST,
in contrast, broadens this conception to account for “goals involving thrills/excitement, high levels of autonomy, masculine status and the desire for more money in a short period of time” (Agnew, 2012, p.35). A second type of strain involves the actual or perceived loss of a positively valued stimuli. The third type of strain is the presentation of a noxious stimuli or the presentation of an inescapable threat, such as experiencing school-based discrimination (Agnew, 2006). Together, these three types of strain trigger the potential development of negative emotional states (Agnew, 1992).

Drawing from the stress literature, Agnew (1992) underscores the extent to which strain fosters psychological maladjustments in the form of negative emotions. In particular, Agnew (1992, 2015) identifies anger, frustration, depression, fear, and disappointment as negative emotional states likely to materialize following one’s exposure to one of the three types of strains previously described. However, for the purposes of GST, anger is centralized as the most critical emotional state responsible for linking strain and crime/deviance due, in part, by the nature of anger in increasing one’s “level of felt injury, creates a desire for retaliation/revenge, energizes individual for action, and lowers inhibitions” to the point that aggression becomes a justifiable response (Agnew, 1992, p.60, citing Kemper, 1978; Zillmann, 1979; Averill, 1982; Berkowitz, 1982; Kluegel & Smith, 1986: Chapter 10). Still, Agnew (1992) recognizes the impact of other negative affect types, such as depression, on propensities for crime/deviance. In turn, these negative emotional states create pressure for corrective action; crime/deviance emerges as a potential response or coping strategy for alleviating strain. In this view, strain has the potential for creating a “predisposition for delinquency or function as a situational event that instigates a particular delinquent act” (Agnew, 1992, p.60). Nevertheless, despite the importance given to negative emotional states, strain also increases the likelihood for crime/deviance by “reducing social control … fostering social learning of crime … and leading to traits conducive to crime” (Agnew, 2013, p.654).
Despite the universality of experiencing strain, not all coping strategies involve crime/deviance as a response. In particular, Agnew (2013) argues that strains that are high in magnitude, unjust, associated with low social control, and that incentivize criminal coping are likely to result in deviant/criminal coping. Drawing from justice and attribution literatures, Agnew (2001:329) argues that stressful events or conditions are likely considered as unjust “when individuals believe it involves voluntary and intentional violation of a relevant justice norm” (citing Crittenden, 1983; Crittenden, 1989; Tedeschi & Felson, 1994; Tyler, Boeckmann, Smith, & Huo, 1997). In assessing magnitude, Agnew (2001) noted that strains high in magnitude (i.e., severe, frequent, of long duration, recent, etc.) likely lower the capacity of individuals to cope. As noted by available data, chronic stressors, or stressful events of long duration, have a greater negative affect on individuals (Turner & Wheaton 1995), as well unresolved stressors possess the capacity of generating distress, particularly amongst low-income, racial minorities, given that these “signal future conflicts of a more serious nature” (Agnew 2001:334). Essentially, the more chronic the stressor, the more likely individuals develop currents of frustration and anger, specifically when the stressors are unresolved; therefore, prolonging one’s experience with strain and exacerbating their risk for crime/deviance (Agnew, 2001). Finally, Agnew (2006) argues that the extent to which the strain poses a threat to core goals, needs, values, activities, and/or identities further impacts whether an individual respond to strain with crime/deviance (Agnew, 2006).

Despite empirical tests of GST, which has yielded mixed results, in general, though, empirical evidence suggests that strain (i.e., negative life events or relationships with others) is associated with deviance/crime, as well negative emotional states, particularly anger, to some degree, mediates this association (see Agnew, 2006 for review). Additionally, empirical evidence has examined factors likely to condition the strain-deviance link, such as low self-control, self-efficacy, social support, social control, deviant peer associations, and criminogenic beliefs (Aseltine, Gore, & Gordon, 2000;
Mazerolle & Maahs, 2000; Broidy, 2001; Jang & Johnson, 2005). Baron (2007) found that, amongst a sample of high-risk homeless stress youth, financial strain impacted crime, but conditional effects varied by gender. For instance, “compared to males, monetary dissatisfaction and relative deprivation had a stronger impact on female violent crime when they upheld attitudes supportive of deviance,” while boys who were financially strained engaged in more property offending when deviant attitudes were high (Baron, 2007, p.296). In another study, findings from Jang & Johnson (2005) revealed that religiosity significantly conditioned the effects of strain for Black girls, but not Black boys. Derived from stress, coping, and resilience literatures, Agnew (2013:661) noted the potential buffering effects of “positive identity, optimistic orientation, cognitive flexibility, academic and cognitive skills, support from non-family members, self-efficacy, and religiosity.” As mentioned by Agnew (2013:667), attention to “a set of characteristics that are conducive to criminal coping […] improve our ability explain, predict, and control crime.”

Racial Discrimination and GST

As a determinant of crime and deviance, racial discrimination has largely been neglected within the field of criminology. Described by Unnever and colleagues (2009) as ‘a criminological blind spot,’ this neglect of criminological scholarship on the effects of discrimination on offending patterns represents a missed opportunity within the field to understand differences in offending patterns between Black and White youth (Agnew & Brezina, 2015) and involvement in the criminal justice system (Gabbidon, 2007; Piquero, Schubert, & Brame, 2014). More specifically, Unnever and colleagues (2009) pinpointed this criminological blind spot within Hirschi’s (1969) analysis of data taken from the Richmond Youth Project, which accounted for race relations during the mid 1960s, providing a “rich source for examining whether perceived racial discrimination is related to adolescent offending” (Unnever, Cullens, Mathers, & McClure, 2009, p.382). Accordingly, in his study, Hirschi (1969) aimed to falsify Cloward and Ohlin’s theoretical argument that linked delinquency to unjust
deprivation. In particular, per their theory, Cloward and Ohlin (1960) postulated that, as a result of
discrimination, minority youth were more likely to develop unjust sentiments that “justified
withdrawal of attributions of legitimacy from conventional rule of conduct” (Unnever et al., 2009,
citing Cloward & Ohlin, 1960, p.121). Hence, Cloward and Ohlin (1960) advanced the claim that
unjust deprivation, as an indicator of discrimination, provided an opportunity for minority youth to
engage in crime/deviance as a response. Even more, Cloward and Ohlin (1960) were not the first to
advance this potential link between discrimination and deviance, for Du Bois (1973), in his seminal
work, *The Philadelphia Negro*, accentuated the extent to which White racism created a “social
environment of excuse, listless despair, careless indulgence and lack of aspiration to work” that pushed
Black youth into deviance and crime (Unnever et al., 2009, citing Du Bois (1973:351).

Consequently, findings from Hirschi (1969) invalidated Cloward and Ohlin (1960) claim that
unjust deprivation explained delinquency, stating that “causes of crime are general and not race-
specific” (Unnever et al., 2009, p.383). The implication to the field of criminological inquiry and
understandings of racialized offending patterns was one that omitted the role of racial inequality and
mechanisms of stratification as potential risk factors for Black American offending. In his efforts of
revitalizing classical strain theories through GST, Agnew (2001) provided a theoretical basis for
examining racial discrimination as a potential determinant of criminal offending. Particularly, in his
identification of strains most likely to be criminogenic, Agnew (2013) included discrimination. More
so, Agnew (2001:347) asserted that “experiences with prejudice and discrimination based on …
race/ethnicity” are likely to produce a criminogenic response because they are perceived as unjust and
high in magnitude, as well possess the capacity of reducing social control and incentivizing
crime/deviance as appropriate forms of coping and relief.

Thus, as a recurrent staple in the lives of Black Americans, especially Black youth, racial
discrimination not only poses a serious threat overall welfare and development, but contributes to the
presentation of negative emotional states, impairs cognitive minimization, and exhausts coping resources. In turn, crime/deviance is rendered as an effective form of coping (Agnew, 2001; Simons et al., 2003; Simons et al., 2006).

Recent research has emerged to suggest that racial discrimination illustrates an insidious predictor of deviance in the lives of Black American youth. For instance, in their examination of panel data drawn from approximately 306 Black American youth participating in the Family and Community Health Study, Burt, Simons, and Gibbons (2012) investigated the link between perceived experiences of racial discrimination on risk of offending, to include the role of ethnic/racial socialization as a proposed protective factor. Accordingly, Burt and colleagues (2012) found that racial discrimination, operationalized as the frequency by which youth experienced different acts of discrimination, significantly increased Black male youths’ engagement in delinquency, which was broadly defined as shoplifting, marijuana use, theft of personal property, assault with a weapon, animal cruelty, etc.). Furthermore, Burt et al. (2012) found that the effects of racial discrimination on delinquency was mediated by depression, deviant peer associations, a disengagement from conventional norms (i.e., belief that deviance is an appropriate response to life problems), and hostile views of relationships. Utilizing three waves of data collected by the Family and Community Health Study for a sample of Black American youth from 2 states in the United States, Martin and colleagues (2010) found that “discrimination was significantly related to violent as well as general delinquency and was an important mediator of effects of concentrated disadvantage and racial isolation on delinquency” (p.673). Additional findings revealed that the effects of discrimination significantly predicted changes in delinquency over time, buttressing GST in the sense that racial discrimination, both in the short term and long term, represents a source of strain and a determinant of deviance in Black American youth.

Even in the case of sexual risk behaviors, research scholarship reinforces racial discrimination as a risk factor (Roberts et al., 2011; Stock, Gibbons, Peterson, & Gerrard, 2013; Hicks & Kogan,
In their study, the researchers examined the extent to which experiences with racial discrimination predicted the engaged of approximately 745 Black American youth in risky sexual behaviors (Roberts et al., 2011). Their findings indicated that, over time, perceived racial discrimination at 10 and 11 significantly predicted an increase in the risky sexual behavior (i.e., number of times youth engaged in sex, condom use, use of alcohol and drugs during sex, and virginity status) in Black American youth. In alignment with GST, Roberts and colleagues (2011) found that negative affect (i.e., general anxiety and depression), deviant affiliations, and attitudes accepting that sex at age 15/16 was not at all wrong, to include having unprotected sex, mediated the association between racial discrimination and risky sexual behavior. Furthermore, in exploring the potential for moderation, findings from Roberts et al. (2011) revealed that attentive parenting (i.e., warmth/affection, supervision) significantly buffered the effects of racial discrimination on youth’s sexual risk behaviors.

Subsequent empirical evidence assessing the GST coalesced in underscoring the deleterious effects of racial discrimination on Black youth’s propensity for delinquency (Du Bois et al., 2002; Simons et al., 2006), to include the extent to which racial discrimination fosters negative emotional states likely to mediate the strain-deviance link (Nyborg & Curry, 2003; Roberts et al., 2011; Burt et al., 2012).

Race-Based Traumatic Stress (RBTS)

In 2007, Robert Carter sought to explain the effects of racism on the mental health of Black Americans and other racial minority groups within the context of the United States. In examining trauma, discrimination, and race-related stress literatures, Carter (2007) uncovered a lack of empirical investigation into the direct effects of racism on the emotional, psychological, and physical health of individuals and groups and a failure to equate trauma as a response to race-related stressors. Moreover, Carter (2007:16) noted “the mental health impact of racism is not considered or captured by traditional counseling psychology or psychiatric theory or assessment models.” As suggested by Carter (2007), omitting realities of racism and discrimination, to include their deleterious effects on the
psychological well-being of Black Americans and other racial minorities, infringes upon the
development of effective assessments and theories addressing the nature of race-based stressors
(Carter, 2007). Based on the conceptualization advanced by the *Diagnostic and Statistical Manual of Mental
Disorders* (5th ed.), trauma is understood as an event that is life threatening or physically dangerous to
the integrity and welfare of individuals (Carter, 2007; APA, 2013; Carter & Sant-Barket, 2015; Carter,
Kirkinis, & Johnson, 2020). Based on this definition, “diagnosis of PTSD […] is limited by the fact
that the person’s subjective perceptions are not part of the criterion and the event that triggers the
reactions must be physical and life threatening,” thus omitting experiences of racism and

However, this stands in stark contrast to the 2001 U.S. Surgeon General Report which
discussed that “racism in the form of discrimination … contributes to stress and poor mental health
outcomes for Blacks” (Franklin-Jackson & Carter, 2007, citing USDHHS, 2001). Furthermore, a
growing body of research literature reveals that Black Americans are more likely to experience
symptoms of posttraumatic stress that stems from experiences of racial discrimination than other
populations (Carter et al., 2020). In assessing the lasting emotional effects of critical incidents of racial
discrimination amongst a diverse sample of 323 racial minorities, Carter, Forstyth, Mazzula, and
Williams (2005) found that approximately 89 percent reported experiences of racial discrimination,
with less than three quarters (74%) indicating lasting psychological and emotional effects that were
synonymous with traumatic reactions.

Nevertheless, given the conceptualization of traumatic stress advanced by the American
Psychological Association (2013), which omits racism and discrimination as potential sources of
traumatic stress, Carter (2007) advanced the construct of race-based traumatic stress. This conception
of traumatic stress was derived from Carlson’s (1997) conceptualization of traumatic stress as
emotionally and psychologically harmful (negative), sudden, and uncontrollable. Given the malleable
nature of racism and discrimination and the embeddedness of racism within American society, the potential occurrence of race-based incidents across the life span is arguably inevitable, particularly for Blacks. Hence, accounting for this reality and the subsequent injury to the emotional and psychological well-being of Blacks and other racial minorities, Carter (2007) recast this definition as race-based traumatic stress.

According to Carter’s model of race-based traumatic stress, racism represents a multifaceted construct with diverse conceptualizations (Carter, 2007). In particular, racism has been defined as, (1) a rational individual process justifying traditional values (i.e., symbolic or modern racism); (2) a means by which to differentiate between people based on standards derived from the dominant racial-cultural group; (3) a systemic process of violence that denigrates and subordinates’ groups based on race (i.e., systemic racism or structural racism); exercise of power by the dominant racial-cultural group that aims to preserve status quo relations and racial hierarchies of power between members of the dominant and nondominant; and (4) a relationship between racial power and interactions that are mutable to changes in the sociopolitical landscape (i.e., racial formation), to include racism as microaggressions (Carter, 2007). Such globalized and universal definitions of racism hinder attempts at relating specific forms of racism to psychological and emotional injury (i.e., reactions linked to specific acts of racism that, themselves are nonpathological, external and situational factors influencing the nature of one’s mental health) and those injuries synonymous with trauma (Bryant-Davis & Ocampo, 2005; Carter, 2007; Polanco-Roman, Danies, & Anglin, 2016). In addressing this, Carter (2007) adopts a deconstructionist approach that clusters racism into three categories (i.e., racial discrimination, racial harassment, and discriminatory harassment) (Carter & Helms, 2002; Carter, Forsyth, Williams, and et al., 2005). As argued by Carter and Helm (2002) (as cited by Carter, 2007), an understanding of the distinctive types of racism and the resulting psychological outcomes likely enhances coping strategies of individuals experiencing racism, as well as provides a framework upon
which mental health professionals are better equipped at alleviating the ameliorating “any injury sustained by acts of racism” (Carter, 2007, p.76).

Nonetheless, Carter (2007) defines racial discrimination as avoidant racism. This form of racism, as argued by Carter and colleagues (2005), aims to increase social distance between dominant racial groups and nondominant racial groups in a manner that the positionality of nondominant racial groups remains subordinate to the superiority of the dominant racial group. Racial harassment is conceptualized as hostile racism whereby “feelings, thoughts, actions, strategies, behaviors and policies are intended to communicate the target’s subordinate or inferior status” given their membership in a nondominant racial-cultural group (Carter, 2007, p.77). Discriminatory harassment, unlike racial discrimination and harassment, accounts for the complexities in experiences with avoidant and hostile racism (Carter et al., 2005). More specifically, discriminatory harassment “best defined as aversive hostile racism, which involves thoughts, behaviors, actions, feelings, or policies and procedures” designed to foster social distance amongst racial group members through hostile racism “after a person of Color has entered an environment from which he or she was once excluded” (Carter, 2007, p.79).

In expanding on this, Carter (2007) notes the emotional and psychological injury resulting from these different forms of racism. Carter (2007) states that racism has the capacity to compromise the psyche and personality of an individual in the same fashion as those who have been exposed to a traumatic event, such as community violence. Scholarship examining the impact of exposure to violence reveals the potential for the manifestation of traumatic stress in the form of internalizing symptoms (i.e., depression, aggression, anxiety, irritability) and externalizing symptoms (i.e., violence, substance abuse, risky sexual behavior) (Gaylord-Harden, Cunningham, & Zelencik, 2011; Hardaway, McLoyd, & Wood, 2012; Mrug, Madan, & Windle, 2016). From the standpoint of this body of literature and, in alignment with Carter (2007:83), stressors, such as racism, “disrupt normal functioning” in a non-pathologizing fashion. This results in the manifestation of traumatic symptomologies that include,
intrusion, avoidance of stimuli associated with trauma, and increased arousal or vigilance (Carter, 2007; Carter, Johnson, Roberson, Mazzula, Kirkinis, & Sant-Barket, 2017; Carter et al., 2020). A case in point, in 2020, Carter and colleagues examined the hypothesized relationship between symptoms of trauma and race-based traumatic stress amongst a community-based sample of 421 adult respondents. Findings revealed that race-based traumatic stress was significantly associated with trauma symptomologies (i.e., anxiety, depression, dissociation, sexual problems, and sleep disturbances), especially when race-related incidents were perceived as stressful (Carter et al., 2020).

As argued by Agnew (2013), certain types of strains lead to criminal/deviant responses. More specifically, Agnew (2001) emphasizes that strains perceived as high in magnitude, unjust, associated with low social control, and incentivize criminal coping are more likely to foster a criminogenic response. Similarly, Carter (2007:90) asserts that the presence of race-based traumatic stress depends upon whether an individual perceives racial discrimination, racial harassment, or discriminatory harassment as “emotionally painful, sudden, and uncontrollable.” Once appraised in this manner, traumatic reactions are likely to manifest. These reactions have the potential of being physiological, psychological, behavioral, or cognitive, as well can manifest themselves internally through symptoms of “anxiety, anger, rage, depression, compromised self-esteem, shame, and guilt” (Carter, 2007, p.94). In coping with race-based traumatic stress, Carter (2007:68) notes that the interplay between the sociopolitical history of Black Americans, personality, and the availability of effective coping resources or the lack thereof within families and communities “contribute to an individual’s idiosyncratic response to environmental stress.” Further, given the type of racism experienced and the source of traumatic stress, Black Americans are likely to rely on an array of coping strategies that influence the degree of emotional and psychological injury of the race-related stressor(s) (Carter, 2007).

Available research identifies forms of coping employed by Black Americans experiencing race-based traumatic stress (Utsey, Ponterotto, Reynolds, & Cancelli, 2000; Smith, Stewart, Myers, & Latu,
2008). Using a sample of 103 Black American undergraduate students, Smith and colleagues (2008) introduced a measure of African Americans’ implicit emotional and coping responses to racism (i.e., GNAT) in order to assess its ability to predict psychological distress. Findings from Smith and colleagues (2008) indicated that active coping strategies, such as seeking support, telling friends, and discussing race-based incidents, significantly lowered the effects of prejudice on levels of anxiety and psychological distress, to a greater degree than other forms of coping, such as confronting, avoiding, and isolation. In their development and assessment of the Racism-Related Coping Scale (RRCS), which aims to measure specific coping strategies utilized by Blacks experiencing racism and discrimination, Forsyth & Carter (2014) found that, amongst their sample of 307 Black Americans, coping strategies described as Empowered Action (i.e., asserting one’s rights, harnessing resources, and actively engaging the situation) and Spiritual (i.e., reliance on spiritual practices, beliefs and self-soothing behaviors) were the most effecting coping strategies. Contrary to this, passive or active efforts of resistance, the regulation of anger through the use of fantasy or humor, hypervigilance, and bargaining were found to be not as effective as the aforementioned coping strategies (Forsyth & Carter, 2014).

Taken together, race-based traumatic stress engenders negative emotional states that likely incur emotional and psychological injury to Black Americans, as well has the propensity for manifesting traumatic reactions that are unbridled by a limited conception of trauma (Carter 2007). Furthermore, the extent to which Black Americans appraise race-based incidents of discrimination as negative or injurious to their emotional and psychological well-being is potentially dependent upon by novelty, which, according to Lazarus and Folkman (1984:115), “encourages appraisal inferences based on related previous experience or on general knowledge.” As well, processes of racial socialization, which involves the exchange of histories and experiences that reinforce pride and appreciation for heritage and that provides individuals with a toolbox of flexible coping strategies that safeguard the
emotional and psychological welfare of individuals experiencing racism and discrimination (Hughes et al., 2006; Burt et al., 2012; Forsyth & Carter, 2014).

Taken together, Agnew’s (2013) GST and Carter’s (2007) conceptual framework of Race-Based Traumatic Stress (RBTS) coalesce in framing perceived discrimination as a stressor with the capacity for exerting a negative effect on the emotional and psychological well-being, as well has the potential of engendering deviance as a coping response amongst racial minorities, generally, Black Americans, specifically, and Black youth, more specifically.

In proposing to explore the associations between perceived teacher discrimination, school bonding, negative emotional state, disobedience, suspension, and student learning, this study conceptualizes perceived teacher discrimination as an inescapable noxious-stimuli with the potential for engendering emotional and psychological injury to Black youth, diminishing their ability to establish school bonds through their attachments to school and teachers, their level of educational commitment, and their capacity to engage in learning (Maddox & Prinz, 2003; Agnew, 2006; Carter, 2007). In line with GST, disobedience represents a form of deviant coping, a response likely manifested from the effect of perceived teacher discrimination on the negative emotional state of Black youth, or in response to their lack of school bonding, which is also impacted by their perceptions of perceived teacher discrimination (Agnew, 2013; Unnever et al., 2016). Investment in student learning through spending time on homework each day mirrors Agnew’s (1992, 2006) conception of prosocial coping in response to the strain of perceived teacher discrimination. Furthermore, as noted by Forsyth and Carter (2014), one effective form of coping likely to alleviate the negative effects of perceived race-based traumatic stress is to actively engage in the situation. Accordingly, by investing time in learning by doing their homework each day, Black youth are demonstrating their capacity for being resilient in the face of adversity; they are reinforcing their ability to persist in the face of academic difficulties, including perceived experience(s) with discrimination from teachers (Smalls et al., 2007).
Additionally, though beyond the scope of GST, Carter’s (2007) conceptual framework of Race-Based Traumatic Stress (RBTS) posits that behavioral responses to race-based traumatic stress likely heighten an individual’s risk of being sanctioned. Therefore, in line with Carter (2007), the administration of suspensions that remove Black youth from the classroom for one or more days possibly serves as a form of school-based sanctioning in response to the perceived negative behavior that Black youth are externalizing. Empirical evidence in support of GST accentuates the role of peer associations, social support, and self-control as buffers that potentially increase or decrease the effects of strain on deviant coping through negative emotional state (Agnew, 2006). Thus, this study considers the potential moderating effect of these theoretical constructs on the effects of perceived teacher discrimination on disobedience, by focusing on their likely impact on school bonding and negative emotional state. Racial socialization has been documented by available research to exert a buffering effect on the association between perceived discrimination, in-school and out-of-school, and negative emotional state, and perceived discrimination and school bonding (Harris-Britt et al., 2004; Dotterer et al., 2009; Bryan et al., 2018). Academic aspiration or aspiring to further one’s education beyond high school has been suggested by available literature to illustrate a protective factor of Black youth confronting perceived discrimination in school (Sanders, 1997; Bryan et al., 2012; Hope et al., 2015; Bryan et al., 2018; Verkuyten, Thijs, & Gharaei, 2019). Arguably, racial socialization and academic aspiration likely buffer the effect of perceived teacher discrimination on school bonding and negative emotional state in Black youth. Collectively, GST, Carter’s (2007) conceptual framework of Race-Based Traumatic Stress, and available research literature frames the research questions and hypotheses guiding this study.

RESEARCH QUESTIONS AND HYPOTHESES

Framed by Agnew’s (1992, 2006) general strain theory, this study explores the direct and indirect associations between perceived teacher discrimination, school bonding, negative emotional
state, disobedience, school discipline, and student learning for a nationally representative sample of Black American youth in the United States. To accomplish this, the following research questions and hypotheses are posed.

1. To what extent, if any, are Black students’ perceptions of differential treatment from teachers directly associated with their academic achievement (i.e., self-reported grades)?
   a. Hypothesis 1: The more that Black youth perceive differential treatment from teachers, the lower their academic achievement.

2. To what extent, if any, do deviant peer associations, academic aspirations, racial socialization (i.e., Black pride), and student resilience buffer the direct association between Black students’ perceptions of differential treatment from teachers and their academic achievement?
   a. Hypothesis 2a: As Black students associate with more deviant peers, the negative effect of Black students’ perceptions of differential treatment from teachers on their academic achievement will likely increase.
   b. Hypothesis 2b: As Black students aspire to further their education beyond high school, the negative effect of Black students’ perceptions of differential treatment from teachers on their academic achievement will likely diminish.
   c. Hypothesis 2c: For Black students who have been socialized to take pride in being Black, the negative effect of Black students’ perceptions of differential treatment from teachers on their academic achievement will likely diminish.
   d. Hypothesis 2d: For Black students possessing higher levels of resilience, the negative effect of Black students’ perceptions of differential treatment from teachers on their academic achievement will likely diminish.
3. To what extent, if any, do perceptions of school bonding mediate the association between Black students’ perceptions of differential treatment from teachers and their academic achievement?

   a. Hypothesis 3a: Perceptions of school bonding will likely mediate the association between Black students’ perceptions of differential treatment from teachers and their academic achievement.

   b. Hypothesis 3b: In series, perceptions of school bonding and student homework behavior (i.e., the number of hours Black students spend outside of school doing their homework) will likely mediate the association between Black students’ perceptions of differential treatment from teachers and their academic achievement.

   c. Hypothesis 3c: In series, perceptions of school bonding and disobedience will likely mediate the association between Black students’ perceptions of differential treatment from teachers and their academic achievement.

4. To what extent, if any, do negative emotions mediate the association between Black students’ perceptions of differential treatment from teachers and their academic achievement?

   a. Hypothesis 4a: Negative emotions will likely mediate the association between Black students’ perceptions of differential treatment from teachers and their academic achievement.

   b. Hypothesis 4b: In series, negative emotions and disobedience will likely mediate the association between Black students’ perceptions of differential treatment from teachers and their academic achievement.

5. To what extent, if any, does getting suspended from school for one or more days mediate the association between Black students’ perceptions of differential treatment from teachers and their academic achievement?
a. Hypothesis 5a: Black students getting suspended from school for one or more days will likely mediate the association between Black students’ perceptions of differential treatment from teachers and their academic achievement.

b. Hypothesis 5b: In series, Black students getting suspended from school for one or more days and their homework behavior will likely mediate the association between Black students’ perceptions of differential treatment from teachers and their academic achievement.

The next chapter discusses the research methodology of this study.
CHAPTER III

METHODOLOGY

This chapter provides an overview of the research methodology used in this study. First, a discussion of the research design, sampling design, and data source is presented. Next, the variables in the study, to include their conceptualization and operationalization, are presented. Finally, this chapter concludes with a discussion on the analytic strategy for the proposed study.

RESEARCH DESIGN

This study utilizes a cross-sectional research design to conduct a secondary data analysis exploring the direct and indirect associations between Black students’ perceptions of differential treatment from teachers and the self-reported academic achievement for a nationally representative of African American students in the United States. Additionally, this study explores the potential moderating effects of deviant peer associations, academic aspirations, racial socialization (i.e., Black pride), and self-perceptions on the associations between Black students’ perceptions of differential treatment from teachers and their self-reported academic achievement. For this study, data comes from a nationally representative sample of 917 African American youth who participated in the 2001-2004, National Survey of American Life – Adolescent Supplement (NSAL-A). The Adolescent Supplement of the National Survey of American Life uses data drawn from a nationally representative sample of approximately 1,170 African American and African American youth of Caribbean descent whose parents participated in the National Survey of American Life (NSAL). In all intent and purposes, the aim of the Adolescent Supplement of the National Survey of American Life is to provide an estimation of the lifetime-to-date and the current prevalence, distribution, course, and comorbidities of DSM-IV defined disorders (Jackson, Caldwell, Antonucci, & Oyersam, 2016). Additionally, using the compiled data from the youth participating in the Adolescent Supplement of
the National Survey of American Life, risks and protectives factors, to include their associated patterns and correlations to service use tailored to addressing DSM-IV related maladies, are identified (Jackson et al., 2016). Hence, the Adolescent Supplement of the National Survey of American Life informs and shapes policy and practice within a variety of fields, to include, but are not limited to, health and human services, education, psychology.

**NSAL – A Sampling Design**

A multi-area probability sample with stratified and clustered sampling designs were used during NSAL data collection (Jackson et al., 2016). During this two-stage process, a stratification approach was used to generate approximately 64 primary sampling units (PSUs) that were selected as representation of the NSAL Core Sample of African American households1 (Heeringa, Wagner, Torres, Duan, Adams, & Berglund, 2004). Afterwards, a clustering approach was used to select approximately 456 area segment units that were proportionate to the 1990 census counts of Black American households (Jackson et al., 2016). For the NSAL Caribbean Black sample, a stratified sample of eight primary area units were selected (Jackson et al., 2016). Next, through clustering, approximately 86 area segment units were selected based on “a block group population at least 10% Afro-Caribbean (based on the 1990 census estimates)” (Heeringa et al., 2004, p.229). By incorporating clustering, the researchers reduced the cost of data collection given the grouped nature of frame elements included in the study (Jackson et al., 2004). Next, the responsive design technique of two-phase sampling was utilized in order to screen out eligible African American households and Black Caribbean households (Heeringa et al., 2004). As a result, approximately 3,570 Black Americans and approximately 267 Black Caribbean households completed interviews.

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1 The NSAL Core Sample is defined by the 1990 census proportions of African-American households, to include “all census block groups in which 10% or more of 1990 census households were reported to be African Americans” and “all census block groups in which the 1990 Census reported <10% density for African American households” (Heeringa et al., 2004, p.228).
The African American and African American youth of Caribbean descent participating in the Adolescent Supplement of the National Survey of American Life were screened from the adult sample of African American and African Americans of Caribbean descent households involved in the National Survey of American Life. Once screened, Seaton and colleagues (2018) employed randomization to draw a sample of African American youth as well as African American youth of Caribbean descent. Specifically, if more than one adolescent was eligible for the study, researchers selected two participants who did not share the same gender (Seaton, Caldwell, Sellers, & Jackson, 2010; Assari, Preiser, Lankarani, & Caldwell, 2018). Nevertheless, given the non-independence of the adolescent sample, data was weighted to adjust for both the non-independence in selection probabilities within households and the non-response rates of households and individuals. Following this, the sample was post-stratified to ensure the representativeness of the sample in terms of age, gender, and ethnic origins (Assari et al., 2018).

For this study, however, additional sampling techniques are applied to construct the analytic sample used for data analysis. First, this study focuses on the academic achievement of African American youth. Thus, to ensure that the analytic sample was only comprised of African American youth, sample selection was used to remove African American youth who indicated being of Caribbean descent. This yielded a weighted analytic sample of 1092 African American youth. Considering the representativeness of the weighted sample, the data, as a whole, was not complete data, for various measures and their associated indicators contained missing data. Therefore, listwise deletion was used to drop cases where values were missing. While this process reduced the sample size to 917, the weighted nature of the data maintains the representativeness of the sample. Notwithstanding, the sample is comprised of African American youth between the ages of 13 and 17, with the average age being approximately 15 years old. The sample is equivalent in terms of gender,
with females accounting for approximately 52 percent and males accounting for approximately 48 percent. The median family income for this sample ranges between $25,001 and $50,000.

**NSAL – A Procedures**

Prior to data collection, the NSAL – A received institutional review board approval from the University of Michigan, and the survey was administered by the staff of the Survey Research Center at the University of Michigan. Data collection for the NSAL – A was completed between February 2001 and March 2003. Prior to conducting interviews with the sampled youth, informed consent from the youths’ legal guardian as well as assent from the adolescent was obtained (Assari et al. 2018). As previously mentioned, an overall national sample of 1,170 Black American and Black American youth of Caribbean descent were interviewed. Most of the interviews were conducted face-to-face (82%), with the remaining 18 percent of interviews being conducted on the telephone (Assari et al., 2018). To enhance the quality of data collection for long and complex surveys, the researchers used computer-assisted personal interviews (CAPI) mode during face-to-face interviews. On average, interviews lasted approximately an hour and 40 minutes for Black American youth, with the average interview time for Caribbean Black youth being close to 2 hours (i.e., an hour and 50 minutes respectively) (Seaton et al., 2010). Respondents were paid $50 for participation in the NSAL – A, and the overall response rate for all adolescents was 80.6 percent, with Black American youth having an overall response rate of 80.4 percent and Caribbean Black youth having an overall response rate of 83.5 percent (Carter, Leath, Butler-Barnes, Bryd, Chavous, Caldwell, & Jackson, 2017)
<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Conceptualization</th>
<th>Operationalization</th>
<th>Coding</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Academic Achievement</strong></td>
<td>Self-reported grades</td>
<td>“What kind of grades (do/did) you usually get?”</td>
<td>0 = Failing Grades; 1 = Ds; 2 = Cs; 3 = Bs</td>
</tr>
<tr>
<td><strong>Independent Variables</strong></td>
<td></td>
<td>Scale ranges from 1 to 19, with higher scores indicating more perceived experiences of differential treatment from teachers.</td>
<td></td>
</tr>
<tr>
<td><strong>Perceived Differential Treatment from Teachers</strong></td>
<td>Perceptions of differential treatment from teachers</td>
<td>Scale comprised of four items. One item asks, “How true (is/was) …. Most of my teachers treat(ed) me fairly?” while the remaining three items ask, “In your day-to-day life how often have…. Your teachers act as if they think you are not smart?” “In your day-to-day life how often have…. Your teachers treated you with less respect than other students?” “In your day-to-day life how often have…. Your teachers act as if they are afraid of you?”</td>
<td>Scale ranges from 1 to 19, with higher scores indicating more perceived experiences of differential treatment from teachers.</td>
</tr>
<tr>
<td><strong>Perceived School Bonding</strong></td>
<td>Perceptions of school bonding</td>
<td>Scale comprised of eight items. One item, which asks, “How true (is/was) …. I (like/liked school) measured perceptions of school attachment, to include two additional items measuring perceptions of attachment to teachers; “How true (is/was) …. I (care/cared) a lot about what my teachers (think/thought) of me?” and “How true (is/was) …. I (like/liked) my teachers.” Additional items measured perceptions of school commitment. For instance, these items ask, “How true (is/was) …. I (try/tried) hard at school?” “How true (is/was) …. Getting good grades (is/was) important to me?” “How true (is/was) …. Homework (is/was) a waste of time?” “How true (is/was) …. Most of the things I learned in school are unimportant?” and “How true (is/was) …. I (feel/felt) as if I (don’t/didn’t) belong at school?”</td>
<td>Scale ranges from 3 to 27, with higher scores indicating more positive perceptions of school bonding.</td>
</tr>
<tr>
<td><strong>Negative Emotions</strong></td>
<td>Feelings of sadness, discouragement, diminished interest, irritability, and worry that lasted for several days</td>
<td>Scale containing five items measuring whether or not respondents ever experienced “a time lasting a few days or longer when most of the day you felt…sad, empty or depressed…very discouraged or hopeless about how things were going in your life…became bored with most things you usually enjoy like work, hobbies, and personal relationships…very irritable, grouchy, or in a cranky mood…worried a lot more about things than other people with the same problems as you?”</td>
<td>Scale ranges from 0 to 4, with 4 representing more negative emotions and 0 indicating no negative emotions.</td>
</tr>
<tr>
<td>Independent Variable</td>
<td>Conceptualization</td>
<td>Operationalization</td>
<td>Coding</td>
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<tr>
<td><strong>Student Homework Behavior</strong></td>
<td>Self-reported number of hours per week spent doing homework outside of school</td>
<td>“How many hours a week outside of school (do/did) you usually spend doing …. Homework?”</td>
<td>0 = None; 1 = 1 hour or Less; 2 = 2 hours; 3 = 3 – 4 hours; 4 = 5 or more hours</td>
</tr>
<tr>
<td><strong>Disobedience</strong></td>
<td>Childhood and/or adolescent disobedience</td>
<td>“Many children and teenagers go through periods when they do things adults don’t want them to do, like lying, stealing, or breaking rules. Did you ever go through a period during your childhood or teenage years when you did any of these things?”</td>
<td>0 = No 1 = Yes</td>
</tr>
<tr>
<td><strong>School Suspension</strong></td>
<td>Lifetime receipt of school suspension for one or more days</td>
<td>“Were you ever suspended from school for one or more days?”</td>
<td>0 = No 1 = Yes</td>
</tr>
<tr>
<td><strong>Deviant Peer Associations</strong></td>
<td>Self-reported peers involved in alcohol and drug use, selling drugs, and with the police</td>
<td>Scale comprised of six items that measure the perceived number of peers who “ever smoke cigarettes…drink alcohol…use marijuana/drugs…sell drugs…[and] arrested.”</td>
<td>Scale ranges from 0 to 15, with higher scores indicating more associations with deviant peers.</td>
</tr>
<tr>
<td><strong>Racial Socialization (i.e., Black pride)</strong></td>
<td>Socialization of Black pride</td>
<td>“Think about the messages you have received about race or racism. Do you remember being told …. You should be proud to be Black.”</td>
<td>0 = No 1 = Yes</td>
</tr>
<tr>
<td><strong>Academic Aspirations</strong></td>
<td>Belief in furthering one’s education beyond high school</td>
<td>“How far do you want to go in school?”</td>
<td>0 = Not graduate high school; 1 = Graduate high school; 2 = Technical/Trade/Vocational School; 3 = College/University/Other</td>
</tr>
<tr>
<td><strong>Student Self-Perception</strong></td>
<td>Perceived self-esteem and self-efficacy</td>
<td>Scale comprised of three items measuring perceived self-esteem. These items include, “How strongly you agree or disagree…I am able to do things as well as most other people…I take a positive (good) attitude toward myself…[and] On the whole, I am satisfied with myself?” Additionally, the scale is comprised of six items measuring perceived self-efficacy. The items asks students to indicate how true it is that “Once I make up my mind to do something, I stay with it until the job is completely done…I don’t let my personal feelings get in the way of getting a job done…When things don’t go the way I want them to, that just makes me work even harder…It’s not always easy, but I manage to find a way to do the things I really need to get done…I like doing things that other people thought could not be done…[and] In the past, even when things got really tough, I never lost sight of my goals.”</td>
<td>Scale from 8 to 24, with higher scores indicating more positive perceptions of self.</td>
</tr>
</tbody>
</table>
Table 1. Continued

<table>
<thead>
<tr>
<th>Control Variables</th>
<th>Conceptualization</th>
<th>Operationalization</th>
<th>Coding</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong> Age in years</td>
<td>“How old are you?”</td>
<td>13, 14, 15, 16, and 17</td>
<td></td>
</tr>
<tr>
<td><strong>Gender</strong> Adolescent’s gender</td>
<td>Dummy variable measuring female gender</td>
<td>0 = Male 1 = Female</td>
<td></td>
</tr>
<tr>
<td><strong>Imputed Family Income</strong> Parent-reported family income</td>
<td>-------------------------------</td>
<td>0 = $0 - $10,000 1 = $10,001 - $25,000 2 = $25,001 - $50,000 3 = $50,001 - $75,000 4 = $75,001 and Over</td>
<td></td>
</tr>
<tr>
<td><strong>Grade Level</strong> Current grade level</td>
<td>What grade (are you in now/did you last complete)?</td>
<td>5 = 5th Grade 6 = 6th Grade 7 = 7th Grade 8 = 8th Grade 9 = 9th Grade 10 = 10th Grade 11 = 11th Grade 12 = 12th Grade 13 = Post High School</td>
<td></td>
</tr>
</tbody>
</table>
VARIABLES IN THE STUDY

Table 1 summarizes the conceptualizations, operationalizations, and coding schemes for the variables in this study. Provided below is a more detailed description of the study variables.

Dependent Variable

Academic Achievement. Academic achievement assesses students’ self-reported grades. More specifically, students indicated whether they earned mostly As, Bs, Cs, Ds, or failing grades in school. Originally coded 1=As, 2=Bs, 3=Cs, 4=Ds, and 5=Failing Grades, for this study, these responses are reversed and recoded into 0=Failing Grades, 1=Ds, 2=Cs, 3=Bs, and 4=As. While prior studies using the NSAL-A operationalized academic achievement in the same way (Thomas et al., 2009; Bryan et al., 2018), this study does not coalesce failing grades and Ds into a single category.

Independent Variable

Perceived Differential Treatment. Defined as Black students’ perceptions of differential treatment from teachers, perceived differential treatment uses the Perceived Teacher Discrimination Scale, a modified version of the Everyday Discrimination Scale developed by Williams and colleagues (1997), to measure Black students’ perception of discrimination from their teachers using three items: “In your day-to-day life how often have any of the following things happened to you?” (a) “Your teachers treat you with less respect than other students,” (b) “Your teachers act as if they think you are not smart,” and (c) “Your teachers act as if they are afraid of you.” Originally, each item was rated on a 6-point Likert-scale (1=Almost Every day, 2=At Least Once a Week, 3=Few Time a Month, 4=Few Times A Year, 5=Less Than Once a Year, and 6=Never). However, this study reversed and recoded the ratings (0=Never, 1=Less Than Once a Year, 2=Few Times A Year, 3=Few Times a Month, 4=At Least Once a Week, and 5=Almost Every day).

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2 Actual grades from school transcripts were not available in this study; therefore, self-reported grades were used. Prior research indicates that self-reported grades and actual measures of academic achievement are highly correlated, with correlations ranging from 0.76 to 0.97 (Cassady 2001; Hishinuma, Johnson, Foster, & Nishimura 2001).
Additionally, this study included the item: How true (is/was) each of the following statements about you (when you were in school) [...]”, (a) “Most of my teachers treat(ed) me fairly.” This item was rated on a 4-point Likert Scale (1=Very, 2=Somewhat, 3=Not very, and 4=Not at all). Thus, 4 indicates that students perceived their treatment from teachers to be unfair. Unlike prior studies using the Perceived Teacher Discrimination (Thomas et al., 2009; Bryan et al., 2018), this study did not dichotomize the three-items included in the scale, as well, unlike prior studies, this study incorporates students’ perception of fairness in treatment from teachers.

In the end, each of the four items were loaded into a factor analysis\(^3\), which yielded a factor of 1. Factor loading scores for “Your teachers treat you with less respect than other students,” “Your teachers act as if they think you are not smart,” “Your teachers act as if they are afraid of you,” and “Most of my teachers treat(ed) me fairly” were 0.944, 0.976, 0.960, and 0.458 respectively. Scale reliability analysis was used to assess the consistency amongst these proposed indicators of perceived teacher discrimination. According to Pallant (2010), if scale reliability analysis generates a Cronbach alpha that is greater than 0.70, then this indicates a reasonably good and reliable scale. For the four-item scale of perceived teacher discrimination\(^4\) used in this study, a Cronbach alpha of 0.875(\(\alpha=0.875\)) was generated, suggesting a reasonably good and reliable scale. Total scores ranged from 1 to 19, with higher scores indicating that students perceived more experiences of differential treatment from teachers.

**Intervening Variables**

**Perceived School Bonding.** For this study, perceived school bonding is defined as Black students’ perceptions of their attachment to school and their teachers as well as their commitment to

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\(^3\) Factor analysis allows for the “simplification of interrelated measures” for the purpose of establishing parsimony or grouping together variables into a “limited clusters based on shared variances” (Yong & Pearce, 2013, p.79).

\(^4\) In prior studies, the Cronbach alpha for the perceived teacher discrimination scale was 0.71 (Thomas et al., 2009), 0.73 (Butler-Barnes et al., 2018), and 0.86 (Assari & Caldwell, 2018).
education. More specifically, the items: “I (like/liked) school” and “I (feel/felt) as if I (don’t/didn’t) belong at school,” measure perceptions of school attachment, particularly school belongingness. In addition, the items: “I (care/cared) a lot about what my teachers (think/thought) of me” and “I (like/liked) my teachers,” measure perceptions of attachment to teachers. Finally, the items: “Getting good grades (is/was) important to me,” “Most of the things I learn(ed) in school are unimportant,” “Homework (is/was) a waste of time,” and “I (try/triehd) hard at school,” measure perceptions of school commitment. The responses are rated using a 4-point Likert-type scale (1=Very, 2=Somewhat, 3=Not very, and 4=Not at all). However, in the case of the items, “I (care/cared) a lot about what my teachers (think/thought) of me,” “I (like/liked) school,” “Getting good grades (is/was) important to me,” “I (like/liked) my teachers,” and “I (try/triehd) hard at school,” the response ratings are reversed and recoded such that, 0=Not at all, 1=Not very, 2=Somewhat, 3=Very. Thus, higher ratings correspond to more positive responses. As well, the items, “Most of the things I learn(ed) in school are unimportant,” “Homework (is/was) a waste of time,” and “I (feel/felt) as if I (don’t/didn’t) belong at school,” are recoded into 0=Very, 1=Somewhat, 2=Not Very, and 3=Not at all. Prior studies measuring school bonding adopted a similar operationalization of this construct (Rose et al., 2017; Butler-Barnes & Inniss-Thompson, 2020). However, as suggested by Maddox and Prinz (2003) and Libbey (2004), there is no standardized conceptualization and measurement of school bonding; various definitions and measurements of school bonding exist within the literature.

Nonetheless, all eight items were loaded into a factor analysis, which yielded a factor of 2. Factor 1 included the items, I (like/liked) school,” I (like/liked) my teachers,” “I (try/triehd) hard at school,” “Getting good grades (is/was) important to me,” and “I (care/cared) a lot about what my teachers (think/thought) of me.” Factor 2 included the items, I (feel/felt) as if I (don’t/didn’t) belong at school,” “Homework (is/was) a waste of time,” and “Most of the things I learn(ed) in school are unimportant.” Scale reliability analyses produced a Cronbach alpha of 0.0.653 (α=0.653) for Factor 1
and a Cronbach alpha of 0.607 ($\alpha=0.607$) for Factor 2. In combining Factors 1 and 2, scale reliability analysis generated a Cronbach alpha of 0.694 ($\alpha=0.694$). Though not 0.70 and greater, it is arguable that this is indicative of a reasonable scale (Taber, 2017). Total scores ranged from 0 to 24, with higher scores indicating that students feel more bonded to school.

**Negative Emotions.** Negative emotions describe feelings of sadness, discouragement, lost interest, irritability, and worry that Black students indicated lasted for several days. While Agnew (2015) has most often focused on the negative emotion of anger in explaining the link between strain and deviance, he has also recognized the potential effect of sadness, anxiety, and other negative emotions in explaining the link between strain and deviance (see for example Agnew, 1992). Furthermore, Carter (2007) acknowledged the potential manifestation of these emotions in consequence to an individuals’ exposure to race-based incidents. Measured as a scale, negative emotions measures Black youths’ feelings with the following stem question, “Have you ever in your life had a time lasting a few days or longer when most the day you felt […],” and the indicators, “sad, empty or depressed,” “very discouraged or hopeless about how things were going in your life,” “lost interest and became bored with most things you usually enjoyed like work, hobbies, and personal relationships,” and “very irritable, grouchy, or in a cranky mood.” Originally, responses were rated as 1=Yes and 5=No. To improve understanding, response items are recoded and reversed so that 0=No and 1=Yes. Like the process discussed for constructing the composite variable of perceived differential treatment from teachers, a factor analysis involving varimax rotation was conducted with 8 indicators assessing Black youths’ feelings. Before and after rotation, factor analysis yielded a factor of 2. Factor 1 was comprised of the indicators, *ever sad several days* (0.729), *ever discouraged several days* (0.702), *ever irritable several days* (0.614), and *ever lost interest several days* (0.638). Factor 2 was comprised of

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5 In factor analysis, a varimax rotation is employed to minimize factor complexity by “maximizing variances for each factor” (Mertler & Vannatta, 2013, p.257).
ever anger attack—break something (0.728), ever mania several days (0.608), and ever anger attack—hurt someone (0.650). To assess the reliability of each factor, items from each were placed in a scale reliability analysis. Scale reliability analysis yielded a Cronbach alpha of 0.747 for Factor 1 and a Cronbach alpha of 0.499 for Factor 2. Hence, Factor 1 was constructed as negative emotions by combining the associated indicators into a scale. With a range of 0 to 4, scores closer to 4 suggest that Black students feel more negative emotions, while scores closer to 0 indicate fewer negative emotions.

**Disobedience.** Conceptualized as involvement in behaviors characteristic of disobedience, such as lying, stealing, and/or rule breaking during childhood and/or adolescence, disobedience is measured using the question, “Did you ever go through a period during your childhood or teenage years when you did things adults don’t want [you] to do like lying, stealing, or breaking rules?” Initially, responses were coded as 1=Yes and 5=No; however, this study recodes and reverse the responses so that 0=No and 1=Yes.

**Student Homework Behavior.** Student homework behavior describes the behavioral aspect of school commitment (Maddox & Prinz, 2003). More specifically, student homework behavior measures the amount of time (i.e., hours) each week that students spend doing their homework outside of school. As a self-reported measure, this study assesses student homework behavior with the item: “How many hours a week outside of school (do/did) you usually spend doing homework?” Responses were coded on a 5-point Likert-type scale wherein 0=None, 1=1 hour or Less, 2=2 hours, 3=3-4 hours, and 4=5 or more hours.

**School Suspension.** School suspension describes the extent to which Black students have been suspended from school for a one or more days. School suspension is measured using the stem question, “Were you ever suspended from school for a day or longer?” Responses are recoded and reversed from 1=Yes and 5=No into 0=No and 1=Yes.
**Deviant Peer Association.** Deviant peer association is a scale measure comprised of four items measuring Black students’ perceptions of their peers’ involvement in deviance. To measure this, students are asked, “How many of [their] friends ever do any of the following things [...]” (a) “drink alcohol,” (b) “use marijuana or other drugs,” (c) “ever sell drugs,” and (d) “were ever arrested.” Originally, responses were coded as 1=All of them, 2=Most of them, 3=Some of them, and 4=None of them. However, given the focus of this study on deviant peer associations, responses are reversed and recoded (0=None of them, 1=Some of them, 2=Most of them, 3=All of them), such that higher values correspond with more deviant peer associations.

Using factor analysis, the four items are loaded into a varimax rotation, which produces one factor. Following an analysis of scale reliability, a Cronbach alpha of 0.812 ($\alpha=0.812$) was generated. Scale scores range from 0 to 15, with higher scores indicating that Black youth perceive that more of their peers are involved in deviance and the justice system.

**Academic Aspiration (AA).** Academic aspiration are the beliefs of Black students furthering their education beyond high school. Operationalized as, “How far do you want to go in school?” responses were recoded such that, 0 (i.e., Not graduate HS) serves as a reference category while 1=high graduation, 2=Technical/Trade/Vocational school, and 3=College/University/Other.

**Student Self-Perception.** Conceptualized as Black students’ perceptions of self-esteem and self-efficacy, together these constructs reinforce self-perceptions (Condly, 2006; Schwarzer & Warner, 2013). In this study, self-perceptions are measured as a scale comprised of nine items. More specifically, three of the items comprising self-perceptions are self-reported assessments of self-esteem. These items ask student to indicate “How strongly you agree or disagree [...]” that, (a) “I am able to do things as well as most other people,” (b) “I take a positive (good) attitude toward myself,” and (c) “On the whole, I am satisfied with myself.” Originally, responses were coded as 1=Strongly Agree, 2=Somewhat Agree, 3=Somewhat Disagree, and 4=Strongly Disagree. However, these
responses are reversed and recoded so that 0=Strongly Disagree, 1=Somewhat disagree, 2=Somewhat Agree, and 3=Strongly Agree.

Additionally, students are asked to indicate the extent to which a series of questions are true with regards to their perceived self-efficacy. In particular, students are asked if it is true that (1) “Once I make up my mind to do something, I stay with it until the job is completely done,” (2) “I don’t let my personal feelings get in the way of getting a job done,” (3) “When things don’t go the way I want them to, that just makes me work even harder,” (4) “It’s not always easy, but I manage to find a way to do the things I really need to get done,” (5) “I like doing things that other people thought could not be done,” and (6) “In the past, even when things got really tough, I never lost sight of my goals.” Responses were coded as 1=Completely True, 2=Somewhat True, 3=Somewhat False, and 4=Completely False. However, this study reverses and recodes the responses into 1=Completely False, 2=Somewhat False, 3=Somewhat True, and 3=Completely True.

Next, each indicator was loaded into factor analysis that utilized varimax rotation. Initially, results from the factor analysis yielded a factor of 3. Factor 1, which contained the items: “Once I make up my mind to do something, I stay with it until the job is completely done,” “I don’t let my personal feelings get in the way of getting a job done,” “When things don’t go the way I want them to, that just makes me work even harder,” “It’s not always easy, but I manage to find a way to do the things I really need to get done,” and “In the past, even when things got really tough, I never lost sight of my goals,” had a Cronbach alpha of 0.687. Factor 2, which was comprised of the items: “I take a positive (good) attitude toward myself” and “On the whole, I am satisfied with myself,” had a Cronbach alpha of 0.642. For Factor 3, the items: “I am able to do things as well as most other people” and “I like doing things that other people thought could not be done” generated a Cronbach alpha of 0.315. Despite generating a factor of 3, all items were combined into a scale, which, scale reliability analysis indicated was a reasonably good scale. Specifically, the Cronbach alpha of 0.726 was generated
for this scale. Thus, with a scale range of 8 to 24, higher values for the self-perceptions scale indicate greater resilience.

**Racial Socialization (i.e., Black pride).** As referenced in the literature review presented in Chapter II, racial socialization embodies the practice of exchanging information, values, and understandings that builds pride for one’s racial history and legacy, to include enriching individuals’ knowledge on the essentiality of racial heritage and culture, thereby promoting identity exploration and development (Hughes et al., 2006). For this study, racial socialization is defined as the practice of socializing Black students to take pride in the legacy and triumphs of African Americans. In operationalizing racial socialization, Black students are asked to “Think about the messages you have received about race or racism. Do you remember being told …. You should be proud to be Black,” Their responses, which are recoded and reversed, are dichotomous (i.e., 0 = No and 1 = Yes).

**Control Variables**

*Race and ethnicity* were controlled for through sample selection. In drawing the sample of Black youth, race and ethnicity were used as criterion for excluding Caribbean Black youth from the analytic sample. *Age* is conceived as a continuous variable while gender is dichotomous, with responses recoded as (0=male, 1=female). *Household family income* measures the annual income reported by youths’ parents. Income levels were categorized as, 0= No income to report, 1= $1 - $10,000, 2=$10,001 - $25,000, 3=$25,001 - $50,000, 4=$50,001 - $75,000, 5=$75,001 - $100,000, and 6= $100,000 and over. *Grade level* describes the current grade of the student, with grade level coded as 5=5th grade, 6=6th grade, 7=7th grade, 8=8th grade, 9=9th grade, 10=10th grade, 11=11th grade, 12= 12th grade, and 13=Post High School.

**DATA ANALYSIS**

Several statistical techniques were utilized in this study to provide descriptive, bivariate, and multivariate analyses. *Descriptive Statistics* include the measure of central tendency, the mean, as well as
the measure of dispersion, the standard deviation, is the most appropriate statistics for interval level variables (Sweet & Grace-Martin, 2012; Mertler & Reinhart, 2017). However, for categorical variables, the mode, another measure of central tendency, is the most appropriate statistic (Mertler & Reinhart, 2017). Pearson’s r coefficient, which summarizes the linear relationship between the independent variables and the dependent variable, will be used to assess bivariate associations between all study variables.

*Complex Samples Ordinal Logistic Regression*

This study uses SPSS 26 Complex Samples ordinal logistic regression to conduct multivariate analyses of the data drawn from the Adolescent Supplement of the National Survey of American Life. As previously mentioned, the Adolescent Supplement of the National Survey of American Life employs a multi-stage area probability sample using stratified and clustered sampling techniques. Thus, all regression analyses are weighted using the provided student weight, `WGTCENT`, which “accounts for unequal probabilities of selection, non-response, and post-stratification in the main NSAL survey, within an additional component accounting for the adolescent sample design” (Jackson et al., 2016, p.991). Furthermore, the ordinal-level of measurement associated with the dependent variable necessitates the use of ordinal logistic regression, as this is the most appropriate statistical technique for ordinal dependent variables (Liu, 2009). Described as “a generalization of a binary logistic regression model when the response variable has more than two ordinal categories,” ordinal logistic regression is used to estimate the likelihood of being either at or below a particular level of the response variable (Liu, 2009, p.632). Using SPSS 26 Complex Samples ordinal logistic regression, several hypothesized models are tested.  

6 More specifically, this study explores six different pathways hypothesized to link Black students’ perceptions of differential treatment from teachers and academic achievement. For instance, Model 1 explores the direct association between Black students’

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6 For all analyses conducted in this study, the effects of age, gender, family income, and grade level are held constant.
perceptions of differential treatment from teachers on their academic achievement, while holding constant the effects of age, gender, family income, and grade level. In Model 2, deviant peer associations, academic aspirations, racial socialization (i.e., Black pride), and self-perceptions are introduced as potential moderators to the direct association. Models 3 and 4 explore the indirect pathway linking perceptions of differential treatment from teachers and Black students’ self-reported academic achievement through perceptions of school bonding, to include, the extent to which deviant peer associations, academic aspirations, racial socialization (i.e., Black pride), and self-perceptions serve as potential buffers to the effect of perceptions of school bonding on Black students’ self-reported academic achievement.

In extending the indirect pathway linking perceptions of differential treatment from teachers on Black students’ self-reported academic achievement through perceptions of school bonding, student homework behavior is added as another mediator in series with perceptions of school bonding. Thus, for these analyses, Model 1 assesses the direct association between perceptions of differential treatment from teachers on Black students’ self-reported academic achievement. In Model 2, the independent effects of perceptions of school bonding are explored, while Model 3 explores the independent effect of student homework behavior. Then, in Model 4, the proposed mediation of perceptions of school bonding and student homework behavior on the association between Black students’ perceptions of differential treatment from teachers and academic achievement is explored. Then, in a separate analysis, the role of deviant peer associations, academic aspirations, racial socialization (i.e., Black pride), and self-perceptions as potential moderators to the association between student homework behavior and the academic achievement of Black students is examined. Similar to the aforementioned indirect pathway involving perceptions of school bonding and student homework behavior as potential mediators, another series of Complex Samples ordinal logistic regression models explore the role of perceptions of school bonding and disobedience as potential mediators to the
association between Black students’ perceptions of differential treatment from teachers and academic achievement, to include examining the potential moderating effects of deviant peer associations, academic aspirations, racial socialization (i.e., Black pride), and self-perceptions on the association between disobedience and academic achievement. Moreover, in exploring the indirect pathway linking Black students’ perceptions of differential treatment from teachers and academic achievement through negative emotions and disobedience, similar models are employed, to include a separate analysis that focuses on the potential role of deviant peer associations, academic aspirations, racial socialization (i.e., Black pride), and self-perceptions as buffers to the association between disobedience and academic achievement.

In determining the presence of mediation, a structural approach is used, whereby a reduction in or elimination of a statistically significant association between perceptions of differential treatment from teachers and Black students’ self-reported academic achievement indicates the presence of mediation. In Burt and Simons (2012) and Bryan et al. (2018), a similar process of testing for mediation is used.

Finally, the remaining Complex Samples ordinal logistic regression models explore the indirect pathway linking perceptions of differential treatment from teachers and Black students’ self-reported academic achievement through school suspension, to include the potential moderating effects of deviant peer associations, academic aspirations, racial socialization (i.e., Black pride), and self-perceptions on the association between school suspensions and academic achievement, as well as the indirect pathway through school suspension and student homework behavior, including the role of deviant peer associations, academic aspirations, racial socialization (i.e., Black pride), and self-perceptions as potential moderators to the association between student homework behavior and the academic achievement of Black students.
Additionally, this study uses the Nagelkerke $R^2$ to determine the added contribution from each of the models described above. For this study, odds ratios and standardized coefficients are reported. Likewise, tests of parallel lines are conducted to ensure that the assumption of proportional odds is met. Accordingly, the assumption of proportional odds argues that, across the response categories of the dependent variable, the effects of the independent variables are the same (Liu, 2009). Thus, in evaluating the extent to which proposed models violate or advance the assumption of proportional odds, “a non-significant omnibus test indicates that the proportional odds assumption is not violated” (Liu, 2009, p.637). Stated differently, when the chi-square ($\chi^2$) for the test of parallel lines has a large significance value (i.e., $p>0.05$), the assumption of proportional odds is upheld (i.e., the results are a set of parallel lines or planes – one for each level of the outcome variable) (Liu, 2009; Norušis, 2011).

To demonstrate consistency in the findings generated from the Complex Samples ordinal logistic regressions, post-hoc analyses are conducted. Appendices A, B, and C contain the post-hoc analyses conducted in conjunction with the Complex Samples ordinal logistic regressions. These analyses are unweighted, thus do not account for the complex sampling design. Therefore, while the aim of the post-hoc analyses centered on establishing consistency in the results, the certainty of their ability to confirm findings from the Complex Samples ordinal logistic regressions proves limiting to the current study. Still, for all analyses conducted, a significance level of 0.05 is used to denote statistically significant results.

The next chapter will describe the sample and provide a detailed discussion on the results of both bivariate and multivariate analyses.
CHAPTER IV

RESULTS

This chapter presents the findings from the current study, which explores the association between Black students’ perceptions of differential treatment from teachers and their self-reported academic achievement (i.e., grades), to include indirect pathways involving Black students’ perceptions of school bonding, negative emotions, as well as involvement in school suspension. This chapter begins with a discussion of the descriptive statistics, followed by a discussion of the Pearson’s r correlation analysis. This chapter concludes with a discussion of the Complex Samples Ordinal Logistic Regression analyses.

DESCRIPTIVE STATISTICS

Table 2 presents the descriptive statistics for a nationally representative sample of 917 Black students in the United States. Approximately 96 percent of respondents reported that they usually earn at least a Cs or better. More specifically, approximately 36 percent of Black students reported that they usually earn Cs, while approximately 44 percent reported that they usually earn Bs and 16 percent reported that they usually earn As. Approximately 4 percent of respondents indicated that they usually earned Ds (3%) and failing grades (1%). The vast majority (94%) of respondents invest time each day doing their homework outside of school, with approximately 25 percent spending less than an hour to an hour each day doing their homework outside of school and another 23 percent indicating that they spend two hours a day doing their homework outside of school. Approximately 17 percent of respondents indicated that they spend between three and four hours a day doing their homework outside of school, with another 29 percent indicating that they spend five or more hours a day doing their homework outside of school. Respondents are no more likely to be disobedient (49%) than they are to be obedient (51%). However, approximately 57 percent of respondents indicated that
they have been suspended from school for one or more days. Most respondents (96%) reported receiving messages that promoted Black pride. In addition, the vast majority of respondents (86%) aspire to continue their education, with approximately 47 percent wanting to pursue a post-secondary education (i.e., community college and/or college) and approximately 39 percent wanting to pursue a graduate and/or professional education.

On average, perceptions of differential treatment from teachers by Black students in this study are low. For instance, on a scale of 1 to 19, with higher scores indicating more perceptions of differential treatment from teachers, results in Table 2 reveal a mean score of 3.130 for Black students’ perceptions of differential treatment from teachers. Also, Black students in this study do not exhibit negative emotions. For the negative emotions scale, which ranges in scores from 0 to 4, results indicate a mean score of 1.141. On a scale of 3 to 27, with higher scores indicating more positive perceptions of school bonding, results reveal a mean score of 22.410 for perceptions of school bonding. Furthermore, on a scale of 0 to 15, with higher scores indicating more deviant peer associations, results in Table 2 indicate a mean score of 2.172 for the deviant peer associations scale. As well, on average, Black students indicate greater positive peer support; on a scale of 0 to 18, the mean score for positive peer support is 13.490. With a scale ranging from 8 to 24, results in Table 2 reveal a mean score of 22.424 for self-perceptions.
Table 2. Descriptive Statistics (N=917)

<table>
<thead>
<tr>
<th>DEPENDENT VARIABLES</th>
<th>Frequency</th>
<th>Valid Percent</th>
<th>Mean</th>
<th>Median</th>
<th>Mode</th>
<th>S.D.</th>
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<tr>
<td>( A_t )</td>
<td>144</td>
<td>16%</td>
<td>2.708</td>
<td>3.000</td>
<td>3.000</td>
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<tr>
<td>( B_t )</td>
<td>407</td>
<td>44%</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>( C_t )</td>
<td>329</td>
<td>36%</td>
<td>2.708</td>
<td>3.000</td>
<td>3.000</td>
<td>0.797</td>
</tr>
<tr>
<td>( D_t )</td>
<td>29</td>
<td>3%</td>
<td>2.708</td>
<td>3.000</td>
<td>3.000</td>
<td>0.797</td>
</tr>
<tr>
<td><strong>Failing Grades</strong></td>
<td>8</td>
<td>1%</td>
<td>2.708</td>
<td>3.000</td>
<td>3.000</td>
<td>0.797</td>
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<tr>
<td><strong>INDEPENDENT VARIABLES</strong></td>
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<td>2.360</td>
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<td>4.000</td>
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<tr>
<td>One Hour or Less</td>
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<tr>
<td>2 Hours</td>
<td>211</td>
<td>23%</td>
<td>2.360</td>
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<td>3-4 Hours</td>
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<td>5+ Hours</td>
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<td>1.000</td>
<td>0.197</td>
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<td>4%</td>
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<tr>
<td>Yes</td>
<td>880</td>
<td>96%</td>
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Table 2. Continued.

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<th>INDEPENDENT VARIABLES</th>
<th>Frequency</th>
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<th>Median</th>
<th>Mode</th>
<th>S.D.</th>
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<tr>
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<tr>
<td>Not Graduate HS</td>
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<td>&lt;1%</td>
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<tr>
<td>Graduate HS</td>
<td>67</td>
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<tr>
<td>Technical/Vocational/Trade School</td>
<td>51</td>
<td>6%</td>
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<td>Community College / University</td>
<td>439</td>
<td>47%</td>
<td>4.966</td>
<td>5.000</td>
<td>5.000</td>
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<td>Graduate/Professional</td>
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<td>39%</td>
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<tr>
<td>Other</td>
<td>2</td>
<td>&lt;1%</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

| CONTROL VARIABLES     |           |               |      |        |      |      |
| Age                   | 15.02     |              |      |        |      |      |
| Gender                |           |               |      |        |      |      |
| Male                  | 446       | 49%           | 0.510 | 1.000 | 1.000 | 0.500 |
| Female                | 471       | 51%           |      |        |      |      |
| Household Income      |           |               |      |        |      |      |
| $0 - $10,000          | 131       | 14%           |      |        |      |      |
| $10,001 - $25,000     | 294       | 32%           | 1.687 | 2.000 | 1.000 | 1.112 |
| $25,001 - $50,000     | 289       | 32%           |      |        |      |      |
| $50,001 - $75,000     | 135       | 15%           |      |        |      |      |
| $75,000 and Over      | 67        | 7%            |      |        |      |      |
| Grade Level           |           |               |      |        |      |      |
| 6th Grade             | 23        | 2%            |      |        |      |      |
| 7th Grade             | 68        | 7%            |      |        |      |      |
| 8th Grade             | 179       | 20%           |      |        |      |      |
| 9th Grade             | 202       | 22%           | 9.448 | 9.000 | 9.000 | 1.541 |
| 10th Grade            | 197       | 22%           |      |        |      |      |
| 11th Grade            | 147       | 16%           |      |        |      |      |
| 12th Grade            | 98        | 11%           |      |        |      |      |
| Post High School      | 2         | <1%           |      |        |      |      |
TABLE 3 presents the results from the Pearson’s r correlation analysis. Accordingly, findings from Table 3 show a negative and statistically significant association between Black students’ perceptions of differential treatment from teachers and their academic achievement (i.e., self-reported grades) \( (r=-0.127, \ p<0.01) \). Also, results from Table 3 reveal a positive and statistically significant association between Black students’ perceptions of school bonding and their academic achievement \( (r=0.232, \ p<0.01) \), to include a positive and statistically significant association between Black students’ homework behavior and their academic achievement \( (r=0.206, \ p<0.01) \). The negative association between negative emotions and Black students’ academic achievement, however, was not statistically significant \( (r=-0.057, \ p>0.05) \). As indicated by Table 3, both disobedience \( (r=-0.094, \ p<0.01) \) and Black students getting suspended from school for one or more days \( (r=-0.210, \ p<0.01) \) have a negative and statistically significant association with Black students’ academic achievement. Furthermore, findings from Table 3 indicate that the association between positive peer support and Black students’ academic achievement \( (r=0.093, \ p<0.01) \), academic aspirations and Black students’ academic achievement \( (r=0.219, \ p<0.01) \), and self-perceptions and Black students’ academic achievement \( (r=0.115, \ p<0.01) \) are positive and statistically significant. The association between racial socialization (i.e., Black pride) and Black students’ academic achievement, however, was not statistically significant \( (r=0.046, \ p>0.05) \). For the control variables, Black female students \( (r=0.233, \ p<0.01) \), Black students whose parents report higher family incomes \( (r=0.157, \ p<0.01) \), and Black students in higher grades \( (r=0.136, \ p<0.01) \) are significantly more likely to report earning higher grades. The association between age and Black students’ academic achievement, on the other hand, was not statistically significant \( (r=0.014, \ p>0.05) \).
<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
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<th>10 (AA)</th>
<th>11 (SR)</th>
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<td>-0.232**</td>
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<td>-0.210**</td>
<td>-0.196**</td>
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<td>0.115**</td>
<td>0.046</td>
<td>0.014</td>
<td>0.233**</td>
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<td>Perceptions of Differential Treatment from Teachers</td>
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<td>0.120**</td>
<td>0.246**</td>
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<td>0.339**</td>
<td>0.159**</td>
<td>0.203**</td>
<td>0.001</td>
<td>0.059</td>
<td>-0.181**</td>
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<td>0.041</td>
<td>0.110**</td>
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<td>-0.152**</td>
<td>-0.144**</td>
<td>0.081*</td>
<td>0.126**</td>
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<td>-0.152**</td>
<td>0.107**</td>
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<td>-0.173**</td>
<td>0.005</td>
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<td>0.199*</td>
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<td>0.001</td>
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<td>-0.071*</td>
<td>-0.083*</td>
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<td>0.254**</td>
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<td>0.126**</td>
<td>-0.067*</td>
<td>-0.173**</td>
<td>-0.125**</td>
<td>0.144**</td>
<td>1</td>
<td>0.079*</td>
<td>0.109*</td>
<td>-0.091**</td>
<td>0.215**</td>
<td>0.111**</td>
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<td>-0.181**</td>
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<td>0.021</td>
<td>0.005</td>
<td>0.038</td>
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<td>0.011</td>
<td>-0.030</td>
<td>0.109**</td>
<td>-0.013</td>
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<td>0.053</td>
<td>0.012</td>
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<td>0.078*</td>
</tr>
<tr>
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<td>0.041</td>
<td>-0.078*</td>
<td>0.053</td>
<td>0.053</td>
<td>0.046</td>
<td>0.306**</td>
<td>0.155**</td>
<td>-0.091**</td>
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<td>Gender</td>
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<td>0.110**</td>
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<td>0.067*</td>
<td>-0.004</td>
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<td>0.254**</td>
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<td>Family Income</td>
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<td>0.060</td>
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*p<0.05; **p<0.01; ***p<0.001
COMPLEX SAMPLES ORDINAL LOGISTIC REGRESSION ANALYSES

Results from six Complex Samples Ordinal Logistic Regression analyses are presented in Tables 4, 5, 6, 7, 8, and 9. Each table coincides with the six different pathways linking Black students’ perceptions of differential treatment from teachers to their self-reported academic achievement. More specifically, Table 4 presents the results from a Complex Samples Ordinal Logistic Regression analysis exploring the direct association between Black students’ perceptions of differential treatment from their teachers and their self-reported academic achievement, to include the indirect association through Black students’ perceptions of school bonding. In Table 5, the indirect association in Table 4 is expanded with the addition of Black students’ homework behavior (i.e., time spent each day doing homework outside of school). Table 6, while incorporating the direct association previously mentioned, explores the indirect association between Black students’ perceptions of differential treatment from their teachers and their self-reported academic achievement through negative emotions and disobedience. In Table 7, the indirect association between Black students’ perceptions of differential treatment from their teachers and their self-reported academic achievement through Black students’ perceptions of school bonding and disobedience is explored. Table 8 explores the indirect association between Black students’ perceptions of differential treatment from their teachers and their self-reported academic achievement through Black students’ suspension from school for one or more days. Finally, Table 9 explores the indirect association between Black students’ perceptions of differential treatment from their teachers and their self-reported academic achievement through being suspended from school for one or more days and Black students’ homework behavior. In all analyses, the effects of age, gender, family income, and grade level are held constant.

Perceptions of Differential Treatment from Teachers and Academic Achievement – The Role of School Bonding

Table 4 presents the findings from a Complex Samples Ordinal Logistic Regression exploring the direct association between Black students’ perceptions of differential treatment from teachers and
their self-reported academic achievement (i.e., grades). As well, Table 4 provides findings exploring the mediating and moderating between Black students’ perceptions of differential treatment from teachers and their self-reported academic achievement through Black students’ perceptions of school bonding.

In Model 1, Black students’ self-reported grades are regressed on their perceptions of differential treatment from teachers. Age, gender, family income, and grade level are included as control variables. Accordingly, Table 4 indicates that approximately 14 percent of the variance in Black students’ self-reported grades is explained by the model (Nagelkerke R² = 0.137). Furthermore, in evaluating Table 4, the assumption of proportional odds is met (Adj. Wald χ² = 8.162, df=8.920, p>0.05).

For Model 1, results reveal significant associations between the sociodemographic control variables and Black students’ self-reported grades, an indicator for academic achievement. Specifically, results indicate a negative and statistically association between Black students’ age and academic achievement (B = -0.426, Std. Error = 0.112, p<0.001). Thus, while holding all other variables constant, for each unit increase in Black students’ age, their odds of reporting greater academic achievement is significantly reduced (Exp(B) = 0.653). In addition, compared to Black male students, the odds of Black female students reporting greater academic achievement significantly increases, net the effects of all other variables (B = 0.794, Std. Error = 0.144, p<0.001, Exp(B) = 2.213). A positive and significant association between Black students’ family income and their self-reported grades was also found (B = 0.204, Std. Error = 0.089, p<0.05). Thus, while holding all other variables constant, for every unit increase in Black students’ family income, their odds of reporting greater academic achievement increases by approximately 23% (Exp(B) = 1.226). Finally, a positive and significant association between grade level and academic achievement was found for a population of 917 Black students (B = 0.488, Std. Error = 0.104, p<0.001). Thus, while holding all other variables constant,
for every unit increase in grade level, the odds of Black students reporting greater academic achievement increases by approximately 63% (Exp(B) = 1.629).

Furthermore, results from Model 1 show that the association between Black students’ perceptions of differential treatment and their academic achievement is negative and statistically significant (B = -0.072, Std. Error = 0.032, p<0.05). Therefore, while holding all other variables constant, for every unit increase in Black students’ perceptions of differential treatment from teachers, their odds of reporting greater academic achievement significantly decreases by approximately 7% (Exp(B) = 0.930).

Additionally, in Model 2, the potential buffering effect of deviant peer associations and racial socialization (i.e., Black pride) on the association between Black students’ perceptions of differential treatment from teachers and their academic achievement is examined. Thus, two interaction terms are included in Model 2. The first involves the interaction between deviant peer associations and perceptions of differential treatment from teachers. The second involves the interaction between black socialization (i.e., Black pride) and perceptions of differential treatment from teachers. As indicated in Model 2, the addition of the interaction terms increased the amount of variance in Black students’ academic achievement explained by the model (Nagelkerke $R^2 = 0.167$). Furthermore, the assumption of proportional odds is upheld in Model 2 given that the Adjusted Wald $\chi^2$ statistic (0.035, df=13.023) was not statistically significant (p>0.05).

As shown in Table 4, Model 2 reveals a positive and significant interaction whereby the effect of perceived differential treatment from teachers on the academic achievement of Black students is

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7 The results presented here are consistent with the findings of a post-hoc analysis presented in Table 4A located in Appendix A. Particularly, in this analysis, ordinal logistic regression is used to assess the association between Black students’ perceptions of differential treatment from teachers on their academic achievement, while controlling for age, gender, family income, and grade level. According to the post hoc analysis presented in Table 4A, the association between perceptions of differential treatment from teachers and the academic achievement of Black students is also negative and statistically significant (B = -0.072, Std. Error = 0.024, p<0.05). Yet, unlike Complex Sample Ordinal Logistic Regression, Ordinal Logistic Regression does not account for the complex sample designs and weights. Thus, despite the consistency in findings from both regression analyses, it is not possible to confirm with certainty the results of the Complex Sample Ordinal Logistic Regression.
conditioned by levels of deviant peer associations and vice versa ($B = 0.100$, Std. Error $= 0.048$, $p<0.05$). In particular, at mean levels of deviant peer associations (approx. 0), the effect of perceived differential treatment from teachers is negative ($B = -0.196$, Std. Error $= 0.048$), reducing the odds of Black students reporting greater academic achievement (i.e., grades) ($\text{Exp}(B) = 0.822$). At mean levels of perceived differential treatment from teachers (approx. 0), the effect of deviant peer associations is negative ($B = -0.325$, Std. Error $= 0.110$), reducing the odds of Black students reporting greater academic achievement ($\text{Exp}(B) = 0.723$). Taken together, while holding all other variables constant, the effect of Black students' perceptions of differential treatment from teachers on their academic achievement is strengthened at lower levels of deviant peer associations. As well, while holding all other variables constant, at high levels of perceived differential treatment from teachers, the effect of deviant peer associations on the academic achievement of Black students amplifies.

Additionally, Model 2 reveals a positive and significant interaction whereby the effect of perceived differential treatment from teachers on the academic achievement of Black students is conditioned on whether or not Black students are socialized to take pride in their race and vice versa ($B = 0.146$, Std. Error $= 0.039$, $p<0.001$). Thus, at mean levels of perceived differential treatment from teachers (approx. 0), the effect of racial socialization (i.e., Black pride) is positive ($B = 0.030$, Std.

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8 This finding is consistent with the finding indicated in Table 4A, Model 2 of the Ordinal Logistic Regression model presented in Appendix A, whereby the interaction term, involving deviant peer associations and Black students’ perceptions of differential treatment from teachers, was found to be positive and statistically significant ($B= 0.124$, Std. Error $= 0.055$, $p<0.05$). Nevertheless, while both regression analyses revealed a positive and statistically significant coefficient for the interaction term, findings from the ANOVA presented in Table A, which does not account for the complex sample designs and weights, showed that the interaction of deviant peer associations and perceptions of differential treatment from teachers was not significant ($B = 0.055$, $p>0.05$). It is arguable that the weighted complex sampling design of the Complex Sample Ordinal Logistic Regression produced a suppression effect whereby the significance level of the interaction was boosted. Ergo, it is not possible to confirm with certainty the results of the Complex Sample Ordinal Logistic Regression.

9 This finding, however, does not match the post-hoc analyses presented in Table 4A located in Appendix A. Although it was found that the interaction of racial socialization (i.e., Black pride) with perceptions of differential treatment from teachers was statistically significant using Complex Samples Ordinal Logistic Regression, it was not replicated in the Ordinal Logistic Regression presented in Table 4A, Model 2 ($B = 0.122$, $p>0.05$). Though both regression analyses revealed a positive coefficient for the interaction term, the significance of this interaction term differed. It is arguable that the weighted complex sampling design produced a suppression effect whereby the significance level of the interaction was boosted. In Ordinal Logistic Regression, which does not account for the complex sample designs and weights, and the ANOVA presented in Table B, which was used to verify an interaction between racial socialization and perceptions of differential treatment from teachers ($B = 0.053$, $p>0.05$), results showed that the interaction of racial socialization and perceptions of differential treatment from teachers was not significant. Ergo, it is not possible to confirm with certainty the results of the Complex Sample Ordinal Logistic Regression.
Error = 0.056), increasing the odds of Black students reporting greater academic achievement \((\text{Exp}(B) = 1.031)\). On the other hand, at mean levels of racial socialization reinforcing Black pride (approx. 0), the effect of perceived differential treatment from teachers is negative \((B = -0.196, \text{Std. Error} = 0.098)\), reducing the odds of Black students reporting greater academic achievement \((\text{Exp}(B) = 0.822)\). In all, while holding all other variables constant, the effect of perceived differential treatment from teachers on the academic achievement of Black students is weakened for Black students who have been socialized to take pride in being Black. Still, while holding all other variables constant, at high levels of perceived differential treatment, the effect of Black students being socialized to take pride in being Black on their academic achievement increases.

In Model 3, school bonding was added to assess whether or not Black students’ perceived levels of school bonding mediate the effect of perceived differential treatment from teachers on their academic achievement, net the effects of age, gender, family income, and grade level. As indicated in Table 4, approximately 18 percent of the variance in Black students’ academic achievement is explained by Model 3, an increase from Model 1 wherein school bonding was included in the model \((\text{Nagelkerke } R^2 = 0.177)\). In assessing Model 3, the assumption of proportional odds is met \((\text{Adj. Wald } \chi^2 = 2.466, df = 10.567, p>0.05)\).

Consistent with Model 1, results for Model 3 reveal a negative and significant association between age and Black students’ academic achievement \((B = -0.424, \text{Std. Error} = 0.111, p<0.001)\), net the effects of other variables in the model. Also, consistent with Model 1, the positive and significant associations between gender and academic achievement \((B = 0.737, \text{Std. Error} = 0.143, p<0.001)\), family income and academic achievement \((B = 0.227, \text{Std. Error} = 0.094, p<0.05)\), and grade level and academic achievement \((B = 0.500, \text{Std. Error} = 0.100, p<0.001)\), net the effects of all other variables in the model, remained the same. In contrast to Model 1, which showed that the negative association between perceived differential treatment from teachers and the academic achievement of
Black students was statistically significant (B = -0.072, Std. Error = 0.032, p<0.05), Model 3 shows that the negative effect of perceived differential treatment from teachers on the academic achievement of Black students was reduced and is no longer statistically significant (B = -0.043, Std. Error = 0.030, p>0.05). Instead, a positive and significant association between school bonding and the academic achievement of Black students was found (B = 0.118, Std. Error = 0.027, p<0.001). Thus, while holding constant all other variables in the model, for every unit increase in Black students’ perceptions of school bonding, the odds of Black students reporting greater academic achievement significantly increases by approximately 12.5% (Exp(B) = 1.125).

To further gauge the mediating effect of Black students’ perceived level of school bonding on the association between Black students’ perceptions of differential treatment from teachers on their academic achievement, Model 4 assessed whether this effect was moderated by Black students’ negative emotions (i.e., depression, irritability, withdrawal, and loss of interest). Age, gender, family income, and grade level are held constant. As indicated in Table 4, approximately 19 percent of the variance in Black students’ academic achievement is explained by Model 4 (Nagelkerke R²=0.188). In assessing Model 4, the assumption of proportional odds is met (Adj. Wald χ² = 1.040, df = 12.439, p>0.05). As shown in Table 4, Model 4 reveals a negative and significant interaction whereby the effect of perceived school bonding on the academic achievement of Black students is conditioned by levels of negative emotion and vice versa (B = -0.217, Std. Error = 0.086, p<0.05). This finding is consistent with the post hoc analysis presented in Table 4A (Model 4) located in Appendix A, whereby an interaction term, involving perceptions of school bonding and Black students’ negative emotions, was entered in an Ordinal Logistic Regression model. The interaction term was found to be negative and statistically significant (B=-0.198, Std. Error = 0.070, p<0.01). In the ANOVA analysis presented in Table C, results further showed consistency to the significance and negative coefficient (B = -0.099, p<0.01). Nevertheless, while both regression analyses and ANOVA revealed a negative and statistically significant coefficient for the
mean levels of negative emotion (approx. 0), the effect of perceived school bonding is positive (B = 0.459, Std. Error = 0.101), increasing the odds of Black students reporting greater academic achievement (i.e., grades) (Exp(B) = 1.583). At mean levels of perceived school bonding (approx. 0), the effect of negative emotions is negative (B = -0.056, Std. Error = 0.098), reducing the odds of Black students reporting greater academic achievement (Exp(B) = 0.946).

Taken together, while holding all other variables constant, the effect of Black students’ perceptions of school bonding on their academic achievement is weakened at higher levels of negative emotion. As well, while holding all other variables constant, the effect of Black students’ negative emotions on the academic achievement of Black students is strengthened at higher levels of perceived school bonding.

interaction term, Ordinal Logistic Regression and ANOVA do not account for the complex sample designs and weights, thus it is not possible to confirm with certainty the results of the Complex Sample Ordinal Logistic Regression.
Table 4. Association between Perceived Differential Treatment from Teachers and Black Students’ Self-Reported Academic Achievement – The Role of Perceived School Bonding (N=917)

<table>
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<td>0.930</td>
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<td>--------</td>
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<td>Black Pride (BP)</td>
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<td>Nagelkerke R(^2)</td>
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<td>0.167</td>
<td>0.177</td>
<td>0.188</td>
</tr>
</tbody>
</table>

Test of Parallel Lines

<table>
<thead>
<tr>
<th>Test of Parallel Lines</th>
<th>Adj. Wald $\chi^2 = 8.162$</th>
<th>Adj. Wald $\chi^2 = 0.035$</th>
<th>Adj. Wald $\chi^2 = 2.466$</th>
<th>Adj. Wald $\chi^2 = 1.040$</th>
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<tr>
<td>$df = 8.920$</td>
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<td>$df = 10.567$</td>
<td>$df = 12.439$</td>
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<tr>
<td>p&gt;0.05</td>
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<td>p&gt;0.05</td>
<td>p&gt;0.05</td>
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</tr>
</tbody>
</table>

*\(p<0.05; **p<0.01; ***p<0.001\)

\(^{12}\) Family income.

\(^{13}\) Perceptions of Differential Treatment from Teachers; Deviant Peer Associations; Racial Socialization (i.e., Black pride); Perceptions of School Bonding; Negative Emotions.

\(^{14}\) Each variable comprising the interaction terms are standardized, and their corresponding z-scores are used to create the interaction terms.
Perceptions of Differential Treatment from Teachers and Academic Achievement – The Role of School Bonding and Student Homework Behavior

Table 5 presents the findings from a Complex Samples Ordinal Logistic Regression exploring the associations between Black students’ perceptions of differential treatment from teachers, their perceptions of school bonding, and their homework behavior (i.e., number of hours each day that Black students invest in doing their homework outside of school). The effects of age, gender, family income, and grade level are held constant throughout Table 5. Findings for Model 1 are consistent with the findings for Model 1 presented in Table 4. Model 2 regresses Black students’ perception of school bonding on the academic achievement of Black students, while accounting for the effects of age, gender, family income, and grade level. Accordingly, as a whole, the model explains approximately 17 percent of the variance in Black students’ academic achievement (Nagelkerke $R^2=0.173$), as well, given that the Adjusted Wald $\chi^2 (2.488, df=8.881)$ is not statistically significant ($p>0.05$), the assumption of proportional odds is met.

Consistent with Model 1, results from Model 2 reveal a negative and significant association between age and Black students’ academic achievement ($B = -0.426, \text{Std. Error} = 0.107, p<0.001$), net the effects of other variables in the model. Also, consistent with Model 1, the positive and significant associations between gender and academic achievement ($B = 0.752, \text{Std. Error} = 0.142, p<0.001$), family income and academic achievement ($B = 0.233, \text{Std. Error} = 0.093, p<0.05$), and grade level and academic achievement ($B = 0.498, \text{Std. Error} = 0.097, p<0.001$), net the effects of all other variables in the model, remained the same.

Model 2 also reveals a significant and positive association between Black students’ perceived level of school bonding and their academic achievement, while controlling for the effect of age, gender, family income, and grade level ($B = 0.126, \text{Std. Error} = 0.027, p<0.001$). Thus, independent of the effect of Black students’ perceptions of differential treatment from teachers, while holding the
effects of age, gender, family income, and grade level constant, for every unit increase in Black students’ perceptions of school bonding, the odds of Black students reporting greater academic achievement significantly increases by 13.5% (Exp(B) = 1.135).

Model 3 assesses the independent effect of Black students’ homework behavior on their academic achievement while controlling for the effects of age, gender, family income, and grade level. As presented in Table 5, Model 3 explains approximately 15 percent of the variance in Black students’ self-reported academic achievement (Nagelkerke R² = 0.149). In evaluating Model 3, the assumption of proportional odds is met (Adj. Wald χ² = 5.188, df = 8.629, p>0.05). Consistent with prior models, results reveal a negative and significant association between age and Black students’ academic achievement (B = -0.426, Std. Error = 0.116, p<0.001), net the effects of other variables in the model. Also, consistent with prior models, results show positive and significant associations between gender and academic achievement (B = 0.800, Std. Error = 0.150, p<0.001), family income and academic achievement (B = 0.193, Std. Error = 0.086, p<0.05), and grade level and academic achievement (B = 0.464, Std. Error = 0.108, p<0.001), net the effects of all other variables in the model.

As indicated in Table 5, for Model 3 results reveal that Black students’ homework behavior has a positive and statistically significant association with their self-reported academic achievement (B = 0.240, Std. Error = 0.061, p<0.001). Thus, independent of Black students’ perceptions of differential treatment from teachers and holding all other variables constant, for every unit increase in Black students’ homework behavior, their odds of reporting greater academic achievement significantly increases by approximately 27% (Exp(B) = 1.271). In Model 4, school bonding and student homework behavior are added to assess whether or not Black students’ perceived levels of school bonding and their homework behavior mediate the effect of perceived differential treatment from teachers on their academic achievement, net the effects of age, gender, family income, and grade level. As indicated in Table 5, approximately 19 percent of the variance in Black students’ academic achievement is
explained by Model 4 (Nagelkerke $R^2=0.189$). In assessing Model 4, the assumption of proportional odds is met (Adj. Wald $\chi^2 = 3.749$, $df = 11.745$, $p>0.05$). Consistent with previous models, the negative and significant association between age and Black students’ academic achievement ($B = -0.424$, Std. Error = 0.111, $p<0.001$), net the effects of other variables in the model, as well the positive and significant associations between gender and academic achievement ($B = 0.737$, Std. Error = 0.143, $p<0.001$), family income and academic achievement ($B = 0.227$, Std. Error = 0.094, $p<0.05$), and grade level and academic achievement ($B = 0.500$, Std. Error = 0.100, $p<0.001$), net the effects of all other variables in the model, remained the same.

Additionally, similar to Model 4, the negative effect of perceived differential treatment from teachers on the academic achievement of Black students is no longer statistically significant ($B = -0.045$, Std. Error = 0.031, $p>0.05$) with the addition of Black students’ homework behavior. Instead, a positive and significant association between school bonding and the academic achievement of Black students was found ($B = 0.104$, Std. Error = 0.029, $p<0.001$), to include a positive and significant association between Black students’ homework behavior and their self-reported academic achievement ($B = 0.180$, Std. Error = 0.062, $p<0.01$). Thus, while holding constant all other variables in the model, for every unit increase in Black students’ perceptions of school bonding, the odds of Black students reporting greater academic achievement significantly increases by approximately 11% (Exp($B$) = 1.109). Also, while holding all other variables constant, for every unit increase in the time

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15 These results match the post-hoc analysis presented in Table 5A (Model 4) in Appendix A, whereby the proposed mediation of school bonding and homework behavior on the association between Black students’ perceptions of differential treatment from teachers and their self-reported academic achievement was assessed using Ordinal Logistic Regression. Accordingly, these findings also showed that the association between Black students’ perceptions of differential treatment from teachers and their self-reported academic achievement was no longer significant when school bonding and homework behavior are added to the model ($B = -0.035$, Std. Error = 0.025, $p>0.05$). Similarly, findings reinforced the positive and significant association between Black students’ perceived level of school bonding and their self-reported academic achievement ($B = 0.110$, Std. Error = 0.022, $p<0.001$), as well as the positive and significant association between Black students’ homework behavior and their self-reported academic achievement ($B = 0.215$ Std. Error = 0.058, $p<0.001$). Nonetheless, despite this consistency in findings, unlike Complex Sample Ordinal Logistic Regression, Ordinal Logistic Regression does not account for the complex sample designs and weights. Ergo, it is not possible to confirm with certainty the results of the Complex Sample Ordinal Logistic Regression.
Black students invest each day doing homework outside of school, their odds of reporting greater academic achievement significantly increases by approximately 20\% (\text{Exp}(B) = 1.197).
Table 5. Association between Perceived Differential Treatment from Teachers and Black Students’ Self-Reported Academic Achievement – The Role of Perceived School Bonding and Student Homework Behavior (N=917)

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>s.e.</td>
<td>Exp(B)</td>
<td>B</td>
</tr>
<tr>
<td>Age</td>
<td>-0.426***</td>
<td>0.112</td>
<td>0.653</td>
<td>-0.426***</td>
</tr>
<tr>
<td>Gender</td>
<td>0.794***</td>
<td>0.144</td>
<td>2.213</td>
<td>0.752***</td>
</tr>
<tr>
<td>Family Income¹⁶</td>
<td>0.204*</td>
<td>0.089</td>
<td>1.226</td>
<td>0.233*</td>
</tr>
<tr>
<td>Grade Level</td>
<td>0.488***</td>
<td>0.104</td>
<td>1.629</td>
<td>0.498***</td>
</tr>
<tr>
<td>Perceived Differential Treatment</td>
<td>-0.072*</td>
<td>0.032</td>
<td>0.930</td>
<td>-------</td>
</tr>
<tr>
<td>Perceived School Bonding¹⁷</td>
<td>-------</td>
<td>-----</td>
<td>-------</td>
<td>0.126***</td>
</tr>
<tr>
<td>Student Homework Behavior</td>
<td>-------</td>
<td>-----</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td>Nagelkerke R²</td>
<td>0.137</td>
<td></td>
<td></td>
<td>0.173</td>
</tr>
<tr>
<td>Test of Parallel Lines</td>
<td>Adj. Wald $\chi^2 = 8.162$ $df = 8.920$ $p &gt; 0.05$</td>
<td>Adj. Wald $\chi^2 = 2.488$ $df = 8.881$ $p &gt; 0.05$</td>
<td>Adj. Wald $\chi^2 = 5.188$ $df = 8.629$ $p &gt; 0.05$</td>
<td>Adj. Wald $\chi^2 = 3.749$ $df = 11.745$ $p &gt; 0.05$</td>
</tr>
</tbody>
</table>

* p<0.05; ** p<0.01; *** p<0.001

¹⁶ Family income
¹⁷ Perceptions of Differential Treatment from Teachers; Perceptions of School Bonding
The Moderating Role of Academic Aspirations

To further understand the role of Black students’ homework behavior as an additional mediator to the indirect association between Black students’ perceptions of differential treatment from teachers on their self-reported academic achievement through perceived levels of school bonding, Table 6 assessed whether academic aspirations moderated this indirect association. Like Model 4, age, gender, family income, and grade level are held constant. As indicated in Table 6, approximately 22 percent of the variance in Black students’ self-reported academic achievement is explained by the model, an increase from the variance explained by Model 4 in Table 5 (Nagelkerke $R^2=0.217$). In assessing Model 4, the assumption of proportional odds is met (Adj. Wald $\chi^2 = 0.358$, $df = 13.493$, $p>0.05$). As revealed in Table 6, the associations between the control variables and Black students’ self-reported academic achievement reported in Model 4 in Table 5, though effect sizes decreased with the addition of the interaction term. Furthermore, the model maintains that the negative association between Black students’ perceptions of differential treatment from teachers and their self-reported academic achievement is not statistically significant ($B = -0.045$, Std. Error = 0.030, $p>0.05$).

As well, consistent with Model 4 in Table 5, the odds of Black students reporting greater academic achievement increases by approximately 11% ($\exp(B) = 1.112$) for every unit increase in their perceptions of school bonding ($B = 0.107$, Std. Error = 0.029, $p<0.001$).

Table 6 does show a positive and significant interaction whereby the effect of Black students’ homework behavior on their self-reported academic achievement is conditioned by levels of academic aspirations and vice versa ($B = 0.263$, Std. Error = 0.054, $p<0.001$). In particular, at mean levels of

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18 This finding is consistent with the post hoc analysis presented in Appendix A, Table 6A whereby an interaction term involving Black students’ homework behavior and their academic aspirations was entered into an unweighted Ordinal Logistic Regression model. The interaction term was found to be positive and statistically significant ($B = 0.245$, Std. Error = 0.075, $p<0.01$). According to findings from the ANOVA presented in Table D in Appendix A, results further showed consistency to the significance and negative coefficient ($B = 0.101$, $p<0.01$). Nevertheless, while both regression analyses and ANOVA revealed a positive and statistically significant coefficient for the interaction term, Ordinal Logistic Regression and ANOVA do not account for the complex sample designs and weights, thus it is not possible to confirm with certainty the results of the Complex Sample Ordinal Logistic Regression.
academic aspirations (approx. 0), the effect of Black students’ homework behavior is positive ($B = 0.206$, Std. Error = 0.083), increasing the odds of Black students reporting greater academic achievement ($\text{Exp}(B) = 1.229$). At mean levels of homework behavior (approx. 0), the effect of academic aspirations is positive ($B = 0.288$, Std. Error = 0.093), increasing the odds of Black students reporting greater academic achievement ($\text{Exp}(B) = 1.334$). Taken together, while holding all other variables constant, the effect of Black students’ homework behavior on their self-reported academic achievement is amplified at higher levels of academic aspirations. As well, while holding all other variables constant, the effect of academic aspirations on the self-reported academic achievement of Black students is strengthened at higher levels of homework behavior.
Table 6. Moderating Effect of Academic Aspirations on the Association between Perceived Differential Treatment from Teachers and Black Students’ Self-Reported Academic Achievement through Perceived School Bonding and Student Homework Behavior (N=917)

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>s.e.</td>
<td>Exp(B)</td>
</tr>
<tr>
<td>Age</td>
<td>-0.365**</td>
<td>0.127</td>
<td>0.694</td>
</tr>
<tr>
<td>Gender</td>
<td>0.633***</td>
<td>0.153</td>
<td>1.883</td>
</tr>
<tr>
<td>Family Income</td>
<td>0.186</td>
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<td>1.204</td>
</tr>
<tr>
<td>Grade Level</td>
<td>0.434***</td>
<td>0.115</td>
<td>1.543</td>
</tr>
<tr>
<td>Perceived Differential Treatment</td>
<td>-0.045</td>
<td>0.030</td>
<td>0.956</td>
</tr>
<tr>
<td>Perceived School Bonding</td>
<td>0.107***</td>
<td>0.029</td>
<td>1.112</td>
</tr>
<tr>
<td>Student Homework Behavior (SHB)</td>
<td>0.206*</td>
<td>0.083</td>
<td>1.229</td>
</tr>
<tr>
<td>Academic Aspirations (ACASP)</td>
<td>0.288**</td>
<td>0.093</td>
<td>1.334</td>
</tr>
<tr>
<td>SHB<em>ACASP</em></td>
<td>0.263***</td>
<td>0.054</td>
<td>1.301</td>
</tr>
</tbody>
</table>

Nagelkerke R²

Test of Parallel Lines

Adj. Wald χ² = 0.358
\[ df = 13.493 \]
p > 0.05

*p<0.05; **p<0.01; ***p<0.001

19 Family income
20 Perceptions of Differential Treatment from Teachers; Perceptions of School Bonding
21 Each variable comprising the interaction terms are standardized, and their corresponding z-scores are used to create the interaction terms.
Perceptions of Differential Treatment from Teachers and Academic Achievement – The Role of Negative Emotions and Disobedience

Table 7 presents the findings from a Complex Samples Ordinal Logistic Regression exploring the direct association between Black students’ perceptions of differential treatment from teachers on their self-reported academic achievement. Furthermore, Table 7 explores the indirect association between Black students’ perceptions of differential treatment from teachers on their self-reported academic achievement through negative emotions and disobedience. Throughout Table 7, results account for the effects of age, gender, family income, and grade level. In Table 7, the results for Model 1 are consistent with the findings presented in Table 5 for Model 1. In Model 2, the independent effect of negative emotions on Black students’ self-reported academic achievement are assessed. In Model 2, the effects of age, gender, family income, and grade level are held constant. As indicated in Model 2, the model as a whole is statistically significant and explains approximately 13 percent of the variance in Black students’ self-reported academic achievement (Nagelkerke $R^2 = 0.129$). In assessing Model 2, the assumption of proportional odds is met ($\text{Adj. Wald } \chi^2 = 3.773, df = 8.610, p > 0.05$). Only the control variables are found to have statistically significant associations with Black students’ self-reported academic achievement. The association between negative emotions and Black students’ self-reported academic achievement was not statistically significant ($B = -0.096, \text{ Std. Error} = 0.063, p > 0.05$).

Model 3 assesses the independent effect of disobedience on Black students’ self-reported academic achievement while controlling for the effects of age, gender, family income, and grade level. As presented in Table 7, Model 3 explains approximately 13 percent of the variance in Black students’ self-reported academic achievement (Nagelkerke $R^2 = 0.135$). In evaluating Model 3, the assumption of proportional odds is met ($\text{Adj. Wald } \chi^2 = 3.333, df = 9.072, p > 0.05$). Consistent with prior models, results reveal a negative and significant association between age and Black students’ academic
achievement ($B = -0.423$, Std. Error = 0.110, $p<0.001$), net the effects of other variables in the model. Also, consistent with prior models, results show positive and significant associations between gender and academic achievement ($B = 0.837$, Std. Error = 0.140, $p<0.001$), family income and academic achievement ($B = 0.216$, Std. Error = 0.086, $p<0.05$), and grade level and academic achievement ($B = 0.482$, Std. Error = 0.100, $p<0.001$), net the effects of all other variables in the model.

As indicated in Table 7, for Model 3, results reveal that disobedience among Black students has a negative and statistically significant association with Black students’ self-reported academic achievement ($B = -0.395$, Std. Error = 0.140, $p<0.01$). Thus, independent of Black students’ perceptions of differential treatment from teachers and holding all other variables constant, for Black students who are disobedient, their odds of reporting greater academic achievement significantly decreases by approximately 33% ($\text{Exp}(B) = 0.673$).

In Table 7, Model 4 introduces negative emotions and disobedience to explore whether or not these variables in series mediate the association between Black students’ perceptions of differential treatment from teachers and their self-reported academic achievement, net the effects of age, gender, family income, and grade level. As shown in Table 7, Model 4 explains approximately 15 percent of the variance in Black students’ self-reported academic achievement ($\text{Nagelkerke } R^2 = 0.147$). In evaluating Model 4, the assumption of proportional odds is met (Adj. Wald $\chi^2 = 8.816$, $df = 11.390$, $p>0.05$). Results from Table 7 for Model 4 show a negative and significant association between age and Black students’ academic achievement ($B = -0.414$, Std. Error = 0.117, $p<0.001$), net the effects of other variables in the model. Also, results show positive and significant associations between gender and academic achievement ($B = 0.816$, Std. Error = 0.142, $p<0.001$), family income and academic achievement ($B = 0.208$, Std. Error = 0.087, $p<0.05$), and grade level and academic achievement ($B = 0.483$, Std. Error = 0.105, $p<0.001$), net the effects of all other variables in the model.
Furthermore, results indicate a negative and significant association between perceived differential
treatment from teachers and Black students’ self-reported academic achievement ($B = -0.069$, Std.
Error = 0.034, $p<0.05$). Thus, net the effects of all other variables in the model, for every unit
increase in Black students’ perceptions of differential treatment from teachers, their odds of reporting
greater academic achievement significantly decline by approximately 7% ($\text{Exp}(B) = 0.933$). Negative
emotions, however, was not found to be statistically significant, despite findings showing a negative
association ($B = -0.031$, Std. Error = 0.071, $p>0.05$).

Results further show a negative and statistically significant association between disobedience
amongst Black students and their self-reported academic achievement ($B = -0.356$, Std. Error = 0.157,
$p<0.05$). Thus, while holding all other variables constant, Black students who engage in disobedience
have a decreased odds of reporting greater academic achievement ($\text{Exp}(B) = 0.700$).

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22 These results match the post-hoc analysis presented in Table 7A located in Appendix B, whereby the proposed mediation of negative emotions and disobedience on the association between Black students’ perceptions of differential treatment from teachers and their self-reported academic achievement was assessed using Ordinal Logistic Regression. Accordingly, these findings also showed that the association between Black students’ perceptions of differential treatment from teachers and their self-reported academic achievement was statistically significant despite the addition of negative emotions and disobedience ($B = -0.066$, Std. Error = 0.024, $p<0.01$). Similarly, findings reinforced that the negative association between negative emotions and Black students’ self-reported academic achievement was not statistically significant ($B = -0.040$, Std. Error = 0.056, $p>0.05$). As well, results from the post hoc analysis showed a negative and significant association between disobedience amongst Black students and their self-reported academic achievement ($B = -0.427$, Std. Error = 0.155, $p<0.01$). Nonetheless, despite these consistencies in findings, unlike Complex Sample Ordinal Logistic Regression, Ordinal Logistic Regression does not account for the complex sample designs and weights. Ergo, it is not possible to confirm with certainty the results of the Complex Sample Ordinal Logistic Regression.
Table 7. Association between Perceived Differential Treatment from Teachers and Black Students’ Self-Reported Academic Achievement – The Role of Negative Emotions and Disobedience (N=917)

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
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<tbody>
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<td></td>
<td>B</td>
<td>s.e.</td>
<td>Exp(B)</td>
<td>B</td>
</tr>
<tr>
<td>Age</td>
<td>-0.426***</td>
<td>0.112</td>
<td>0.653</td>
<td>-0.417***</td>
</tr>
<tr>
<td>Gender</td>
<td>0.794***</td>
<td>0.144</td>
<td>2.213</td>
<td>0.867***</td>
</tr>
<tr>
<td>Family Income23</td>
<td>0.204*</td>
<td>0.089</td>
<td>1.226</td>
<td>0.211*</td>
</tr>
<tr>
<td>Grade Level</td>
<td>0.488***</td>
<td>0.104</td>
<td>1.629</td>
<td>0.471***</td>
</tr>
<tr>
<td>Perceived Differential Treatment</td>
<td>-0.072*</td>
<td>0.032</td>
<td>0.930</td>
<td></td>
</tr>
<tr>
<td>Negative Emotions24</td>
<td></td>
<td></td>
<td></td>
<td>-0.096</td>
</tr>
<tr>
<td>Disobedience</td>
<td></td>
<td></td>
<td></td>
<td>-0.395***</td>
</tr>
<tr>
<td>Nagelkerke R²</td>
<td>0.137</td>
<td></td>
<td></td>
<td>0.129</td>
</tr>
<tr>
<td>Test of Parallel Lines</td>
<td>Adj. Wald $\chi^2 = 8.162$ $df=8.920$ $p&gt;0.05$</td>
<td></td>
<td></td>
<td>Adj. Wald $\chi^2 = 3.773$ $df=8.610$ $p&gt;0.05$</td>
</tr>
</tbody>
</table>

*p<0.05; **p<0.01; ***p<0.001

23 Family income
24 Perceptions of Differential Treatment from Teachers; Negative emotions
Perceptions of Differential Treatment from Teachers and Academic Achievement – The Role of Perceptions of School Bonding and Disobedience

Table 8 presents the findings from a Complex Samples Ordinal Logistic Regression exploring the direct association between Black students’ perceptions of differential treatment from teachers on their self-reported academic achievement. Furthermore, Table 8 explores the indirect association between Black students’ perceptions of differential treatment from teachers on their self-reported academic achievement through Black students’ perceptions of school bonding and disobedience in series. Like prior analyses, results account for the effects of age, gender, family income, and grade level. In addition, the results for Models 1 and 2 replicate the findings presented in Table 5 for Models 1 and 2. Furthermore, the results for Model 3 presented in Table 8 are consistent with the results presented in Table 7 for Model 3.

In Table 8, Model 4 introduces school bonding and disobedience to explore whether or not these variables mediate the association between Black students’ perceptions of differential treatment from teachers and their self-reported academic achievement, net the effects of age, gender, family income, and grade level. As shown in Table 8, Model 4 explains approximately 18 percent of the variance in Black students’ self-reported academic achievement (Nagelkerke $R^2 = 0.183$). In evaluating Model 4, the assumption of proportional odds is met (Adj. Wald $\chi^2 = 2.932$, $df = 11.639$, $p>0.05$). Results from Table 8 for Model 4 show a negative and significant association between age and Black students’ academic achievement ($B = -0.418$, Std. Error = 0.114, $p<0.001$), net the effects of other variables in the model. Also, results show positive and significant associations between gender and academic achievement ($B = 0.748$, Std. Error = 0.141, $p<0.001$), family income and academic achievement ($B = 0.230$, Std. Error = 0.092, $p<0.05$), and grade level and academic achievement ($B = 0.498$, Std. Error = 0.100, $p<0.001$), net the effects of all other variables in the model.
Furthermore, results indicate a negative association between perceived differential treatment from teachers and Black students’ self-reported academic achievement; however, the association was not statistically significant (B = -0.044, Std. Error = 0.030, p>0.05). Results indicate a positive and statistically significant association between Black students’ perceptions of school bonding and their self-reported academic achievement, such that, for every unit increase in Black students’ perceptions of school bonding, the odds of Black students reporting greater academic achievement significantly increases by approximately 12% (B = 0.113, Std. Error = 0.027, p<0.001, Exp(B) = 1.120). Results further show a negative and statistically significant association between disobedience amongst Black students and their self-reported academic achievement (B = -0.315, Std. Error = 0.148, p<0.05). Thus, while holding all other variables constant, Black students who engage in disobedience have a decreased odds of reporting greater academic achievement (Exp(B) = 0.730).

25 These results match the post-hoc analysis presented in Table 8A located in Appendix B, whereby the proposed mediation of perceived school bonding and disobedience on the association between Black students’ perceptions of differential treatment from teachers and their self-reported academic achievement was assessed using Ordinal Logistic Regression. Accordingly, these findings also showed a positive and statistically significant association between Black students’ perceptions of school bonding and their self-reported academic achievement (B = 0.118 Std. Error = 0.021, p<0.001), as well revealed a negative and statistically significant association between disobedience amongst Black students and their self-reported academic achievement (B = -0.366, Std. Error = 0.148, p<0.05). Nonetheless, despite these consistencies in findings, unlike Complex Sample Ordinal Logistic Regression, Ordinal Logistic Regression does not account for the complex sample designs and weights. Ergo, it is not possible to confirm with certainty the results of the Complex Sample Ordinal Logistic Regression.
Table 8. Association between Perceived Differential Treatment from Teachers and Black Students’ Self-Reported Academic Achievement – The Role of Perceived School Bonding and Disobedience (N=917)

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>s.e.</td>
<td>Exp(B)</td>
<td>B</td>
</tr>
<tr>
<td>Age</td>
<td>-0.426***</td>
<td>0.112</td>
<td>0.653</td>
<td>-0.426***</td>
</tr>
<tr>
<td>Gender</td>
<td>0.794***</td>
<td>0.144</td>
<td>2.213</td>
<td>0.752***</td>
</tr>
<tr>
<td>Family Income 26</td>
<td>0.204*</td>
<td>0.089</td>
<td>1.226</td>
<td>0.233*</td>
</tr>
<tr>
<td>Grade Level</td>
<td>0.488***</td>
<td>0.104</td>
<td>1.629</td>
<td>0.498***</td>
</tr>
<tr>
<td>Perceived Differential Treatment</td>
<td>-0.072*</td>
<td>0.032</td>
<td>0.930</td>
<td>-------</td>
</tr>
<tr>
<td>Perceived School Bonding 27</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>0.126***</td>
</tr>
<tr>
<td>Disobedience</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td></td>
<td>-0.315*</td>
<td>0.148</td>
<td>0.730</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Nagelkerke R²</th>
<th>0.137</th>
<th>0.173</th>
<th>0.135</th>
<th>0.183</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Test of Parallel Lines</th>
<th>Adj. Wald $\chi^2 = 8.162$</th>
<th>Adj. Wald $\chi^2 = 2.488$</th>
<th>Adj. Wald $\chi^2 = 3.333$</th>
<th>Adj. Wald $\chi^2 = 2.932$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$df=8.920$</td>
<td>$df=8.881$</td>
<td>$df=9.072$</td>
<td>$df=11.639$</td>
</tr>
<tr>
<td></td>
<td>p&gt;0.05</td>
<td>p&gt;0.05</td>
<td>p&gt;0.05</td>
<td>p&gt;0.05</td>
</tr>
</tbody>
</table>

*p<0.05; **p<0.01; ***p<0.001

26 Family income
27 Perceptions of Differential Treatment from Teachers; Perceptions of School Bonding
Perceptions of Differential Treatment from Teachers and Academic Achievement – The Role of School Suspension

Table 9 presents the results from a Complex Samples Ordinal Logistic Regression that explores the direct association between Black students’ perceptions of differential treatment from teachers and their likelihood of having been suspended from school for one or more days. Additionally, Table 9 presents the results from a Complex Samples Ordinal Logistic Regression that explores the associations between Black students’ perceptions of differential treatment from their teachers, getting suspended from school for one or more days, and Black students’ self-reported academic achievement. Prior to these results, Table 9 also presents the findings from a Complex Samples Ordinal Logistic Regression exploring the association between Black students’ perceptions of differential treatment from teachers and their likelihood of being suspended from school for one or more days. The effects of age, gender, family income, and grade level are held constant throughout the models presented in Table 9. In Table 9, Black students’ perceptions of differential treatment from teachers is regressed on whether or not Black students have been suspended from school for one or more days. The effects of age, gender, family income, and grade level are held constant. Accordingly, Model 1 as a whole is statistically significant ($\chi^2 = 74.221$, $df = 5$, $p<0.001$), suggesting that Black students’ perceptions of differential treatment from teachers, as well as the control variables, are significant predictors of Black students getting suspended from school for one or more days. Approximately 10 percent of the variance in Black students’ suspension from school for one or more days is explained by Model 3 (Nagelkerke $R^2 = 0.104$).

As shown in Model 1, the association between age and Black students getting suspended from school for one or more days is positive and statistically significant ($B = 0.424$, Std. Error = 0.103, $p<0.001$). Thus, while holding the effects of all the other variables constant, for every unit increase in Black students’ age, their odds of being suspended from school for one or more days significantly increases by approximately 53% ($\text{Exp}(B) = 1.529$). The association between gender and Black students
getting suspended from school for one or more days (\(B = -0.714\), Std. Error = 0.141, \(p<0.001\)), as well as the association between family income and Black students getting suspended from school for one or more days (\(B = -0.148\), Std. Error = 0.064, \(p<0.05\)) and the association between grade level and Black students getting suspended from school for one or more days (\(B = -0.378\), Std. Error = 0.095, \(p<0.001\)) are negative and statistically significant.

Even more, Model 1 reveals a positive and statistically significant association between Black students’ perceptions of differential treatment from teachers and their self-reported academic achievement (\(B = 0.074\), Std. Error = 0.025, \(p<0.01\)), such that, the odds of Black students being suspended from school for one or more days significantly increases for Black students who perceive more frequent instances of differential treatment from their teachers by approximately 8% (\(\text{Exp}(B)=1.076\)).

Additionally, Table 9 explores the direct association between Black students’ perceptions of differential treatment from teachers and their self-reported academic achievement, as well the indirect association of Black students’ perceptions of differential treatment from teachers and their self-reported academic achievement through school suspension. The effects of the control variables are held constant throughout Table 9. In Model 1, Black students’ perceptions of differential treatment from teachers is regressed on academic achievement (i.e., Black students’ self-reported grades). Age, gender, family income, and grade level are held constant. Accordingly, Model 1 explains approximately 14 percent of the variance in Black students’ self-reported grades (Nagelkerke \(R^2 = 0.137\)). Furthermore, in evaluating Model 1, the assumption of proportional odds is met (Adj. Wald \(\chi^2 = 8.162, df=8.920, p>0.05\)).

For Model 1, results reveal significant associations between the sociodemographic control variables and Black students’ self-reported grades, an indicator for academic achievement. Specifically, results indicate a negative and statistically association between Black students’ age and academic
achievement ($B = -0.426$, Std. Error $= 0.112$, $p<0.001$). Thus, while holding all other variables constant, for each unit increase in Black students' age, their odds of reporting greater academic achievement is significantly reduced by approximately 35% ($\text{Exp}(B) = 0.653$). In addition, compared to Black male students, Black female students report significantly greater academic achievement, net the effects of all other variables ($B = 0.794$, Std. Error $= 0.144$, $p<0.001$, $\text{Exp}(B) = 2.213$). A positive and significant association between Black students' family income and their self-reported grades was also found ($B = 0.204$, Std. Error $= 0.089$, $p<0.05$). Thus, while holding all other variables constant, for every unit increase in Black students' family income, their odds of reporting greater academic achievement increases by approximately 23% ($\text{Exp}(B) = 1.226$). Finally, a positive and significant association between grade level and academic achievement was found for a sample of 917 Black students ($B = 0.488$, Std. Error $= 0.104$, $p<0.001$). Thus, while holding all other variables constant, for every unit increase in grade level, the odds of Black students reporting greater academic achievement increases by approximately 63% ($\text{Exp}(B) = 1.629$).

Furthermore, results from Model 1 show that the association between Black students’ perceptions of differential treatment and their academic achievement is negative and statistically significant ($B = -0.072$, Std. Error $= 0.032$, $p<0.05$). Therefore, while holding all other variables constant, for every unit increase in Black students’ perceptions of differential treatment from teachers, their odds of reporting greater academic achievement significantly diminishes by approximately 7% ($\text{Exp}(B) = 0.930$).

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28 The results presented here are consistent with the findings of a post-hoc analysis presented in Table 9A located in Appendix C. Particularly, in this analysis, ordinal logistic regression is used to assess the association between Black students’ perceptions of differential treatment from teachers on their academic achievement, while controlling for age, gender, family income, and grade level. According to post hoc analysis, the association between perceptions of differential treatment from teachers and the academic achievement of Black students is also negative and statistically significant ($B = -0.072$, Std. Error $= 0.024$, $p<0.05$). Yet, unlike Complex Sample Ordinal Logistic Regression, Ordinal Logistic Regression does not account for the complex sample designs and weights. Thus, despite the consistency in findings from both regression analyses, it is not possible to confirm with certainty the results of the Complex Sample Ordinal Logistic Regression.
Model 2 regresses whether Black students have been suspended from school for one or more days on their self-reported academic achievement, while accounting for the effects of age, gender, family income, and grade level. Accordingly, as a whole, the model explains approximately 14 percent of the variance in Black students’ self-reported academic achievement (Nagelkerke $R^2 = 0.144$), as well, given that the Adjusted Wald $\chi^2$ ($3.382$, $df=8.626$) is not statistically significant ($p>0.05$), the assumption of proportional odds is met.

Results from Model 2 reveal a negative and significant association between age and Black students’ academic achievement ($B = -0.382$, Std. Error = 0.108, $p<0.001$), net the effects of other variables in the model. Also, the positive and significant associations between gender and academic achievement ($B = 0.749$, Std. Error = 0.150, $p<0.001$), family income and academic achievement ($B = 0.200$, Std. Error = 0.086, $p<0.05$), and grade level and academic achievement ($B = 0.444$, Std. Error = 0.095, $p<0.001$), net the effects of all other variables in the model, are consistent with Model 1. Model 2, however, shows a negative and statistically significant association between Black students’ getting suspended from school for one or more days and their self-reported academic achievement ($B = -0.560$, Std. Error = 0.181, $p<0.01$), such that, while controlling for all other variables in the model, the odds of Black students reporting greater academic achievement diminishes by approximately 43% for Black students who have been suspended from school for one or more days ($\exp(B)=0.571$).29

In Model 3, whether Black students have been suspended from school for one or more days is added as a mediator. Accordingly, as a whole, the model explains approximately 15 percent of the variance in Black students’ self-reported academic achievement (Nagelkerke $R^2 = 0.153$), as well, given

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29 This finding is consistent with the finding presented in Model 2 in Table 9A presented in Appendix C. Specifically, Model 2 shows that Black students who have been suspended from school for one or more days have a decreased odd of reporting greater academic achievement, net the effects of all other variables in the model ($B = -0.562$, Std. Error = 0.151, $p<0.001$). Nevertheless, while both regression analyses revealed a negative and statistically significant association, unlike Complex Samples Ordinal Logistic Regression, which accounts for the complex sample design and weight of the data, Ordinal Logistic Regression does not. Ergo, it is not possible to confirm with certainty the results of the Complex Sample Ordinal Logistic Regression.
that the Adjusted Wald $\chi^2 (8.327, df=10.031)$ is not statistically significant ($p>0.05$), the assumption of proportional odds is met.

Results from Model 3 reveal a negative and significant association between age and Black students’ academic achievement ($B = -0.380$, Std. Error = 0.113, $p<0.01$), net the effects of other variables in the model. Also, the positive and significant associations between gender and academic achievement ($B = 0.724$, Std. Error = 0.152, $p<0.001$), family income and academic achievement ($B = 0.194$, Std. Error = 0.088, $p<0.05$), and grade level and academic achievement ($B = 0.450$, Std. Error = 0.099, $p<0.001$), net the effects of all other variables in the model, are consistent with Model 1.

In addition, results from Model 3 reveal that, even when Black students’ suspension from school was added into the model, the negative association between their perceptions of differential treatment from teachers and their self-reported academic achievement remained statistically significant ($B = -0.064$, Std. Error = 0.033, $p<0.05$). However, with the addition of Black students’ suspension from school, the effect size for the association declined.\(^{30}\) Still, all else equal, for every unit increase in Black youths’ perceptions of differential treatment from their teachers, the odds of these youth reporting greater academic achievement significantly decreases by approximately 6% ($\text{Exp}(B) = 0.938$).

Model 3, however, shows a negative and statistically significant association between Black students’ getting suspended from school for one or more days and their self-reported academic achievement ($B = -0.523$, Std. Error = 0.181, $p<0.01$), such that, while controlling for all other variables in the model, the odds of Black students reporting greater academic achievement diminishes

\(^{30}\)This finding is consistent with the finding of an unweighted Ordinal Logistic Regression, presented in Table 9A in Appendix C. However, unlike Complex Samples Ordinal Logistic Regression, which accounts for the complex sample design and weight of the data, Ordinal Logistic Regression does not. Ergo, it is not possible to confirm with certainty the results of the Complex Sample Ordinal Logistic Regression.
by approximately 41% for Black students who have been suspended from school for one or more days ($\text{Exp}(B)=0.593$).\footnote{This finding is consistent with the finding presented in Model 3 in Table 9A presented in Appendix C. Specifically, Model 3 shows that Black students who have been suspended from school for one or more days have a decreased odd of reporting greater academic achievement, net the effects of all other variables in the model ($B=-0.520$, Std. Error = 0.152, $p<0.01$). Nevertheless, while both regression analyses revealed a negative and statistically significant association, unlike Complex Samples Ordinal Logistic Regression, which accounts for the complex sample design and weight of the data, Ordinal Logistic Regression does not. Ergo, it is not possible to confirm with certainty the results of the Complex Sample Ordinal Logistic Regression.}
Table 9. Association between Perceived Differential Treatment from Teachers and Academic Achievement – The Role of Suspension (N=917)

<table>
<thead>
<tr>
<th></th>
<th>School Suspension</th>
<th>Model 1</th>
<th>Academic Achievement</th>
<th>Model 2</th>
<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>s.e.</td>
<td>Exp(B)</td>
<td>B</td>
<td>s.e.</td>
</tr>
<tr>
<td>Age</td>
<td>0.424***</td>
<td>0.162</td>
<td>1.529</td>
<td>-0.426***</td>
<td>0.112</td>
</tr>
<tr>
<td>Gender</td>
<td>-0.714***</td>
<td>0.232</td>
<td>0.490</td>
<td>0.794***</td>
<td>0.144</td>
</tr>
<tr>
<td>Family Income 32</td>
<td>-0.148*</td>
<td>0.105</td>
<td>0.863</td>
<td>0.204*</td>
<td>0.089</td>
</tr>
<tr>
<td>Grade Level</td>
<td>-0.378***</td>
<td>0.150</td>
<td>0.685</td>
<td>0.488***</td>
<td>0.104</td>
</tr>
<tr>
<td>Perceived Differential Treatment 33</td>
<td>0.074**</td>
<td>0.037</td>
<td>1.076</td>
<td>-0.072*</td>
<td>0.032</td>
</tr>
<tr>
<td>School Suspension</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
</tr>
</tbody>
</table>

Model Summary

- Adjusted $R^2 = 0.104$
- $F = 74.221$ (df = 5)

Nagelkerke R²

- 0.137
- 0.144
- 0.153

Test of Parallel Lines

- Adj. Wald $\chi^2 = 8.162$ (df = 8.920, p > 0.05)
- Adj. Wald $\chi^2 = 3.382$ (df = 8.626, p > 0.05)
- Adj. Wald $\chi^2 = 8.327$ (df = 10.031, p > 0.05)

*p<0.05; **p<0.01; ***p<0.001

32 Family income
33 Perceptions of Differential Treatment from Teachers
Table 10 assesses whether the mediating effect of Black students getting suspended from school for one or more days on the association between Black students’ perceptions of differential treatment from teachers and their self-reported academic achievement is moderated by Black students’ self-perceptions. The effects of age, gender, family income, and grade level are held constant. As indicated by Table 10, approximately 18 percent of the variance in Black students’ academic achievement is explained by the model (Nagelkerke $R^2=0.182$). In evaluating Table 10, the assumption of proportional odds is met (Adj. Wald $\chi^2 = 1.299$, $df = 12.062$, $p>0.05$). Consistent with results from Table 9, the effects of the sociodemographic controls on Black students’ self-reported academic achievement remained the same, despite changes in the effect sizes.

Table 10 reveals a negative and significant interaction whereby the effect of Black students getting suspended from school for one or more days on their self-reported academic achievement is conditioned by levels of resiliency and vice versa ($B = -0.238$, Std. Error = 0.057, $p<0.001$). In particular, at mean levels of self-perceptions (approx. 0), the effect of Black students’ suspension from school for one or more days is negative ($B = -0.264$, Std. Error = 0.090), decreasing the odds of Black students reporting greater academic achievement ($\exp(B) = 0.768$). At mean levels of Black students’ suspension from school for one or more days (approx. 0), the effect of self-perceptions is positive ($B = 0.224$, Std. Error = 0.062), increasing the odds of Black students reporting greater academic achievement ($\exp(B) = 1.251$). Taken together, while holding all other variables constant, the negative effect of Black students getting suspended from school for one or more days on their self-reported academic achievement is weakened at higher levels of self-perceptions in Black students. Yet, while holding all other variables constant, the positive effect of Black students’ self-perceptions on their
self-reported academic achievement of Black students diminishes for Black students who have been suspended for one or more days.\textsuperscript{34}

\textsuperscript{34} This finding is consistent with the post hoc analysis presented in Table 10A located in Appendix C, whereby an interaction term, involving Black students’ self-perceptions and getting suspended from school for one or more days, was entered into an Ordinal Logistic Regression model. The interaction term was found to be negative and statistically significant (B = -0.204, Std. Error = 0.074, p<0.01). According to the findings from an ANOVA presented in Table E in Appendix C, results further showed consistency to the significance and negative coefficient (B = -0.114, p<0.001) of the interaction term. Nevertheless, while both regression analyses and ANOVA revealed a negative and statistically significant coefficient for the interaction term, Ordinal Logistic Regression and ANOVA do not account for the complex sample designs and weights, thus it is not possible to confirm with certainty the results of the Complex Sample Ordinal Logistic Regression.
Table 10. Moderating Effect of Self-Perceptions on the Association between Perceived Differential Treatment from Teachers and Black Students’ Self-Reported Academic Achievement through Suspension (N=917)

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>s.e.</td>
<td>Exp(B)</td>
</tr>
<tr>
<td>Age</td>
<td>-0.402***</td>
<td>0.114</td>
<td>0.669</td>
</tr>
<tr>
<td>Gender</td>
<td>0.700***</td>
<td>0.141</td>
<td>2.013</td>
</tr>
<tr>
<td>Family Income35</td>
<td>0.199*</td>
<td>0.092</td>
<td>1.220</td>
</tr>
<tr>
<td>Grade Level</td>
<td>0.458***</td>
<td>0.097</td>
<td>1.581</td>
</tr>
<tr>
<td>Perceived Differential Treatment 36</td>
<td>-0.062*</td>
<td>0.032</td>
<td>0.940</td>
</tr>
<tr>
<td>School Suspension (SUSP)</td>
<td>-0.264**</td>
<td>0.090</td>
<td>0.768</td>
</tr>
<tr>
<td>Self-Perceptions (SP)</td>
<td>0.224***</td>
<td>0.062</td>
<td>1.251</td>
</tr>
<tr>
<td>SUSP*SR37</td>
<td>-0.238***</td>
<td>0.057</td>
<td>0.788</td>
</tr>
</tbody>
</table>

Nagelkerke R² 0.182

Test of Parallel Lines

Adj. Wald χ² = 1.299  
df = 12.062  
p > 0.05

*p<0.05; **p<0.01; ***p<0.001

35 Family income
36 Perceptions of Differential Treatment from Teachers
37 Each variable comprising the interaction terms are standardized, and their corresponding z-scores are used to create the interaction terms.
Perceptions of Differential Treatment from Teachers and Academic Achievement – The Role of School Suspension and Student Homework Behavior

Table 11 presents the findings from a Complex Samples Ordinal Logistic Regression that explores the associations between Black students’ perceptions of differential treatment from teachers, Black students getting suspended from school for one or more days, their homework behavior, and their self-reported academic achievement (i.e., grades). Across all models in Table 11, the effects of age, gender, family income, and grade level are accounted for. Accordingly, Model 1 explains approximately 14 percent of the variance in Black students’ self-reported grades ($R^2 = 0.137$). Furthermore, in evaluating Model 1, the assumption of proportional odds is met (Adj. Wald $\chi^2 = 8.162$, $df=8.920$, $p>0.05$). For Model 1, results reveal significant associations between the sociodemographic control variables and Black students’ self-reported grades, an indicator for academic achievement. Specifically, results indicate a negative and statistically association between Black students’ age and academic achievement ($B = -0.426$, Std. Error = 0.112, $p<0.001$). Thus, while holding all other variables constant, for each unit increase in Black students’ age, their odds of reporting greater academic achievement is significantly reduced by approximately 35% ($\text{Exp}(B) = 0.653$).

In addition, compared to Black male students, Black female students report significantly greater academic achievement, net the effects of all other variables ($B = 0.794$, Std. Error = 0.144, $p<0.001$, $\text{Exp}(B) = 2.213$). A positive and significant association between Black students’ family income and their self-reported grades was also found ($B = 0.204$, Std. Error = 0.089, $p<0.05$). Thus, while holding all other variables constant, for every unit increase in Black students’ family income, their odds of reporting greater academic achievement increases by approximately 23% ($\text{Exp}(B) = 1.226$). Finally, a positive and significant association between grade level and academic achievement was found for a sample of 917 Black students ($B = 0.488$, Std. Error = 0.104, $p<0.001$). Thus, while
holding all other variables constant, for every unit increase in grade level, the odds of Black students reporting greater academic achievement increases by approximately 63% (Exp(B) = 1.629). Furthermore, results from Model 1 show that the association between Black students’ perceptions of differential treatment and their academic achievement is negative and statistically significant (B = -0.072, Std. Error = 0.032, p<0.05). Therefore, while holding all other variables constant, for every unit increase in Black students’ perceptions of differential treatment from teachers, their odds of reporting greater academic achievement significantly diminishes by approximately 7% (Exp(B) = 0.930). For Model 2, results mirror those presented in Table 9 for Model 2.

In Table 11, Model 3 assesses the independent effect of Black students’ homework behavior on their academic achievement while controlling for the effects of age, gender, family income, and grade level. Accordingly, Model 3 explains approximately 15 percent of the variance in Black students’ self-reported academic achievement (Nagelkerke $R^2 = 0.149$). In evaluating Model 3, the assumption of proportional odds is met (Adj. Wald $\chi^2 = 5.188$, df = 8.629, p>0.05). Consistent with prior models, results reveal a negative and significant association between age and Black students’ academic achievement (B = -0.426, Std. Error = 0.116, p<0.001), net the effects of other variables in the model. Also, consistent with prior models, results show positive and significant associations between gender and academic achievement (B = 0.800, Std. Error = 0.150, p<0.001), family income and academic achievement (B = 0.193, Std. Error = 0.086, p<0.05), and grade level and academic achievement (B = 0.464, Std. Error = 0.108, p<0.001), net the effects of all other variables in the model.

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38 The results presented here are consistent with the findings of a post-hoc analysis presented in Table 11A located in Appendix C. Particularly, in this analysis, ordinal logistic regression is used to assess the association between Black students’ perceptions of differential treatment from teachers on their academic achievement, while controlling for age, gender, family income, and grade level. According to post hoc analysis, the association between perceptions of differential treatment from teachers and the academic achievement of Black students is also negative and statistically significant (B = -0.072, Std. Error = 0.024, p<0.05). Yet, unlike Complex Sample Ordinal Logistic Regression, Ordinal Logistic Regression does not account for the complex sample designs and weights. Thus, despite the consistency in findings from both regression analyses, it is not possible to confirm with certainty the results of the Complex Sample Ordinal Logistic Regression.
As indicated in Table 11, for Model 3 results reveal that Black students’ homework behavior has a positive and statistically significant association with their self-reported academic achievement \( (B = 0.240, \text{ Std. Error} = 0.061, p < 0.001) \). Thus, independent of Black students’ perceptions of differential treatment from teachers and holding all other variables constant, for every unit increase in Black students’ homework behavior, their odds of reporting greater academic achievement significantly increases by approximately 27% \( (\text{Exp}(B) = 1.271) \). In Model 4, the proposed mediating effects of Black students’ suspension from school for one or more days and their homework behavior on the association between Black students perceived differential treatment from teachers and their academic achievement, net the effects of age, gender, family income, and grade level, are assessed. As indicated in Model 4, approximately 17 percent of the variance in Black students’ academic achievement is explained by Model 9 \( (\text{Nagelkerke } R^2 = 0.173) \). In Model 4, the assumption of proportional odds is met \( (\text{Adj. Wald } \chi^2 = 4.378, df = 11.139, p > 0.05) \).

Findings from Model 4 show a negative and significant association between age and Black students’ academic achievement \( (B = -0.383, \text{ Std. Error} = 0.122, p < 0.01) \), net the effects of other variables in the model, as well Model 9 reveals positive and significant associations between gender and academic achievement \( (B = 0.707, \text{ Std. Error} = 0.158, p < 0.001) \), family income and academic achievement \( (B = 0.179, \text{ Std. Error} = 0.086, p < 0.05) \), and grade level and academic achievement \( (B = 0.439, \text{ Std. Error} = 0.107, p < 0.001) \), net the effects of all other variables in the model, remained the same. Additionally, with the addition of Black students’ suspension and their homework behavior, the negative effect of perceived differential treatment from teachers on the academic achievement of Black students continues to be nonsignificant, with the effect size being smaller than the effect size captured in Model 1 \( (B = -0.064, \text{ Std. Error} = 0.034, p > 0.05) \). Furthermore, results for Model 4 show a negative and significant association between Black students’ being suspended from school for one or more days and their self-reported academic achievement \( (B = -0.460, \text{ Std. Error} = 0.188, p < 0.01) \),
to include a positive and significant association between Black students’ homework behavior and their
self-reported academic achievement (B = 0.218, Std. Error = 0.063, p<0.01).\textsuperscript{39} Thus, while holding
constant all other variables in the model, for Black students who have been suspended from school
for one or more days, their odds of reporting greater academic achievement significantly decreases by
approximately 37\% (Exp(B) = 0.632). Also, while holding all other variables constant, for every unit
increase in the time Black students invest each day doing homework outside of school, their odds of
reporting greater academic achievement significantly increases by approximately 24\% (Exp(B) =
1.244).

\textsuperscript{39} These results match the post-hoc analysis presented in Table 11A located in Appendix C, whereby the proposed mediation of Black
students’ suspension and their homework behavior on the association between Black students’ perceptions of differential treatment
from teachers and their self-reported academic achievement was assessed using Ordinal Logistic Regression. However, findings showed
that the association between Black students’ perceptions of differential treatment from teachers and their self-reported academic
achievement was statistically significant, despite the decreasing effect size when Black students’ suspension and their homework behavior
are added to the model (B = -0.059, Std. Error = 0.024, p<0.05). Similarly, findings reinforced the negative and significant association
between Black students’ suspension from school for one or more days and their self-reported academic achievement (B = -0.430, Std.
Error = 0.153, p<0.01), as well as the positive and significant association between Black students’ homework behavior and their self-
reported academic achievement (B = 0.250 Std. Error = 0.058, p<0.001). Nonetheless, despite this consistency in findings, unlike
Complex Sample Ordinal Logistic Regression, Ordinal Logistic Regression does not account for the complex sample designs and
weights. Ergo, it is not possible to confirm with certainty the results of the Complex Sample Ordinal Logistic Regression.
Table 11. Association between Perceived Differential Treatment from Teachers and Black Students’ Self-Reported Academic Achievement – The Role of School Suspension and Student Homework Behavior (N=917)

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>s.e.</td>
<td>Exp(B)</td>
<td>B</td>
</tr>
<tr>
<td>Age</td>
<td>-0.426***</td>
<td>0.112</td>
<td>0.653</td>
<td>-0.382***</td>
</tr>
<tr>
<td>Gender</td>
<td>0.794***</td>
<td>0.144</td>
<td>2.121</td>
<td>0.749***</td>
</tr>
<tr>
<td>Family Income</td>
<td>0.204*</td>
<td>0.089</td>
<td>1.226</td>
<td>0.200*</td>
</tr>
<tr>
<td>Grade Level</td>
<td>0.488***</td>
<td>0.104</td>
<td>1.629</td>
<td>0.444***</td>
</tr>
<tr>
<td>Perceived Differential Treatment (1)</td>
<td>-0.072*</td>
<td>0.032</td>
<td>0.930</td>
<td>--------</td>
</tr>
<tr>
<td>School Suspension</td>
<td>--------</td>
<td>------</td>
<td>--------</td>
<td>-0.560**</td>
</tr>
<tr>
<td>Student Homework Behavior</td>
<td>--------</td>
<td>------</td>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td>Nagelkerke R²</td>
<td>0.137</td>
<td></td>
<td></td>
<td>0.144</td>
</tr>
<tr>
<td>Test of Parallel Lines</td>
<td>Adj. Wald $\chi^2 = 8.162$</td>
<td>$df = 8.920$</td>
<td>p&gt;0.05</td>
<td>Adj. Wald $\chi^2 = 3.382$</td>
</tr>
</tbody>
</table>

*p<0.05; **p<0.01; ***p<0.001

40 Family income  
41 Perceptions of Differential Treatment from Teachers
The Moderating Role of Academic Aspirations

To further understand the role of Black students’ homework behavior as an additional mediator to the indirect association between Black students’ perceptions of differential treatment from teachers on their self-reported academic achievement through Black students’ suspension from school for one or more days, Table 12 assessed whether academic aspirations moderated this indirect association. Similar to prior models, the effects of age, gender, family income, and grade level are held constant. As a whole, results show that Table 12 explains approximately 20 percent of the variance in Black students’ self-reported academic achievement (Nagelkerke R²=0.200). In assessing Table 12, the assumption of proportional odds is met (Adj. Wald χ² = 0.358, df = 13.493, p>0.05).

Results show consistency with Model 4 in Table 11 relative to the associations between the control variables and the dependent variable, though effect sizes changed with the addition of the interaction term. Furthermore, Table 12 maintains that the negative association between Black students’ perceptions of differential treatment from teachers and their self-reported academic achievement is not statistically significant (B = -0.064, Std. Error = 0.033, p>0.05). As well, consistent with Model 4 in Table 11, the odds of Black students reporting greater academic achievement decreases by approximately 35% (Exp(B) =0.648) for Black students who have been suspended from school for one or more days (B = -0.434, Std. Error = 0.191, p<0.05).

Findings from Table 12 also show a positive and significant interaction whereby the effect of Black students’ homework behavior on their self-reported academic achievement is conditioned by levels of academic aspirations and vice versa (B = 0.222, Std. Error = 0.059, p<0.001).42 In particular,

---

42 This finding is consistent with the post hoc analysis presented in Table 12A located in Appendix C, whereby an interaction term, involving Black students’ homework behavior and their academic aspirations, was entered into an unweighted Ordinal Logistic Regression model. The interaction term was found to be positive and statistically significant (B= 0.199, Std. Error = 0.075, p<0.01). In Table D, results from an ANOVA of the interaction term are consistent in showing a significant and negative coefficient for the interaction term (B = 0.101, p<0.01). Nevertheless, while both regression analyses and ANOVA revealed a positive and statistically significant coefficient for the interaction term, Ordinal Logistic Regression and ANOVA do not account for the complex sample designs and weights, thus it is not possible to confirm with certainty the results of the Complex Sample Ordinal Logistic Regression.
at mean levels of academic aspirations (approx. 0), the effect of Black students’ homework behavior is positive (B = 0.260, Std. Error = 0.084), increasing the odds of Black students reporting greater academic achievement (Exp(B) = 1.297). At mean levels of homework behavior (approx. 0), the effect of academic aspirations is positive (B = 0.301, Std. Error = 0.091), increasing the odds of Black students reporting greater academic achievement (Exp(B) = 1.351). Taken together, while holding all other variables constant, the positive effect of Black students’ homework behavior on their self-reported academic achievement is amplified at higher levels of academic aspirations. As well, while holding all other variables constant, the positive effect of academic aspirations on the self-reported academic achievement of Black students is strengthened at higher levels of homework behavior.
Table 12. Moderating Effect of Academic Aspirations on the Association between Perceived Differential Treatment from Teachers and Black Students’ Self-Reported Academic Achievement through Suspension and Student Homework Behavior (N=917)

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
</tr>
<tr>
<td>Age</td>
<td>-0.325**</td>
</tr>
<tr>
<td>Gender</td>
<td>0.618***</td>
</tr>
<tr>
<td>Family Income 43</td>
<td>0.156</td>
</tr>
<tr>
<td>Grade Level</td>
<td>0.387**</td>
</tr>
<tr>
<td>Perceived Differential Treatment 44</td>
<td>-0.064</td>
</tr>
<tr>
<td>School Suspension</td>
<td>-0.434*</td>
</tr>
<tr>
<td>Student Homework Behavior (SHB)</td>
<td>0.260**</td>
</tr>
<tr>
<td>Academic Aspirations (ACASP)</td>
<td>0.301**</td>
</tr>
<tr>
<td>SHB*ACASP 45</td>
<td>0.222***</td>
</tr>
</tbody>
</table>

Nagelkerke $R^2$                                                                 0.200

Test of Parallel Lines

Adj. Wald $\chi^2 = 0.506$

$df = 13.074$

$p > 0.05$

*p<0.05; **p<0.01; ***p<0.001

43 Family income

44 Perceptions of Differential Treatment from Teachers

45 Each variable comprising the interaction terms are standardized, and their corresponding z-scores are used to create the interaction terms.
This chapter presented descriptive, bivariate, and multivariate analyses for this study. The next chapter provides a discussion of the findings from the study.
CHAPTER V
DISCUSSION

Framed by Agnew’s (2006) General Strain Theory, this study explored the direct and indirect associations between perceived differential treatment from teachers, perceptions of school bonding, negative emotions, disobedience, homework behavior, school suspension, and academic achievement for a nationally representative sample of Black youth in the United States. This chapter provides a discussion of the multivariate results found in this study. Afterwards, implications for practice and policy are discussed. Finally, this chapter concludes with study limitations and directions for future research scholarship.

PERCEPTIONS OF DIFFERENTIAL TREATMENT AND ACADEMIC ACHIEVEMENT

In the present study, it was hypothesized that Black youths’ perceptions of differential treatment from teachers would be directly associated with their self-reported grades. In line with this hypothesis, the findings revealed that for Black students who feel that their teachers treat them differently, these youth tended to do poorly in school, even after controlling for age, gender, imputed family income, and grade level. This association was also found at the bivariate level. Prior research has documented the deleterious effect of perceived teacher discrimination on the academic outcomes of African American youth by illuminating the extent to which perceptions of differential treatment from teachers negatively impacts the academic achievement of Black youth (Wong et al., 2003; Chavous et al., 2008; Wang & Huguley, 2012; Gale & Dorsey, 2020). In their study, Brittian and Gray (2014) found that perceptions of differential treatment from teachers was negatively associated with African American students’ academic self-concept and their beliefs about the importance of schooling. Thus, in line with existing evidence, the findings from the current study suggest that perceptions of differential treatment from teachers is a risk factor for Black youths’ academic achievement.
Prior research has indicated that positive peer associations curtail the deleterious effects of perceived teacher discrimination on academic outcomes by developing coping strategies likely to curb negative emotions and encourage achievement-affirming behaviors (Datnow & Cooper, 1997; Stewart, 2008; Golden et al., 2018). Moreover, from the standpoint of GST and RBTS, prosocial peers play an essential role in promoting resilience and diminishing the likelihood that youth respond to race-based incidents in a negative or deviant way (Agnew, 2006; Carter, 2007). Also, prior studies have indicated that racial socialization provides African American youth with the essential coping resources and messages necessary to reinforce Black pride and enrich their understanding and appreciation for their heritage and ancestry (i.e., cultural socialization) and prepare African American youth for experiences of discrimination (i.e., preparation for bias) (Hughes et al., 2006; Hope et al., 2014). For Carter (2007), the availability of coping resources or the lack thereof determines the response of individuals in the face of environmental stressors, including racism and discrimination. Furthermore, prior research accentuates the role of academic aspirations (Cunningham, Corprew III, & Becker, 2008; Anderson, 2018; Uwah, McMahon, & Furlow, 2018) and positive self-perceptions in promoting Black youths’ academic achievement (Awad, 2007; Dixson & Stevens, 2018). Understanding the nature of these factors as buffers to the association between perceptions of differential treatment from teachers and the academic achievement of Black youth warrants more attention given the lack of exploration by available literature. Hence, the present study hypothesized that deviant peer associations, racial socialization messages reinforcing Black pride, academic aspirations, and students’ self-perception would act as moderators to the direct association between Black youths’ perceptions of differential treatment from teachers and their academic achievement.

Accordingly, the results from the current study indicated that, all else equal, for Black youth who feel that their teachers treat them differently, when these youth affiliate with fewer peers engaging in deviance and/or crime, they tend to do worse in school; otherwise, these youth are more likely to
report earning failing grades. According to GST and Carter’s RBTS, prosocial peers play an essential role in promoting resilience and diminishing the likelihood that youth respond to race-based incidents in a negative or deviant way by socializing and/or sharing with each other coping resources and strategies (Agnew, 2006; Carter, 2007). Even more, GST argues that by associating less with peers who, for instance, internalize values that incentivize deviance as an adaptive stress response, youth are protected from the pressure to cope with stress through deviance and/or externalizing behaviors (i.e., substance abuse, aggression, etc.) (Agnew, 2006). The results of the current study, however, do not fit with GST in that, even when Black youth felt that their teachers treated them differently, for those who had fewer peers engaged in deviance and/or crime, they still reported earning failing grades. One plausible explanation is that, as Black youth perceive more differential treatment from teachers, their potential for experiencing symptoms associated with chronic stress (i.e., internalizing and/or externalizing symptoms) increases due to a lack of available coping resources and/or strategies within their peer networks. Another plausible explanation is that these youths’ peer groups, while not engaging in deviance and/or crime, do not feel attached to the school or their teachers as well as lack the commitment and effort to engage in learning and achieve.

Additionally, the findings from the current study revealed that, for African American youth who feel that their teachers treat them differently, when these youth receive racial messages that reinforce Black pride, they are more likely to report better grades. This finding is consistent with prior research suggesting that racial socialization provides African American youth with the essential coping resources and messages necessary to reinforce Black pride and enrich their understanding and appreciation for their heritage and ancestry (i.e., cultural socialization) and prepare African American youth for experiences of discrimination (i.e., preparation for bias) (Hughes et al., 2006; Hope et al., 2014). Surprisingly, neither academic aspirations nor positive self-perceptions buffered the direct association between Black youths’ perceptions of differential treatment from teachers on their
academic achievement. It is possible that the more that Black youth feel that their teachers treat them differently, the more they feel the need to prove themselves, or, as Fanon (2008) argues, the more that Black youth feel the need to earn the acceptance of their teachers. In doing so, these youth probably alter their behaviors and/or thoughts about the value of education in their lives. So, whereas these youth had hope for furthering their education beyond high school, the more that these youth are confronted by the daily stressor of differential treatment from their teachers that likely convey to Black youth their inability to achieve, they likely lose hope. As noted by Anderson (2018), the associated costs of pursuing a post-secondary education, standardized testing, family obligations, and the lack of support services within school further impedes upon the academic aspirations of Black youth.

Hence, while Black youth aspire to further their education beyond high school, academic, financial, and social obstacles forestall their preparation and likely diminishes their interest in pursuing a post-secondary education (Nichols, Kotchick, Barry, & Haskins, 2010; Anderson, 2018). Also, the saliency of deficit-based narratives underscoring the underachievement and failure of African American youth likely shapes Black youths’ perceptions of their academic competencies and effort, which has the potential to undermine their academic achievement (Rudd, 2014; St. Mary, Calhoun, & Jenson, 2018).

SCHOOL BONDING PATHWAYS

The present study hypothesized that Black youths’ perceptions of school bonding would mediate the direct association between perceptions of differential treatment from teachers and the academic achievement of Black youth. In line with this hypothesis, the results from the current study showed that, all else equal, when Black youth feel more attached to their school and teachers and demonstrate a commitment to their education, they are more likely to report earning passing grades, despite feeling that their teachers treat them differently. As documented by empirical evidence, school bonding has an achievement-promoting effect on the academic success of youth (Maddox & Prinz,
Specifically, high levels of school bonding have been found to boost academic performance, stimulate and encourage student engagement, and strengthen youths’ belief and commitment to education (Catalano, Haggerty, Oesterle, Fleming, & Hawkins, 2004; Korpershoek, Canrinus, Fokkens-Bruinsma, & Boer, 2019). For racial and ethnic minority youth, particularly African American youth, strong school bonds safeguard their academic achievement from the negative effects of perceived teacher discrimination by reinforcing their attachment to teachers and the school and deepening their commitments to education (Bryan et al., 2012; Bryan et al., 2018; McWhirter, Garcia, & Bines, 2018; Butler-Barnes & Inniss-Thompson, 2020). Thus, in line with prior research, the findings from the current study accentuate the role of perceived school bonding as a mediator that diminishes the negative effect of perceptions of differential treatment from teachers on the academic achievement of African American youth.

Theoretically, in criminology, Hirschi’s (1969) social bond theory purports that as individuals become more attached, involved, committed, and supportive of beliefs and values promoting conformity, the stronger their social bonds, which in turn diminishes their propensity for engaging in delinquency. As a social control theory, Hirschi’s social bond theory argues that social bonds function to constrain individuals from engaging in delinquent behavior by strengthening their attachments, deepening their commitments to conformist value systems and behaviors, encouraging their involvement in conformity-affirming behaviors and activities, and reinforcing their belief that adherence to the norms and values governing society are essential to its progress (Costello & Laub, 2020). In doing so, social bonds promote behaviors that conform to normative standards of society. The lack of social bonds, on the other hand, increases youths’ propensity for engaging in delinquency by dissolving their attachments, compromising their beliefs, diminishing their commitments, and lowering their engagement in conventional behaviors and/or activities (Hirschi, 1969; Rebellon & Anskat, 2018). Still, while Hirschi’s social bond theory explains how weakened school bonds
contribute to negative student behavior, Agnew’s GST and Carter’s conceptual framework of RBTS identify perceptions of differential treatment from teachers as a potential antecedent likely responsible for weakening Black youths’ feelings of attachment to school and teachers and their commitment to school and learning. Together, these theoretical perspectives provide a foundation for explaining the indirect association between Black youths’ perceptions of differential treatment from teachers and their academic achievement through perceptions of school bonding and negative student behavior. Likewise, available research, though emerging, has indicated that weakened school bonds increase the likelihood of African American youth engaging in negative student behaviors, despite feeling as though their interactions with their teachers are discriminatory (Unnever et al., 2016). In support of prior research and theory, the findings from the current study revealed that, all else equal, when Black youths’ perceptions of school bonding and their disobedient behaviors are considered, the significance of the direct association between Black youths’ perceptions of differential treatment from teachers and their academic achievement diminishes to the point of being nonsignificant. Thus, all else equal, in the face of feeling that their teachers treat them differently, when Black youth feel more attached to their school and teachers and possess a strong commitment to education, they tend to do better in school even when they break or disobey the rules.

Additionally, in line with prior research and theory, the current study found that, all else equal, when Black youths’ perceptions of school bonding and their homework behavior are considered, the significant association between Black youths’ perceptions of differential treatment from teachers and their academic achievement becomes nonsignificant, suggesting complete mediation (McKinnon, Fairchild, and Fritz, 2007). Specifically, the results of the current study suggest that, the more that Black youth feel attached to their school and teachers and possess a deeper commitment to learning and education, and the more time that Black youth invest in doing their homework outside of school, these youth are more likely to report earning passing grades, despite feeling that their teachers treat
them differently. Together, these findings support the hypotheses proposing that perceptions of school bonding amongst Black youth represents one pathway whereby perceptions of differential treatment from teachers influences Black youths’ academic achievement.

NEGATIVE EMOTION AND DISOBEDIENCE

According to GST, experiences with strains cognitively appraised as unjust and high in magnitude manifest negative emotions, particularly anger and/or aggression, which in turn exerts pressure on the individual to respond in either a prosocial manner or with deviant behavior (Agnew, 1992, 2006). Even more, Agnew (2001, 2013) recognizes that experiences of racial discrimination that are perceived as unjust and high in magnitude have the potential to foster deviant behavior as an adaptation to the wave of negative emotions likely to emerge in response to the discrimination. In addition, Carter’s conceptual framework RBTS (2007) supplements Agnew (2001) by underscoring the extent to which the propensity for deviance increases for African Americans, especially youth, who appraise race-based incidents as emotionally and psychological injurious. Together, GST and Carter’s conceptual framework of RBTS explain deviant behavior as an adaptation of Black youth experiencing racial stressors that foster adverse emotions that pressure these youth to take corrective action. However, within the context of schools, deviant behavior has implications on the learning process of students. As reflected by available literature, negative student behaviors, such as dropping out, engaging in school violence, and demonstrating aggression, diminish the capacity for youth to engage in the learning process (Hirschfield & Gasper, 2011; Wang & Fredricks, 2015) which contributes to their self-reported underachievement (Barriga, Doran, Newell, Morrison, Barbetti, & Robbins, 2002; Okano, Jeon, Crandall, Powell, & Riley, 2019).

Ergo, it is possible that the strain of perceiving more frequent experiences of differential treatment from teachers likely contributes to academic underachievement amongst Black youth by engendering negative emotions that likely encourage disobedience as an adaptation or coping
mechanism. Hence, the present study explored the extent to which negative emotions and disobedience mediated the association between Black youths’ perceptions of differential treatment from teachers and their academic achievement. Accordingly, the results of the present study showed that, all else equal, when Black youth are depressed, irritated, and/or have lost an interest in usual activities, and when these youth disobey the rules, they tend to do poorly in school; otherwise, these youth are more likely to report failing grades, despite feeling that their teachers treat them differently. Thus, the results corroborate empirical evidence indicating that strain enhances the likelihood for deviance amongst African American youth through emerging negative emotions (Nyborg & Curry, 2003; Roberts et al., 2011; Burt et al., 2012). Even more, the results from the current study extends available research by indicating that, as a result of the strain produced from Black youth feeling that their teachers treat them differently, Black youth are more likely to display currents of depression, anxiety, and irritability that further increases their likelihood of being disobedient, which in turn lowers their academic achievement.

PATHWAYS THROUGH SUSPENSION

While GST explains deviance and conformity as adaptations to the negative emotions generated from experiences and/or exposures to strains appraised as unjust and high in magnitude, GST also provides a theoretical foundation for understanding how strain leads to punishment and/or sanctioning. As noted by empirical evidence, externalizing behaviors such as delinquency, violence and aggression, substance use, as well as problem behaviors (i.e., dropping out, skipping school, disrupting the class, breaking school rules, bullying, cyberbullying, etc.) increase the likelihood for sanctioning and/or punishment (Wright, Morgan, Coyne, Beaver, & Barnes, 2014; Owens & McLanahan, 2020). Even more, perceptions of racial discrimination have been found to increase youths’ engagement in negative behaviors likely to warrant punishment or some form of discipline (Burt & Simons, 2015; Unnever et al., 2016). From the standpoint of GST, racial discrimination is
likely to be considered as a “violation of relevant justice norms” as well as high in magnitude (Agnew, 2001, p.329). Additionally, racial discrimination has the capacity to reduce social control and, depending upon available coping resources, peer associations, and beliefs in the value of education to future life outcomes, for instance, incentivize deviance as an appropriate response to pressures for corrective action against currents of negative emotions (Agnew, 2013). In this vein, as a result of experiencing frequent forms of racial discrimination, Black youth have an increased risk of being involved in school discipline as they cope with the associated negative emotions through deviance.

Furthermore, prior research has documented the deleterious effects of school discipline on the academic outcomes of youth (Fabelo et al., 2011; Morris & Perry, 2016). Likewise, available research scholarship revealed that African American youth are disproportionately represented in school discipline (Losen & Martinez, 2013; Smith & Harper, 2015; U.S. Department of Education, Office for Civil Rights, 2019). Together, this body of research suggests that involvement in school discipline has the potential to foster negative academic outcomes for African American youth, to include lowering academic achievement and discouraging Black students from engaging in the learning process. For the present study, it was hypothesized that the association between Black youths’ perceptions of differential treatment from teachers on their academic achievement would be mediated by school suspension, specifically, getting suspended from school for one or more days. In line with this hypothesis, the results of the current study extend prior research by showing that, all else equal, despite feeling that their teachers treat them differently, when African American youth have been suspended from school for one or more days, these youth are more likely to report earning failing grades. Also, given the significance of self-perception in stimulating academic motivation, encouraging student engagement in challenging courses, and boosting student efficacy and effort (Awad, 2007; Anderson, 2016), the current study hypothesized that positive self-perceptions would moderate the
indirect association of Black youths’ perceptions of differential treatment from teachers on their academic achievement through school suspension.

While available research stresses the importance of positive self-perceptions in safeguarding the academic achievement of students (Anderson, 2016), in contrast, the current study found that, all else equal, for Black youth who possess high levels of self-esteem and self-efficacy, when these youth have been suspended from school for one or more days, these youth tend to do poorly in school; these youth are more likely to report earning failing grades, despite feeling that their teachers treat them differently. Though surprising, it is possible that receipt of a school suspension(s), in the face of feeling that their teachers treat them differently, confirms underlying feelings of injustice and inequity in the application of school punishment, that Black youth likely disengage from school altogether as a potential form of resistance or a possible demonstration of resilience and self-preservation (McWorther, 2000). Another explanation is that, in receiving a school suspension, Black youth who possess high levels of self-esteem and self-efficacy are disoriented by their removal from the classroom for one or more days, such that their removal from the classroom represents another form of strain that likely compounds the strain associated with feeling that their teachers treat them differently. If no safeguards are available, then it is possible that this would engender reports of academic underachievement. As well, it is possible too that being suspended from school for one or more days counteracts the protective capacity of positive self-perceptions by reinforcing deficit-based narratives that reinforce to African American youth their position in society as inferior to the supremacy of the dominant culture (Ferguson, 2001; Giroux, 2003; Shedd, 2015; Anderson, 2018).

While emerging research underscores the extent to which perceived teacher discrimination increases the likelihood of Black youth being involved in school discipline (Ferguson, 2001; Lewis et al., 2008; Thompson & Gregory, 2011; Butler-Barnes & Inniss-Thompson, 2020), quantitatively, few of these studies explore the underlining factors likely to explain this association. As noted by available
literature, one way in which school discipline works to undermine academic achievement is through declines in student engagement, such as doing homework outside of school and/or engaging in class discussions and/or participation in organized, school clubs (Noltemeyer, Ward, & Meloughlin, 2015; Bottiani et al., 2017). Hence, for the present study, it was hypothesized that school suspension and student homework behavior would mediate the association between Black youths’ perceptions of differential treatment from teachers and their academic achievement. The results from the current study showed that, despite feeling that their teachers treat them differently, when African American youth been suspended from school for one or more days, and when they have invested time in doing their homework outside of school, these youth tend to perform better in school; they are more likely to report earning passing grades. Interestingly, the prior analysis showed a partial mediation whereby school suspension reduced the association between Black youths’ perceptions of differential treatment from teachers and their academic achievement without diminishing the significance. In comparison, when student homework behavior was considered as an additional mediating factor, not only did the significant, direct association between Black youths’ perceptions of differential treatment from teachers and their academic achievement disappear, the sign for school suspension, though significant, became positive, suggesting that, despite feeling that their teachers treat them differently, Black youth who have been suspended from school for one or more days, but who are also investing time in their learning outside of school, their likelihood of reporting academic failure or underachievement is reduced. Instead, these youth report passing grades, especially when Black youth who are investing time in doing their homework outside of school possess aspirations to further their education beyond high school. Together, these findings, though supportive of the deleterious effects of school discipline on the academic success of Black youth, extends findings from Butler-Barnes and Inniss-Thompson (2020) by revealing that perceptions of differential treatment from teachers influence the academic achievement of African American youth through school suspension and student homework behavior.
LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

In light of these findings, this study has limitations. Though this study uses a nationally representative sample of Black youth in the United States to explore the direct and indirect associations between perceived differential treatment from teachers and the academic achievement of Black youth, this study does not thoroughly analyze the effects of gender, household income, age, and grade level. Instead, these factors are included in analyses as controls. Thus, the current study does not illuminate how African American males and females likely differ in their responses to perceptions of differential treatment by teachers, to include the impact of these perceptions on their academic achievement. As noted by available research literature, experiences of perceived discrimination, either in-school and/or out-of-school, the impact on the educational experiences of African American youth vary by gender (Du Bois et al., 2002; Cooper et al., 2013; Assari & Caldwell, 2018; Leath et al., 2019), as well as by ethnicity (Bryan et al., 2018; Butler-Barnes et al., 2018; Butler-Barnes & Inniss-Thompson, 2020; Bell, 2020). Future research should consider exploring intersectional differences that cut across gender, ethnicity, social class, sexual orientation, and other social identities to develop and implement targeted educational reform initiatives and policies that account for the diverse experiences of African American youth within the school system.

Additionally, this study utilized a secondary data source that, not only uses self-reports from Black youth, but has potential issues with validity relative to the conceptualization and measurement of key study variables. As argued by Fisher and Shaw (1995:395), as a proxy measure, “research on perceived racist discrimination should not be used to make inferences about actual racist discrimination.” Stated differently, given that perceptions of differential treatment from teachers does not assess actual experiences, these findings are limited in their capacity to infer that differential treatment from teachers undermines the academic achievement of Black youth. Though focused on perceived differential treatment from teachers, other measures in this study are also proxies, therefore,
these measures function as an indirect measure of an outcome that likely to be unobserved or unavailable in the dataset (Kreuter, Olson, Wagner, Yan, Ezzati-Rice et al., 2009). Thus, future research should consider developing more comprehensive measures of the study variables used in this study to further assess the hypothesized associations.

In addition, the current study was grounded in quantitative methodologies. As argued by Creswell (2013), a mixed methods approach allows for the collection and analysis of quantitative data that is supplemented with rich qualitative data that gives voice to the lived experiences of African American youth confronting feelings of differential treatment from their teachers and the ways in which these youth perceive or assess these experiences, their impacts on their academic achievement, and their potential coping strategies and resources. Future research should consider adopting a mixed methods approach to further investigate the lived realities of African American youth with perceptions of differential treatment from teacher and their impact on their academic success.

Also, while the results indicated that the more that Black youth feel as if their teachers are treating them different, the more likely these youth will report earning failing grades, all else equal, the current study did not specify or identify the potential reason for the differential treatment. Stated differently, this study did not indicate why Black youth did or did not indicate perceived differential treatment from their teachers. As such, future research is warranted to uncover the factor(s) likely explaining Black youths’ perception of differential treatment from teachers, and how these attributional factors likely shape the various associations, both direct and indirect, between Black youths’ perceptions of differential treatment from teachers and their academic achievement. In doing so, potentially expanding the public discourse on deficit-based narratives to account for ways in which race, ethnicity, gender, class, sexual orientation, religion, immigration status, and other indicators of social location intersect to shape Black youths’ educational experiences. In doing so, enriching
understandings to the diverse ways whereby perceptions of differential treatment from teachers impacts the educational experiences of Black youth.

As well, while the current study shows that, all else equal, Black youths’ perceptions of school bonding and their disobedience completely mediate the association between their perceptions of differential treatment from teachers and their academic achievement, this study does not reveal the extent to which perceptions of school bonding inform Black youths’ disobedience. It is possible that a lack of school bonding encourages disobedient behavior, which in turn diminishes the academic achievement of Black youth, in the face of intense feelings of differential treatment from their teachers. However, this is beyond the scope of the current study. Therefore, future research is needed to further investigate the observed mediation to better discuss this proposed pathway linking perceptions of differential treatment from teachers and the academic achievement of Black youth.

Similarly, future research is warranted to identity several different pathways by which perceptions of differential treatment from teachers, as a form of perceived teacher discrimination, is associated with the academic achievement of Black youth. From this study, the results identified a number of pathways, to include, school bonding and disobedience, school bonding and homework behavior, negative emotions and disobedience, school suspension and homework behavior. As a foundation, scholars can further expand upon these pathways, to include identifying additional risk and protective factors that likely buffer or moderate these pathways. As well, understanding the extent to which these pathways change over time, to include, identifying the potential factors responsible for the observed changes, represent another area warranting the attention of future research.

Finally, this study was cross-sectional in design, thus cannot establish causality nor assess changes over time. As such, future research should employ longitudinal research designs that examine how the direct and indirect associations observed in the current study potentially change over time, to include, identifying underlining mechanisms that potentially shape or influence the observed changes.
IMPLICATIONS FOR THEORY AND PRACTICE

Despite these limitations, the results of this study have important implications for theory and practice. Theoretically, the findings from this study underscore the need for theoretical integration. The current study demonstrated the applicability of Agnew’s general strain theory in explaining the negative effects of perceived differential treatment by teachers on the academic achievement of African American youth through the manifestation of negative emotions, which, in turn, engendered disobedience as a form of coping. In taking GST a step further, the results of this study showed that, when considered with perceptions of differential treatment by teachers, disobedience significantly lowered the academic achievement of Black youth, even when demographic factors (i.e., age, gender, family income, and grade level) were controlled for. In addition, the results of this study revealed that, even when Black youth perceive more frequent experiences of differential treatment by teachers, if Black youth possess strong bonds to their school and teachers, to include viewing their homework and learning as important to their life outcomes, then these students will invest more time in doing their homework and less time being disobedient. From the standpoint of Hirschi’s social bond theory, the strong bonds that African American youth have to their school safeguards their academic achievement by increasing the number of hours that Black youth invest in doing their homework outside of school. Though Agnew’s general strain theory examines the role of strain in promoting deviant behavior and Hirschi’s social bond theory focuses on social bonds as protective factors reducing the likelihood for deviant behavior, combined with Carter’s (2007) conceptual framework of race-based traumatic stress (RBTS), this theoretical integration will likely improve the capacity of criminological inquiry to examine the educational experiences of African American and other marginalized youth within the context of the United States.

The analyses presented here illuminate the various ways in which perceptions of differential treatment from teachers undermine the academic achievement of African American youth, specifically
those youth in middle and high schools. Directly, perceptions of differential treatment from teachers diminishes the academic achievement of African American youth. Although, on average, Black youth in the current study reported lower perceptions of differential treatment from teachers, the significant and negative effect on Black youths’ academic achievement seems to suggest that the mere presence of differential treatment, no matter how frequent, has the potential to interfere with Black youths’ academic achievement. Given the importance of education to the economic independence and social mobility of African Americans, it is critical that school systems address issues stemming from implicit biases that likely shape student-teacher interactions. More specifically, schools should consider offering educators, school staff, and school administrators adequate trainings that unearth underlining biases, racial or otherwise, that likely to engender cultural deficit thinking, which research argues informs school policies, teaching pedagogies and classroom management, as well the application of school discipline (Giroux, 2003; Lewis et al., 2008; Rudd, 2014). For instance, the Metropolitan Center for Urban Education (2008:2) developed the Culturally Responsive Classroom Management (CRCM), a pedagogical approach that conceptualizes classroom management as “not to achieve compliance or control but to provide all students with equitable opportunities for learning.” In assessing the efficacy of this approach, the Metropolitan Center for Urban Education (2008) found that having teachers recognize, reflect, and address their biases and values improved their management capabilities and strengthened their relationships with diverse student bodies.

Yet, as noted by Anderson (2016), without the inclusion of voices from the Black community in the formulation and implementation of educational policies tailored to Black student success, these policies fall short of holistically addressing the underlining causes of underperformance, as well, failing to confront prevailing deficit-based narratives of underachievement and failure further cripples the African American community by forestalling social and economic mobility. Thus, beyond simply developing and adopting curricula and culturally relevant pedagogies that centralize issues of race,
diversity and social justice in order to promote inclusive learning environments and improve academic achievement, Anderson (2018:17) further urges that schools provide youth “the opportunity to critique and challenge inequitable practices […] parents and community leaders not only engage youth … but hold schools accountable if discrimination is evident.” In referencing the saliency of deficit-based narratives of underachievement and failure, Anderson (2016, 2018) recommended balancing the public discourse with narratives of resilience and academic excellence. Specifically, Anderson (2016) proposed four ways by which school systems could build new narratives that improve the educational experiences of African Americans in the United States. First, Anderson (2016) notes the importance of engaging the Black community and including the diverse perspectives of parents and community leaders in candid conversations that center around fundamental issues of Black education and strategies for improving the academic outcomes of African American youth. In doing so, schools will potentially gain a deeper understanding of the gaps in educational services and supports and the associated needs of Black youth, thus increasing their capacity to develop and implement targeted and specific interventions that are informed by the voices of the Black community (Anderson, 2016). Additionally, promoting and investing in high quality reforms and initiatives that are grounded in equity and geared towards fostering sustainable policies and practices that transform the organizational culture and overall climate of educational institutions. A proposed recommendation is the adoption of Common Core State Standards that emphasize critical thinking, problem solving, and rigorous, high-quality standards of learning. As noted by Anderson (2016:9), members of the Black community support the adoption of these Common Core Standards as they “prepare their children for college or the workforce.” Additionally, increasing investments in teaching quality and accountability, on top of strengthening their cultural competency and mastery of content and improving their expectations of Black youths’ achievement further coincide with educational reform efforts focusing on promoting high quality reforms and initiatives. Beyond this, embracing the achievements and successes of African
American leaders and community-based organizations committed to equity and excellence in education as well devoted to building a new narrative that showcases the achievement and resilience of African American youth (Anderson 2016, 2018). For instance, Project Ready, a signature initiative of the National Urban League, utilizes robust partnerships that integrates research, theory, and practices designed to foster positive youth development, improve student literacy, encourage out-of-school learning and readiness, and enhance the capacity of African American youth for post-secondary success (Anderson, 2016). As noted by findings of this study, out-of-school learning is essential to safeguarding the academic achievement of Black youth who have been suspended from school for one or more days. Thus, the adoption of academic afterschool programs, such as Project Ready, would likely build the resilience of Black youth and secure their academic success.

Finally, Anderson (2016) proposes that educational reform efforts aimed at building a better narrative of achievement and success and dismantling deficit-based narratives that handicap Black youth in learning and socioeconomic mobility integrate a sense of urgency. For, “We cannot wait; the stakes are too dire. Forging the difficult terrain in the education reform movement can be an arduous task, yet it is important to move swiftly in this endeavor” (Anderson, 2016, p.15). As documented by available research and findings from the current study, deficit-based narratives of underachievement and academic failure informs how teachers instruct and interact with African American youth, often, to the detriment of the student (Lewis et al., 2008; Rudd, 2014; Coles, 2020). The elimination of these narratives from public discourses surrounding the intersection of race and education is likely to improve the educational experiences and outcomes of African American youth within the United States.

In addition, the findings from this study suggests that strengthening Black students’ perceptions of school bonding, to include integrating enrichment opportunities that build their socioemotional learning and encourages their engagement in out-of-school learning has the potential
to diminish the negative impact of differential treatment from teachers on their academic achievement. For instance, schools could create opportunities for student-student and student-teacher interactions by having teachers model positive and supportive interactions and implement classroom management strategies that are inclusive and grounded in social justice and equity (Morgan, Salomon, Plotkin, & Cohen 2014). Furthermore, at the institutional level, schools can provide students with opportunities to make positive contributions to the school environment by allowing students opportunities to engage in school activities as well help with conducting school business (i.e., delivering messages and working in the main office). In doing this, schools reinforce to African American and other marginalized students that they have value and purpose; they have a role in the daily operations of the school, beyond just being a student.

Likewise, schools should consider adopting Cognitive Behavioral Interventions (CBI), an evidence-based practice that affords students the opportunity to acquire cognitive and behavioral skill sets that improve students’ perceptions of situations and cognitive processing capabilities (i.e., problem-solving skills), thus fostering changes in a students’ cognitive processes and thinking behaviors, which results in emerging pro-social behaviors that engender positive school outcomes (i.e., academic achievement, post-secondary enrollment) and future life outcomes (i.e., employment, socioeconomic mobility) (Mennuti, et al., 2012). This institutional support serves to further equip Black students with strategies and resources for dealing with perceptions of differential treatment in a way that does not undermine their bonds to school or mental health but builds resiliency and agency in Black students. Together, these evidenced-based practices have the potential for improving school climate, strengthening Black youths’ school bonds, enriching their socioemotional learning, and promoting achievement-affirming behaviors.

In building upon available research, the findings from the current study suggest that school discipline, particularly getting suspended from school from one or more days, likely explains the
deleterious effect of Black youths’ perceptions of differential treatment from teachers on their academic achievement. Yet, when considered alongside Black students’ investment in doing their homework outside of school, even when Black youth are removed from the classroom environment, having the opportunity to engage in learning outside of school improved their academic achievement. Thus, while it is important for schools to address disparities in school discipline that further undermine the academic success of African American youth by establishing transparent data systems that identify and address disproportionate discipline practices, adopting evidence-based interventions, such as restorative justice approaches that focus on conflict resolution and ensuring the continued involvement of youth in the learning process, and reinforcing preexisting cultural competency trainings, schools should consider providing youth who have been suspended from school for one or more days with access to out-of-school learning opportunities as a condition of their removal, especially when these opportunities encourage Black youth to further their education beyond high school (Anderson, 2018).

In all, as Nelson Mandela so eloquently stated, “Education is the most powerful weapon which you can use to the change the world” (Kifner, 1990: para 2). However, as demonstrated by available research and the current study, the liberating power of education in transforming the human condition of African Americans is weakened by institutional policies and practices. Prevailing narratives of underachievement and academic failure works against Black youth by reinforcing their intellectual inferiority and justifying their exclusion from opportunities to learn and construct knowledge. This epistemic injustice constrains Black youth from accessing the intrinsic values associated with the learning process and education (i.e., material, political, civic, social, individual, economic, and symbolic values), thereby stunting their growth and development, all the while, reaffirming their positionality of inferiority. In the end, Horace Mann’s vision of education as being a great equalizer fades, as education becomes a mechanism for stratifying and disenfranchising African American youth.
Still, there is hope for African Americans, particularly African American youth immersed within learning environments that reinforce the strength and resilience of their ancestors and encourages Black youth to persist in light of adverse experiences within the classroom or school environment. Even if you remove Black youth from the classroom through exclusionary school discipline, their academic success is safeguarded when afforded the opportunity to engage in active and intentional learning and knowledge construction. Thus, in defying the odds and achieving in the face of academic adversity, African American youth demonstrate their tenacity for success and reinforce the legacy of their ancestry; one defined by struggle and triumph. #BlackEducationMatters. #BlackIntellectualismMatters. #BlackLivesMatter.
REFERENCES


Losen, D. J., & Martinez, T. E. (2013). Out of School & Off Track: The Overuse of Suspensions in American Middle and High Schools. The Center for Civil Rights at UCLA’s Civil Rights Project, Los Angeles, CA. Retrieved from https://escholarship.org/content/qt8pd0s08z/qt8pd0s08z.pdf.


Theories. *Marriage & Family Review*, 6(1-2), 193-218, DOI: 10.1300/J002v06n01_10


APPENDIX A

Appendix A contains the post-hoc analyses that correspond to the Complex Samples Ordinal Logistic Regression analyses presented in Chapter 4. Specifically, the analyses presented in Appendix A involve unweighted ordinal logistic regression analyses exploring the direct pathway linking Black students’ perceptions of differential treatment from teachers and their self-reported academic achievement, as well as the indirect pathway through Black students’ perceptions of school bonding and Black students’ perceptions of school bonding and their homework behavior in series. Additionally, results from unweighted ANOVA analyses assessing the significance of the interaction terms are presented. Together, these analyses serve as confirmation to the findings of the Complex Samples Ordinal Logistic Regression analyses. However, given that these analyses do not account for the complex sample design and weight, it is uncertain if the findings presented herein confirm those presented and discussed in Chapter 4.
Table 4A. Association between Perceived Differential Treatment from Teachers and Black Students’ Self-Reported Academic Achievement – The Role of Perceived School Bonding (N=698)

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>s.e.</td>
<td>Exp(B)</td>
<td>B</td>
</tr>
<tr>
<td>Age</td>
<td>-0.419***</td>
<td>0.102</td>
<td>0.658</td>
<td>-0.306**</td>
</tr>
<tr>
<td>Gender</td>
<td>0.765***</td>
<td>0.148</td>
<td>2.212</td>
<td>0.748***</td>
</tr>
<tr>
<td>Family Income</td>
<td>0.202**</td>
<td>0.068</td>
<td>1.224</td>
<td>0.205**</td>
</tr>
<tr>
<td>Grade Level</td>
<td>0.443***</td>
<td>0.095</td>
<td>1.557</td>
<td>0.403***</td>
</tr>
<tr>
<td>Perceived Differential Treatment (PDT)</td>
<td>-0.072**</td>
<td>0.024</td>
<td>0.930</td>
<td>-0.192*</td>
</tr>
<tr>
<td>Deviant Peers (DP)</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>-0.391**</td>
</tr>
<tr>
<td>Black Pride (BP)</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>0.016</td>
</tr>
<tr>
<td>Perceived School Bonding (PSCBD)</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>0.124***</td>
</tr>
<tr>
<td>Negative Emotions (NES)</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>PDT*DP</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>0.124*</td>
</tr>
<tr>
<td>PDT*BP</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>0.122</td>
</tr>
<tr>
<td>PSCBD*NES</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>0.198**</td>
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Nagelkerke R²

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<tr>
<td></td>
<td>0.137</td>
<td>0.163</td>
<td>0.173</td>
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Test of Parallel Lines

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<th>(\chi^2) = 10.099</th>
<th>(\chi^2) = 11.938</th>
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</thead>
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<tr>
<td>df</td>
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<td>=27</td>
<td>=18</td>
<td>=24</td>
</tr>
<tr>
<td>p</td>
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<td>&gt;0.05</td>
<td>&gt;0.05</td>
<td>&gt;0.05</td>
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</tbody>
</table>

*p<0.05; **p<0.01; ***p<0.001

46 Imputed Family Income.

47 Perceptions of Differential Treatment from Teachers; Deviant Peer Associations; Racial Socialization (i.e., Black pride); Perceptions of School Bonding; Negative Emotional State.

48 Each variable comprising the interaction terms are standardized, and their corresponding z-scores are used to create the interaction terms.
Table A. Analysis of Variance (ANOVA) – The Interaction Between Perceived Differential Treatment from Teachers and Deviant Peer Associations

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>s.e.</td>
</tr>
<tr>
<td>Z-Score Perceived Differential Treatment (PDT)</td>
<td>-0.084*</td>
<td>0.027</td>
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<tr>
<td>Z-Score Deviant Peers (DP)49</td>
<td>-0.175***</td>
<td>0.027</td>
</tr>
<tr>
<td>ZPDT*ZDP</td>
<td>---------------</td>
<td>---------------</td>
</tr>
</tbody>
</table>

| Model Summary                        | Adj. R² = 0.043            | Adj. R² = 0.044            |
|                                      | F = 21.525 (df = 2)        | Δ R² = 0.003               |
|                                      | F = 15.182 (df = 3)        | Δ F = 2.429               |

*p<0.05; **p<0.01; ***p<0.001

49 Z-Score Perceptions of Differential Treatment from Teachers; Z-Score Deviant Peer Associations
Table B. Analysis of Variance (ANOVA) – The Interaction Between Perceived Differential Treatment from Teachers and Racial Socialization (i.e., Black pride)

<table>
<thead>
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<th>Model 2</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>s.e.</td>
<td>Sig.</td>
<td>B</td>
</tr>
<tr>
<td>Z-Score Perceived Differential Treatment (PDT)</td>
<td>-0.126***</td>
<td>0.027</td>
<td>0.000</td>
<td>-0.124***</td>
</tr>
<tr>
<td>Z-Score Black Pride (BP)(^50)</td>
<td>0.042</td>
<td>0.026</td>
<td>0.200</td>
<td>0.035</td>
</tr>
<tr>
<td>ZPDT*ZBP</td>
<td>---------</td>
<td>---------</td>
<td>---------</td>
<td>0.053</td>
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Model Summary

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Adj. R(^2)</td>
<td>0.016</td>
<td>0.018</td>
</tr>
<tr>
<td>F</td>
<td>8.376 (df = 2)</td>
<td></td>
</tr>
<tr>
<td>Δ R(^2)</td>
<td>0.003</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>6.455 (df = 3)</td>
<td></td>
</tr>
<tr>
<td>Δ F</td>
<td>2.585</td>
<td></td>
</tr>
</tbody>
</table>

*p<0.05; **p<0.01; ***p<0.001

\(^50\) Z-Score Racial Socialization (i.e., Black Pride).
Table C. Analysis of Variance (ANOVA) – The Interaction Between Perceptions of School bonding and Negative Emotions

<table>
<thead>
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<th>Model 1</th>
<th></th>
<th>Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>s.e.</td>
<td>Sig.</td>
</tr>
<tr>
<td>Z-Score Perceived School Bonding (PSCBD)</td>
<td>0.250***</td>
<td>0.031</td>
<td>0.000</td>
</tr>
<tr>
<td>Z-Score Negative Emotions (NES)</td>
<td>-0.034</td>
<td>0.030</td>
<td>0.359</td>
</tr>
<tr>
<td>ZPSCDB*ZNES</td>
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<td>---</td>
</tr>
</tbody>
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Model Summary

<p>| | | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Adj. $R^2$</td>
<td>0.064</td>
<td>0.072</td>
</tr>
<tr>
<td>$F = 24.857^{***}$ ($df = 2$)</td>
<td>$F = 19.074^{***}$ ($df = 3$)</td>
<td></td>
</tr>
</tbody>
</table>

*p<0.05; **p<0.01; ***p<0.001

---

51 Z-Score Perceptions of School Bonding; Z-Score Negative Emotional State.
Table 5A. Association between Perceived Differential Treatment from Teachers and Black Students’ Self-Reported Academic Achievement – The Role of Perceived School Bonding and Student Homework Behavior (N=698)

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>s.e.</td>
<td>Exp(B)</td>
<td>B</td>
</tr>
<tr>
<td>Age</td>
<td>-0.419***</td>
<td>0.102</td>
<td>0.658</td>
<td>-0.402***</td>
</tr>
<tr>
<td>Gender</td>
<td>0.765***</td>
<td>0.148</td>
<td>2.212</td>
<td>0.721***</td>
</tr>
<tr>
<td>Family Income52</td>
<td>0.202**</td>
<td>0.068</td>
<td>1.224</td>
<td>0.228**</td>
</tr>
<tr>
<td>Grade Level</td>
<td>0.443***</td>
<td>0.095</td>
<td>1.557</td>
<td>0.449***</td>
</tr>
<tr>
<td>Perceived Differential Treatment</td>
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<td></td>
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<tr>
<td>Perceived School Bonding53</td>
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<td></td>
<td></td>
<td>0.132***</td>
</tr>
<tr>
<td>Student Homework Behavior</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nagelkerke R²</td>
<td>0.137</td>
<td></td>
<td></td>
<td>0.170</td>
</tr>
</tbody>
</table>

| Test of Parallel Lines | \( \chi^2 = 6.817 \) | \( df = 15 \) | \( p > 0.05 \) | \( \chi^2 = 5.087 \) | \( df = 15 \) | \( p > 0.05 \) | \( \chi^2 = 12.907 \) | \( df = 15 \) | \( p > 0.05 \) | \( \chi^2 = 18.407 \) | \( df = 21 \) | \( p > 0.05 \) |

*p<0.05; **p<0.01; ***p<0.001

52 Imputed Family Income
53 Perceptions of Differential Treatment from Teachers; Perceptions of School Bonding
Table 6A. Moderating Effect of Academic Aspirations on the Association between Perceived Differential Treatment from Teachers and Black Students’ Self-Reported Academic Achievement through Perceived School Bonding and Student Homework Behavior (N=698)

<table>
<thead>
<tr>
<th>Model 1</th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>s.e.</td>
<td>Exp(B)</td>
</tr>
<tr>
<td>Age</td>
<td>-0.355***</td>
<td>0.105</td>
<td>0.701</td>
</tr>
<tr>
<td>Gender</td>
<td>0.604***</td>
<td>0.153</td>
<td>1.829</td>
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<tr>
<td>Family Income$^{54}$</td>
<td>0.190*</td>
<td>0.069</td>
<td>1.209</td>
</tr>
<tr>
<td>Grade Level</td>
<td>0.395***</td>
<td>0.097</td>
<td>1.484</td>
</tr>
<tr>
<td>Perceived Differential Treatment</td>
<td>-0.035</td>
<td>0.025</td>
<td>(---)</td>
</tr>
<tr>
<td>Perceived School Bonding$^{55}$</td>
<td>0.112***</td>
<td>0.022</td>
<td>1.118</td>
</tr>
<tr>
<td>Student Homework Behavior (SHB)</td>
<td>0.261**</td>
<td>0.077</td>
<td>1.298</td>
</tr>
<tr>
<td>Academic Aspirations (ACASP)</td>
<td>0.276**</td>
<td>0.081</td>
<td>1.318</td>
</tr>
<tr>
<td>SHB*ACASP$^{56}$</td>
<td>0.245**</td>
<td>0.075</td>
<td>1.278</td>
</tr>
</tbody>
</table>

Nagelkerke R$^2$ 0.216

Test of Parallel Lines

$\chi^2 = 29.598$
$df = 27$
$p > 0.05$

*p<0.05; **p<0.01; ***p<0.001

$^{54}$ Imputed Family Income

$^{55}$ Perceptions of Differential Treatment from Teachers; Perceptions of School Bonding

$^{56}$ Each variable comprising the interaction terms are standardized, and their corresponding z-scores are used to create the interaction terms.
Appendix B contains the post-hoc analyses that correspond to the Complex Samples Ordinal Logistic Regression analyses presented in Chapter 4. Specifically, the analyses presented in Appendix B involve unweighted ordinal logistic regression analyses exploring the pathway linking Black students’ perceptions of differential treatment from teachers and their self-reported academic achievement through negative emotions and disobedience in series, as well as the indirect pathway through perceptions of school bonding and disobedience in series. Together, these analyses serve as confirmation to the findings of the Complex Samples Ordinal Logistic Regression analyses. However, given that these analyses do not account for the complex sample design and weight, it is uncertain if the findings presented herein confirm those presented and discussed in Chapter 4.
Table 7A. Association between Perceived Differential Treatment from Teachers and Black Students’ Self-Reported Academic Achievement – The Role of Negative Emotions and Disobedience (N=698)

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>s.e.</td>
<td>Exp(B)</td>
<td>B</td>
</tr>
<tr>
<td>Age</td>
<td>-0.419***</td>
<td>0.102</td>
<td>0.658</td>
<td>-0.408***</td>
</tr>
<tr>
<td>Gender</td>
<td>0.765***</td>
<td>0.148</td>
<td>2.212</td>
<td>0.838***</td>
</tr>
<tr>
<td>Family Income</td>
<td>0.202**</td>
<td>0.068</td>
<td>1.224</td>
<td>0.203**</td>
</tr>
<tr>
<td>Grade Level</td>
<td>0.443***</td>
<td>0.095</td>
<td>1.557</td>
<td>0.432***</td>
</tr>
<tr>
<td>Perceived</td>
<td>-0.072**</td>
<td>0.024</td>
<td>0.930</td>
<td>-------</td>
</tr>
<tr>
<td>Differential</td>
<td>-------</td>
<td>------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td>Treatment</td>
<td>-------</td>
<td>------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td>Negative</td>
<td>-------</td>
<td>------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td>Emotions</td>
<td>-------</td>
<td>------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td>Disobedience</td>
<td>-------</td>
<td>------</td>
<td>-------</td>
<td>-------</td>
</tr>
</tbody>
</table>

Nagelkerke R²

|                  | 0.137 | 0.120 | 0.128 | 0.141 |

Test of Parallel Lines

<table>
<thead>
<tr>
<th></th>
<th>$\chi^2 = 6.817$</th>
<th>$\chi^2 = 4.328$</th>
<th>$\chi^2 = 4.256$</th>
<th>$\chi^2 = 10.328$</th>
</tr>
</thead>
<tbody>
<tr>
<td>$df$</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>21</td>
</tr>
<tr>
<td>p</td>
<td>&gt;0.05</td>
<td>&gt;0.05</td>
<td>&gt;0.05</td>
<td>&gt;0.05</td>
</tr>
</tbody>
</table>

*p<0.05; **p<0.01; ***p<0.001

57 Imputed Family Income
58 Perceptions of Differential Treatment from Teachers; Negative Emotional State
Table 8A. Association between Perceived Differential Treatment from Teachers and Black Students’ Self-Reported Academic Achievement – The Role of Perceived School Bonding and Disobedience (N=698)

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th></th>
<th>Model 2</th>
<th></th>
<th>Model 3</th>
<th></th>
<th>Model 4</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>s.e.</td>
<td>Exp(B)</td>
<td>B</td>
<td>s.e.</td>
<td>Exp(B)</td>
<td>B</td>
<td>s.e.</td>
</tr>
<tr>
<td>Age</td>
<td>-0.419***</td>
<td>0.102</td>
<td>0.658</td>
<td>-0.402***</td>
<td>0.103</td>
<td>0.669</td>
<td>-0.422***</td>
<td>0.102</td>
</tr>
<tr>
<td>Gender</td>
<td>0.765***</td>
<td>0.148</td>
<td>2.212</td>
<td>0.721***</td>
<td>0.149</td>
<td>2.056</td>
<td>0.815***</td>
<td>0.148</td>
</tr>
<tr>
<td>Family Income59</td>
<td>0.202**</td>
<td>0.068</td>
<td>1.224</td>
<td>0.228**</td>
<td>0.068</td>
<td>1.256</td>
<td>0.210**</td>
<td>0.068</td>
</tr>
<tr>
<td>Grade Level</td>
<td>0.443***</td>
<td>0.095</td>
<td>1.557</td>
<td>0.449***</td>
<td>0.096</td>
<td>1.567</td>
<td>0.454***</td>
<td>0.095</td>
</tr>
<tr>
<td>Perceived Differential Treatment</td>
<td>-0.072**</td>
<td>0.024</td>
<td>0.930</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived School Bonding60</td>
<td></td>
<td></td>
<td></td>
<td>0.132***</td>
<td>0.021</td>
<td>1.141</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disobedience</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.482***</td>
<td>0.145</td>
</tr>
<tr>
<td>Nagelkerke R²</td>
<td>0.137</td>
<td></td>
<td>0.170</td>
<td></td>
<td>0.128</td>
<td></td>
<td>0.181</td>
<td></td>
</tr>
</tbody>
</table>
| Test of Parallel Lines | $\chi^2 = 6.817$ | $df = 15$ | $p > 0.05$ | $\chi^2 = 5.087$ | $df = 15$ | $p > 0.05$ | $\chi^2 = 4.256$ | $df = 15$ | $p > 0.05$ | $\chi^2 = 72.184$ | $df = 21$ | $p > 0.05$

*p<0.05; **p<0.01; ***p<0.001

59 Imputed Family Income
60 Perceptions of Differential Treatment from Teachers; Perceptions of School Bonding
Appendix C contains the post-hoc analyses that correspond to the Complex Samples Ordinal Logistic Regression analyses presented in Chapter 4. Specifically, the analyses presented in Appendix B involve unweighted ordinal logistic regression analyses exploring the pathway linking Black students’ perceptions of differential treatment from teachers and their self-reported academic achievement through school suspension, as well as through school suspension and student homework behavior in series. Additionally, results from unweighted ANOVA analyses assessing the significance of the interaction term is presented here. Together, these analyses serve as confirmation to the findings of the Complex Samples Ordinal Logistic Regression analyses. However, given that these analyses do not account for the complex sample design and weight, it is uncertain if the findings presented herein confirm those presented and discussed in Chapter 4.
Table 9A. Association between Perceived Differential Treatment from Teachers and Academic Achievement – The Role of Suspension (N=698)

<table>
<thead>
<tr>
<th>School Suspension</th>
<th></th>
<th>Academic Achievement</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Model 1</td>
<td></td>
<td>Model 1</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>s.e.</td>
<td>Exp(B)</td>
</tr>
<tr>
<td>Age</td>
<td>0.424***</td>
<td>0.162</td>
<td>1.529</td>
</tr>
<tr>
<td>Gender</td>
<td>-0.714***</td>
<td>0.232</td>
<td>0.490</td>
</tr>
<tr>
<td>Family Income61</td>
<td>-0.148*</td>
<td>0.105</td>
<td>0.863</td>
</tr>
<tr>
<td>Grade Level</td>
<td>-0.378***</td>
<td>0.150</td>
<td>0.685</td>
</tr>
<tr>
<td>Perceived Differential Treatment 62</td>
<td>0.074**</td>
<td>0.037</td>
<td>1.076</td>
</tr>
<tr>
<td>School Suspension</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Model Summary

| Adjusted R² = 0.104 |
| F = 74.221 (df = 5) |

Nagelkerke R²

| 0.137 |
| 0.132 |
| 0.142 |

Test of Parallel Lines

| χ² = 6.817 | χ² = 4.205 |
| df = 15 | df = 15 |
| p > 0.05 | p > 0.05 |

χ² = 8.029
| df = 18 |
| p > 0.05 |

*p<0.05; **p<0.01; ***p<0.001

61 Imputed Family Income
62 Perceptions of Differential Treatment from Teachers
Table 10A. Moderating Effect of Self-Perceptions on the Association between Perceived Differential Treatment from Teachers and Black Students’ Self-Reported Academic Achievement through Suspension Behavior (N=698)

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
</tr>
<tr>
<td>Age</td>
<td>-0.383***</td>
</tr>
<tr>
<td>Gender</td>
<td>0.675***</td>
</tr>
<tr>
<td>Family Income(^63)</td>
<td>0.205**</td>
</tr>
<tr>
<td>Grade Level</td>
<td>0.403***</td>
</tr>
<tr>
<td>Perceived Differential Treatment (^64)</td>
<td>-0.053*</td>
</tr>
<tr>
<td>School Suspension (SUSP)</td>
<td>-0.257**</td>
</tr>
<tr>
<td>Self-Perceptions (SP)</td>
<td>0.263***</td>
</tr>
<tr>
<td>SUSP*SR(^65)</td>
<td>-0.204**</td>
</tr>
</tbody>
</table>

Nagelkerke R\(^2\) 0.169

Test of Parallel Lines

\[ \chi^2 = 15.811 \]
\[ df = 24 \]
\[ p > 0.05 \]

*\(p<0.05; **p<0.01; ***p<0.001\)

\(^63\) Imputed Family Income
\(^64\) Perceptions of Differential Treatment from Teachers
\(^65\) Each variable comprising the interaction terms are standardized, and their corresponding z-scores are used to create the interaction terms.
Table E. Analysis of Variance (ANOVA) – The Interaction Between Self-Perceptions and Suspension

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th></th>
<th>Model 2</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>s.e.</td>
<td>Sig.</td>
<td>B</td>
</tr>
<tr>
<td>Z-Score Self-Perceptions (SP)</td>
<td>0.116***</td>
<td>0.025</td>
<td>0.000</td>
<td>0.113***</td>
</tr>
<tr>
<td>Z-Score School Suspension (SUSP)</td>
<td>-0.211***</td>
<td>0.026</td>
<td>0.000</td>
<td>-0.211***</td>
</tr>
<tr>
<td>ZSR*ZSUSP</td>
<td>---------</td>
<td></td>
<td>---------</td>
<td>-0.114***</td>
</tr>
</tbody>
</table>

Model Summary

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th></th>
<th>Model 2</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Adj. R² = 0.056</td>
<td></td>
<td>Adj. R² = 0.068</td>
<td></td>
</tr>
<tr>
<td></td>
<td>F = 27.994*** (df = 2)</td>
<td></td>
<td>Δ R² = 0.013</td>
<td></td>
</tr>
<tr>
<td></td>
<td>F = 23.161*** (df = 3)</td>
<td></td>
<td>Δ F = 12.774**</td>
<td></td>
</tr>
</tbody>
</table>

*p<0.05; **p<0.01; ***p<0.001
Table 11A. Association between Perceived Differential Treatment from Teachers and Black Students' Self-Reported Academic Achievement – The Role of School Suspension and Student Homework Behavior (N=698)

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>s.e.</td>
<td>Exp(B)</td>
<td>B</td>
</tr>
<tr>
<td>Age</td>
<td>-0.419***</td>
<td>0.102</td>
<td>0.658</td>
<td>-0.375***</td>
</tr>
<tr>
<td>Gender</td>
<td>0.765***</td>
<td>0.148</td>
<td>2.212</td>
<td>0.715***</td>
</tr>
<tr>
<td>Family Income66</td>
<td>0.202**</td>
<td>0.068</td>
<td>1.224</td>
<td>0.199**</td>
</tr>
<tr>
<td>Grade Level</td>
<td>0.443***</td>
<td>0.095</td>
<td>1.557</td>
<td>0.408***</td>
</tr>
<tr>
<td>Perceived Differential Treatment 67</td>
<td>-0.072**</td>
<td>0.024</td>
<td>0.930</td>
<td>--------</td>
</tr>
<tr>
<td>School Suspension</td>
<td>--------</td>
<td>------</td>
<td>--------</td>
<td>-0.562***</td>
</tr>
<tr>
<td>Student Homework Behavior</td>
<td>--------</td>
<td>------</td>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td>Nagelkerke R²</td>
<td>0.137</td>
<td></td>
<td></td>
<td>0.132</td>
</tr>
<tr>
<td>Test of Parallel Lines</td>
<td>$\chi^2 = 6.817$</td>
<td>$df = 15$</td>
<td>p&gt;0.05</td>
<td>$\chi^2 = 4.205$</td>
</tr>
</tbody>
</table>

*p<0.05; **p<0.01; ***p<0.001

66 Imputed Family Income
67 Perceptions of Differential Treatment from Teachers
Table 12A. Moderating Effect of Academic Aspirations on the Association between Perceived Differential Treatment from Teachers and Black Students’ Self-Reported Academic Achievement through Suspension and Student Homework Behavior (N=698)

<table>
<thead>
<tr>
<th>Model 1</th>
<th></th>
<th>B</th>
<th>s.e.</th>
<th>Exp(B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>-0.325**</td>
<td>0.105</td>
<td>0.722</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>0.582***</td>
<td>0.154</td>
<td>1.790</td>
<td></td>
</tr>
<tr>
<td>Family Income</td>
<td>0.163*</td>
<td>0.069</td>
<td>1.177</td>
<td></td>
</tr>
<tr>
<td>Grade Level</td>
<td>0.356***</td>
<td>0.097</td>
<td>1.428</td>
<td></td>
</tr>
<tr>
<td>Perceived Differential Treatment</td>
<td>-0.058*</td>
<td>0.024</td>
<td>0.944</td>
<td></td>
</tr>
<tr>
<td>School Suspension</td>
<td>-0.423**</td>
<td>0.154</td>
<td>0.655</td>
<td></td>
</tr>
<tr>
<td>Student Homework Behavior (SHB)</td>
<td>0.304***</td>
<td>0.076</td>
<td>1.355</td>
<td></td>
</tr>
<tr>
<td>Academic Aspirations (ACASP)</td>
<td>0.305***</td>
<td>0.081</td>
<td>1.357</td>
<td></td>
</tr>
<tr>
<td>SHB*ACASP</td>
<td>0.199**</td>
<td>0.075</td>
<td>1.220</td>
<td></td>
</tr>
</tbody>
</table>

Nagelkerke R² 0.193

Test of Parallel Lines

\[ \chi^2 = 30.598 \]
\[ df = 27 \]
\[ p > 0.05 \]

*\( p < 0.05; ** p < 0.01; *** p < 0.001 \)

---

68 Imputed Family Income
69 Perceptions of Differential Treatment from Teachers
70 Each variable comprising the interaction terms are standardized, and their corresponding z-scores are used to create the interaction terms.
VITA

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PEER-REVIEWED PUBLICATIONS


