RACIAL DISPARITIES IN K-12 EDUCATION: UNDERSTANDING BIASES

by

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DISSERTATION ABSTRACT

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Ample evidence suggests many U.S. institutions operate within a system of racial inequities, yet the existence of these inequities and their implications are regularly debated in public discourse. The term "School-to-Prison Pipeline" (STPP) refers to the trend in which children receive exclusionary discipline at school – funneling them out of public school and into the juvenile and eventual adult criminal justice system. Children of color are especially vulnerable to being placed on the STPP. As such, the STPP is one process which perpetuates and amplifies racial inequalities. Understanding the underlying policies and practices that perpetuate these processes over time is critical to understanding how to best combat systemic racism in these institutions.

This study seeks to gain understanding of one aspect that may perpetuate the STPP. Using a longitudinal national dataset of 4,898 children born between 1998 and 2000 in 20 U.S. cities and structural equation modeling, this study examines how the concordance of the race of the student and race of the teacher impacts student academic achievement and student discipline both at the elementary and secondary school levels.

Findings suggest students at age 9 who have the same race as their teacher are more likely to have better academic performance and less likely to receive exclusionary

discipline than students who have a teacher of a different race. This teacher-student race concordance for students at age 9 also positively impacts their academic achievement and is negatively associated with their exclusionary discipline when they are 15. The model operates with subtle but still significant differences for Black versus White participants and for female versus male participants.

Understanding the complex relations between these constructs provides critical information on how teachers' race and potential racial biases can impact students' academic trajectories. Identifying factors and processes which perpetuate the STPP among Black students is a first step towards addressing the issue. Such information is key in informing the development of teacher trainings to combat the hidden biases within the educational system. Moreover, this research serves as a steppingstone to future research by raising broader questions related to children's socialization and the effects of biases.

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Clark, M., Kjellstrand, J.M., & Morgan, K. (2021). Service needs for corrections-involved parents with a history of problematic opioid use: A community needs assessment. *Frontiers in Psychology, 12*, 1–10. doi:10.3389/fpsyg.2021.667389

Gibbs, B., Marsala, M., Gibby, A., Clark, M., Alder, C., Hurst, B., Steinacker, D., & Hutchison, B. (2021) "Involved is an interesting word": An empirical case for redefining school-based parental involvement as parental efficacy. *Social Sciences, 2021*(10), 156. doi: 10.3390/socsci10050156

Kjellstrand, J.M., Clark, M., Caffery, C., Smith, J., & Eddy, J.M. (2021). Reentering the community after prison: Perspectives on the role and importance of social support. *American Journal of Criminal Justice (2021)*. doi: 10.3102/0013189X031007028

Kjellstrand, J.M., Yu, G., Eddy, J. M., Clark, M., & Jackson, A. (2020). The role of parental incarceration in predicting trajectories of child internalizing problems. *Children and Youth Services Review,* 115. doi:10.1016/j.childyouth.2020.105055

Kjellstrand, J.M., Yu, G., Eddy, J. M., & Clark, M. (2020). Children with incarcerated parents and developmental trajectories of internalizing problems

across adolescence. *American Journal of Criminal Justice, 45*(1), 48-69. doi:10.1007/s12103-019-09494-4

Clark, M., Buchanan, R. Kovensky, R., & Leve, L. (2018) Partner influences on risky drug and sexual behavior. *Reproductive Health, 15*(1), 156. doi:10.1186/s12978-018-0598-0

Clark, M., Buchanan, R., & Leve, L. D. (2018). Young women's perspectives of their adolescent treatment programs: A qualitative study. *International Journal of Environmental Research and Public Health, 15*(2), 373. doi:10.3390/ijerph15020373

Buchanan, R., & Clark, M. (2017). Understanding parent–school communication for students with emotional and behavioral disorders. *The Open Family Studies Journal, 9*(Suppl 1 M5), 122. doi: 10.2174/1874922401709010122

Buchanan, R., Nese, R. N. T., & Clark, M. (2016). Stakeholders' voices: Defining needs of students with EBD transitioning between school settings. *Behavioral Disorders, 41*(3), 135-147. doi:10.17988/BD-15-73.1

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CHAPTER I

INTRODUCTION

The 2020 murders of Ahmaud Arbery, Breonna Taylor, and George Floyd ignited one of the largest protest movements in U.S. history, inspired protests around the world, and brought to light some of the corruption that exists within the criminal justice system and the deadly effects of systemic racism (Buchanan et al., 2020). Black Lives Matter demonstrations called for an end to hate crimes, police brutality, over-policing of Black neighborhoods, and the School to Prison Pipeline (STPP) within the Black community (Black Lives Matter, n.d.; Buchanan et al., 2020; BLM at School, n.d.).

The STPP is the term used to refer to the practices and policies within educational settings that increase the likelihood of children eventually becoming incarcerated. These practices and policies include such things as methods for school discipline, partnerships between police and schools, and school surveillance technologies (Muñiz, 2021). The current study focuses on one specific critical aspect of the STPP – the use of exclusionary discipline. Previous studies have shown that children who are suspended or expelled from school during their primary and secondary school years are less likely to graduate from high school (Balfanz et al., 2014) and more likely to be incarcerated in adulthood (Burt, 2014; Okonofua & Eberhardt 2015). While the STPP impacts youth from various disadvantaged backgrounds (e.g., youth who identify as lesbian, gay, bisexual, transgender, and queer, youth who experience poverty, and youth with disabilities [Muñiz, 2021]), Black, Indigenous, and People of Color (BIPOC) communities are disproportionately negatively impacted. In fact, research suggests, Black students are three times more likely to be suspended or expelled than White students, propelling them

into the STPP (Glock & Klapproth, 2017; U.S. DOE Office for Civil Rights, 2014; Skiba et al., 2014a). This is an especially troubling example of systemic racism within the United States highlighting the roles that education and criminal justice systems play in perpetuating racism.

The current study provides information that is key to developing an upstream approach for tackling the systemic racism that unjustly devastates the lives of many Black Americans downstream in this pipeline. My specific aim is to identify factors that launch Black children on to the STPP by examining the role teacher-student race concordance may play in child academic performance and discipline. Findings from this study could help curb the misuse of unnecessarily harsh disciplinary action and help shut off some racial biases inherent in the STPP at the spigot.

Background and Significance

The incarceration rate in the United States (U.S.) is the highest of any industrialized nation (World Prison Brief, 2018). With approximately 2 million people currently behind bars in the U.S., this time-period is often termed the era of mass incarceration (Delaney et al., 2018; Kang-Brown et al., 2021). Unfortunately, research has shown that the criminal justice system may not always be effective in deterring crime. Evidence suggests that the risk of incarceration does not seem to consistently prevent individuals from offending (Durlauf & Nagin, 2011; Lofstrom & Raphael, 2016). Furthermore, experiencing incarceration puts people at greater risk of reoffending than other non-custodial sanctions such as fines, electronic monitoring, or work in the community (Cullen et al., 2011; Durlauf & Nagin, 2011; Villettaz et al., 2015). More troubling still, aspects of the criminal justice system add to a larger, complex, racially

biased societal infrastructure where Black and Latinx individuals are arrested, convicted, and imprisoned at disproportionate rates compared to White individuals (The Sentencing Project, 2018). In 2020, the video footage of the murder of George Floyd by a police officer in Minneapolis brought worldwide attention to some of the discriminatory and harsh treatment used in our criminal justice system. Protesters took to the streets and discussions of systemic racism within the criminal justice system infiltrated public and private discourse (Worland, 2020). Since then, debates continue as people question the existence and validity of the concept of systemic racism and what it means for the U.S. (e.g., Rosenberg, 2021; Shapiro, 2021; Bump, 2021).

Understanding Systemic Racism through a Critical Race Theoretical Lens

According to Critical Race Theory (CRT), racism exists in the U.S. not as an unfortunate occurrence that can easily be corrected by law, but rather as a foundation on which the U.S. was built (DeMaske, 2009). Many scholars argue that the very foundation on which the Constitution was written was racist due to the manner in which the U.S. was formed and developed; a process which involved, among many atrocities, the forced resettlement and massacre of Native Americans and use of slave labor of Africans (e.g., DeMaske, 2009; Hannah-Jones, 2019; Wallis, 2007). Though the Civil Rights movement made progress in combatting racism, the main goal of the Civil Rights movement was to change laws (not the foundation of the U.S.) and according to CRT theorists, merely changing laws is not sufficient to fixing the problem of racism (Greene, 1995). Often laws aim to create "neutrality" or "equality," but they define neutrality using a White lens (Crenshaw et al., 1995). Rather than being truly neutral, individuals are forced to conform to the dominant White culture (Crenshaw et al., 1995; Graf, 2015) which

disenfranchises, demeans, and erases Black culture and Black experiences (Crenshaw et al., 1995). This creates a form of "silent genocide" where, instead of creating equal opportunity for all, citizens of the country are expected to conform to the dominant culture to succeed (Peller, 1995).

Since the foundation of the U.S., racist beliefs and actions have continued to saturate U.S. culture, though how this occurs has changed over the years. Current examples of systemic racism are seen in nearly every institution within the U.S., frequently being preserved as a result of both explicit and implicit biases. Explicit racial biases are evident when an individual or institution is consciously aware of their racist attitudes and behaviors towards different groups (U.S. Department of Justice, n.d.). For example, in the healthcare institution, explicit biases were evident in the notorious Tuskegee Syphilis Study in which many Black individuals in the U.S. were unethically denied life-saving medication (Centers for Disease Control and Prevention, 2020). This type of bias is easier to detect and is what laws are often created to prevent. Though important to eradicate explicit biases from U.S. institutions, it is not sufficient to dismantle structural racism or race-based inequality. Merely working to end explicit biases does not rid our country of the more concealed implicit biases. These operate in less overt ways as they happen unconsciously. Individuals exhibit implicit racial biases when they unintentionally and unknowingly exhibit racist attitudes and/or behaviors (Greenwald & Lai, 2020).

Though unintentional, implicit biases (which the majority of people have) lead to harmful discriminatory behavior (Bertrand et al., 2005). These implicit racial biases occur in many U.S. institutions. For example, in their systematic literature review, FitzGerald

and Hurst (2017) found in the healthcare system that when healthcare workers' implicit biases were measured using implicit bias tests (which measure subtle associations of between positive/negative words and pictures of various races) healthcare workers showed similarly high levels of biases as those of the general population. These biases resulted in measurable disadvantages in quality of care received by BIPOC individuals. In educational settings, laws that place greater emphasis on standardized test scores (which can be fraught with bias) and emphasize school choice for families (often most available to already advantaged families) have resulted in levels of school segregation which are similar to those prior to the historic Supreme Court ruling of *Brown v. the Board of Education* (Knoester & Au, 2017). In the workforce, results of Quillian et al.'s meta-analysis (2017) show that racially biased hiring – where White applicants receive an average of 36% more job application callbacks than Black applicants – has occurred at similar levels over the past 25 years, with little improvement. In housing, evidence suggests that, despite the illegality of housing discrimination, it still occurs an estimated 4 million times annually (Friedman, 2015). Housing discrimination is worse in more desirable areas, resulting in disenfranchised groups living in areas fraught with pollution and lack of opportunities for socio-economic upward mobility (Ash & Fetter, 2004; Christensen et al., 2020, Markley et al., 2020). In the criminal justice system, biased police profiling (e.g., biased traffic stops, over policing in Black neighborhoods) has negative health outcomes such as injury/death and mental health issues resulting from trauma (Laurencin & Walker, 2020). Biased sentencing puts BIPOC individuals at greater risk for being incarcerated (rather than less invasive community sanctions), and

for longer periods of time than White individuals who commit similar crimes (Jordan & Freiburger, 2015).

Legal scholars often debate how to best deal with the effects of implicit biases. While the implicit biases may not be racist in intent, they can still result in harmful and discriminatory outcomes. Therefore, understanding how laws can either protect or mitigate implicit racial bias is critical, yet often challenging to come up with specific solutions. CRT and legal scholar Charles R. Lawrence III (1995) suggests that understanding how to combat racism has less to do with recognizing racism, but more to do with understanding how it operates. For Lawrence, racism should be looked at as a crime and a disease. The crime is easy to recognize: atrocities performed against a subgroup. However, the disease is harder to recognize as everyone in society may be subject to the illness. This illness impacts the way we think, make policies and interact with each other. Because the disease of racism is rampant, most people do not recognize how it subtly, yet substantially, impacts our culture (especially in instances of implicit racial biases). Even the act of finding a cure to racism is contaminated by racism itself since the disease of racism is fraught with a White-based understanding of equality. Regardless of racist intent, racism infects our social institutions.

Racial Inequalities in Criminal Justice and Education: The STPP

Though CRT scholars examine the mechanisms through which racism operates within institutions in the U.S., some race scholars argue that today's problem of mass incarceration is the key mechanism through which our society maintains systemic racism. Since slavery and Jim Crow laws (once hallmarks of racism in their own time periods) have been abolished, scholars argue that mass incarceration is today's way to maintain

the historic race-based caste system without explicitly stating the issue of race (Alexander, 2020; Graff, 2015; Marable, 2007; Wacquant, 2010). By not discussing race explicitly within the policies that contribute to mass incarceration, the caste system is legitimized and legalized (Alexander, 2020; López, 2010). Laws to change racism in the past have only led to the evolution of new forms of racism because the focus has been on targeting the mechanisms of racism rather than racism as a core issue. For example, when slavery became illegal, the racism that undermined society during slavery was still evident and practiced broadly. Jim Crow laws, which legalized racial segregation, took the place of slavery as a racialized caste system in the U.S. The end of Jim Crow laws again did not signify an end of racism. Instead, the illegalization of more overt forms of racism led to an increase of more subtle forms of racism (where race is not explicitly discussed) and led to the institutional racism contributing to mass incarceration. Based on these historical examples, there is reason to believe that laws to simply end mass incarceration – without addressing the racism behind it – will likely only create an opportunity for another racist process to replace it (Alexander, 2020; Alexander, 2011; López, 2010). Therefore, race scholars argue that it is important to make a conscious effort to view systemic racism as a form of White supremacy since it disenfranchises BIPOC individuals while allowing White individuals to maintain societal power. Many argue that in order to stop this disenfranchisement of BIPOC populations and promote a more equitable world, vigilant steps are needed which address the underlying systemic racist attitudes and processes (Smith, 2020).

Mass incarceration is perpetuated, not just by systemic inequities in the criminal justice system, but also by the role other institutions play in perpetuating racism.

Experiencing racism can negatively impact an individual's socioeconomic status (SES), health, and overall well-being, while potentially propelling individuals into criminogenic circumstances. For example, research shows that racial inequities in education account for 16% of the racial disproportionalities in the criminal justice system (Barnes & Motz, 2018). In the late 20th century, "get tough on crime" legislation called for harsher sentencing for drug offenses (e.g., federal incentives for states to incarcerate, and elimination of federal parole opportunities) which drove prison rates up – especially for Black and Latinx communities (Adelman, 2019). During this time, schools also implemented strict discipline policies that similarly disproportionately impacted Black and Latinx populations. An example of such a policy is the Gun-Free Schools Act, passed in 1993, which implemented year-long suspensions for any child who brought any weapon to school (Gun-Free Schools Act, 1993). Though meant to be a standard national policy, with the interpretation of "weapon" being left up to school personnel, the application of this policy varied drastically depending on the school. BIPOC students were disproportionately negatively impacted due to implicit and explicit racial biases of school personnel (Nelson & Lind, 2015).

Other examples are the zero tolerance policies for various types of infractions aside from carrying weapons which resulted in even more school suspensions that again, due to implicit and explicit biases, negatively impacted BIPOC students at a disproportionate rate (Nelson & Lind, 2015). With children being forced out of their learning environments, they were more likely to feel disconnected from school and stigmatized by peers when they returned, leading to lower academic achievement, higher dropout rates and ultimately, a greater likelihood of adult incarceration (Balfanz, et al.,

2003; Burt, 2014; Fenning & Rose, 2007; Okonofua & Eberhardt, 2015; Heitzeg, 2009; Mittleman, 2018; Rosenbaum, 2020). Just as in the adult criminal justice system, schools were implementing these policies within a national context of systemic White supremacy and BIPOC children were disproportionately negatively impacted. Zero tolerance policies impacted Black students more than White students, as Black students were more likely to get suspended and expelled than their White counterparts. This ultimately played a role in amplifying the already persistent suspension gap between Black and White students (Curran, 2016). When children are suspended and expelled, they are out of school, missing out on safe, educational opportunities. Being out of this environment puts children at risk for further delinquent behavior. Evidence suggests that children who are suspended and expelled are more likely to drop out of school (Balfanz et al., 2014), be arrested by police and ultimately, more likely to be incarcerated (Burt, 2014; Okonofua & Eberhardt 2015). Scholars call this issue the STPP (Skiba et al., 2014a; Barnes & Motz, 2018).

With the STPP accounting for 16% of the racial disproportionalities in criminal justice (Barnes & Motz, 2018), identifying ways to improve our discriminatory disciplinary and educational practices has the potential to interrupt or diminish the racial disparities not just in education, but also within the criminal justice system. The current study examines the educational system and the role it plays in perpetuating racial disparities short-term as well as long-term. Specifically, the study examines racial inequalities in school discipline and school achievement as well as possible factors which may contribute to racial inequalities. What follows is a brief explanation of how each of these dimensions play an integral role in the systemic racial inequalities on the STPP.

Achievement and Discipline Gaps: K-12 Schools

In the school system, ample research has pointed to differences in academic achievement and discipline between Black students and White students, where Black students are more likely to perform worse academically than White students (Bohrnstedt, et al., 2015) and are more likely to be disciplined, suspended, and expelled for comparable infractions than their White peers (Delale-O'Connor et al., 2017). A growing body of research suggests that systemic racism contributes to both the achievement and the discipline gaps which, in turn, propel students down the STPP. However, more research is necessary to understand possible contributors to these gaps (Gregory et al., 2010; Pearman et al., 2019).

The Black/White Achievement Gap. The 2011 National Assessment of Educational Progress (i.e., federal standardized tests) showed that Black students in eighth grade scored an average of 37 points lower (on a 0-500 scale) than White students at the same school level. Similar gaps persist nationally and have persisted throughout the history of education in the U.S. (Bohrnstedt, et al., 2015). Though some attribute achievement gaps to differences in SES (Hanushek, 2019), other research indicates that, even when controlling for SES, racial achievement disparities still persist (Bohrnstedt, et al., 2015), suggesting that achievement gaps are a product of other factors aside from SES. Many have attributed these differences to the overall systemic racial inequities in which our country operates (Strauss, 2021).

These academic achievement differences vary by the climate of the school. When schools work to create and perpetuate a positive climate (e.g., a general feeling of acceptance, school pride, support) the achievement gap frequently lessens. However,

when the school climate is negative (e.g., feelings of inadequacy, a lack of support, a lack of control) racial inequalities persist (Bodovski et al., 2013). Further, research shows that the achievement gap may be partially traced to teacher bias. As with most, if not all people, teachers have implicit biases. Teachers then bring these implicit biases into the school system (Glock et al., 2019; Glock & Klapproth, 2017; Meissel et al., 2017). This can affect how they relate to different children and, long-term, can impact child academic achievement outcomes (Peterson et al., 2016). Particularly troubling are the race-based biases inherent in classrooms. Evidence shows that both Black and White children perform better academically when they are in a classroom with a teacher of the same race (Egalite et al., 2015, Harbatkin, 2019) – perhaps due to the implicit biases teachers may hold. Evidence suggests that individuals in non-stigmatized majority groups (e.g., White individuals) often have stronger implicit biases favoring members of their same group than individuals not in the dominant group (Project Implicit, n.d.). Perhaps, then, White teachers implicitly favor White students in their classes, allowing these students to perform better than their Black classmates. Additional research shows that students benefit most academically when their teachers' implicit biases favor their ethnic group (Peterson, et al., 2016). For instance, Peterson and colleagues (2016) measured implicit biases (using an Implicit Association Task) of 38 teachers of 6- to 13-year-olds and examined how teachers' biases were related to student academic achievement. They found that students had lower levels of academic achievement when they were in classes with teachers that had higher levels of unfavorable implicit biases toward their ethnic group (Peterson, et al., 2016). Additionally, research shows that there is more of a disconnect between the Black students' and their teachers' perception of their work-effort

than White students' and teachers' perception of their work-effort. This is to say, Black students are more likely than White students to feel that they, as Black students, are working hard in their classes while teachers report the opposite – that these Black students are not working hard (Kozlowski, 2015). Still other scholars explain these apparent biases in the academic achievement gap as being due to the "positive-feedback bias" in which White teachers are less likely to give constructive criticism to Black students on assignments – making it difficult for Black students to improve academically (Harber et al., 2012). However, when teachers and students share the same race/ethnicity, this "positive-feedback bias" is reduced as teachers of color hold students of color to higher academic standards (Goings et al., 2018).

The Black/White Discipline Gap. Not only is there a racial achievement gap, there is also a racial discipline gap which may further explain some of the achievement gap (Morris & Perry, 2016; Pearman, 2019). In fact, one study estimates that the racial gap of school suspensions accounts for a fifth of the differences in school performance (Morris & Perry, 2016). Research shows that Black students are more likely to be disciplined and with harsher punishments than White students (Bryan, 2017; Delale-O'Connor et al., 2017; Skiba et al., 2011). Black students are also more likely than White students to be given office discipline referrals for infractions that are subject to interpretation (such as "defiance) – even when controlling for SES (Gregory & Weinstein 2008; Skiba et al., 2002).

Though the discipline gap is clearly established, the mechanisms through which it is maintained are less clear. Research suggests that this discipline gap results from aspects of the school such as demographic makeup (Owens & McLanahan, 2019; Ramey,

2015), school policies and procedures (Skiba et al., 2014b), or teacher stereotypes, stigmas, and biases (Kunesh & Noltemeyer, 2019). For example, Ramey (2015) used data from the U.S. Department of Education Civil Rights Data Collection and the National Center for Education Statistics to show how demographic composition can impact the discipline gap. Schools with higher proportions of students of color and students from socioeconomically disadvantaged backgrounds are more likely to use suspension, expulsion, and police referrals for arrests than schools with higher proportions of White students and students from higher socioeconomic backgrounds. In terms of school policies, Skiba et al. (2014b) examined data from all public school records of suspension and expulsion from the 2007-2008 school year in one Midwestern state (N = 1,720 schools) combined with the state's Department of Education demographic and school level data for each school and found that racial disparities are most impacted at the school level by the policies introduced and implemented by the principal – suggesting school climate plays a large role in either maintaining or reducing inequalities. However, another study (Owens & McLanahan, 2019) involving approximately 5,000 children across the U.S., reported that "between-school sorting" (the idea that lower SES schools are more likely to have policies for harsher punishment) only accounted for 13% of the discipline gap. Differential treatment according to race, on the other hand, accounted for 39% of the discipline gap suggesting that policies and procedures play a much lesser role than racial biases of individual school personnel. Experimental studies show that racial biases can impact the way teachers view specific behaviors and can impact the way they detect behavior over time (Okonofua & Eberhardt, 2015). Additionally, teacher biases can impact student biases as students watch teachers and learn from them. These developing

student biases can affect teacher biases further when teachers unintentionally learn from their students. This creates a vicious cycle where biases grow for both teachers and students leading to a more hostile school environment (Okonofua et al., 2016). Though these studies show some mechanisms through which the discipline gap operates, researchers suggest using more sophisticated analyses in order to fully understand the complexities of how the discipline gap operates within the school system (Gregory et al., 2010; Pearman et al., 2019).

Teachers' racial biases toward students may begin in preschool and continue through high school (Downer et al., 2016; Downey & Pribesh, 2004). Teachers may have learned their biases as schoolchildren, then model those biases for their own students, perpetuating racism (Bryan, 2017). As mentioned previously, the biases students learn from teachers only maintain and expand teachers' biases, creating a negative cycle in which biases feed off each other (Okonofua, et al., 2016). Worse still, these biases are likely to have long-term implications for the students. In reviewing the theoretical literature, Delale-O'Connor et al. (2017) maintained that several of the key factors that contribute to the STPP revolve around biases in the school system, which in turn lead to subjective disciplinary practices and unwarranted criminal charges. Delale-O'Connor et al. further argue that teachers' beliefs and worldviews about students and classroom management matter greatly for keeping children off the STPP (Delale-O'Connor et al., 2017). Another study used the Fragile Families and Child Wellbeing Study (FFCWS) data set of approximately 5,000 children at age 9 and found that children are treated differently based on their race and, further, that it is a problem of being differentially

treated rather than a problem of differential behavior on the part of the children (Owens & McLanahan, 2019).

Several studies discuss how children have fewer discipline infractions when they are in a classroom with a teacher of their shared race (e.g., Dee, 2005; Okonofua & Eberhardt, 2015; Gilliam et al., 2016). Experimental studies confirm that this is a result of the biases teachers hold (Okonofua & Eberhardt, 2015; Gilliam et al., 2016). For example, Okonofua & Eberhardt (2015) reported on two studies which examined how racial stereotypes held by teachers impact their responses to student misbehavior – especially when teachers view more than one behavioral infraction. In the first study, 57 female K-12 teachers (38 of which were White, 2 were Black, 1 was Asian, and 16 were unreported race) were shown a picture of a middle school and told to imagine they were a teacher at the given school. They were then told of a student committing a minor discipline infraction followed by the same student committing a similar, but different, minor discipline infraction. For half of the teachers, the student had a stereotypical Black boy name and for the other half of the teachers, the student had a stereotypical White boy name. Findings showed that teachers rated the behavior of students with stereotypically White names similarly in both the first and second disciplinary infractions. However, when students had a stereotypical Black name, teachers rated the students harsher for committing a second infraction. These students, then, were more likely to get the label of "troublemaker." The second study further examined racial stereotypes by asking 204 K-12 teachers (166 of which were White, 17 were Black, 10 were Asian, 6 were Latino, 2 were other, and 3 were unknown race) to complete the same task as Study 1, but with more in-depth follow-up questions. Teachers in Study 2 were asked to describe whether

they thought the infractions were part of a bigger pattern of misbehavior and whether they felt they would be likely to suspend these students at a future date. Findings replicated Study 1 and further showed that teachers were more likely to feel students with stereotypically Black names were misbehaving as part of an ongoing pattern, and they felt they would be more likely to suspend these individuals in the future. Both studies highlight how implicit biases impact teacher perceptions – thereby negatively impacting students long-term.

Sex Differences. In addition to racial differences, decades of research show that there are nuanced sex differences that intersect with these racial differences in discipline (Skiba et al., 2002; Welsh & Little, 2018; George, 2015). While girls are at a lower risk of receiving exclusionary discipline than are boys (Jacobsen, 2018), the influence of sex becomes more nuanced when considering the intersectionality of race and sex (Addington, 2021; Blake et al., 2021; Jacobsen, 2018; George, 2015).

***Girls*.** In a theoretical essay on CRT and intersectionality, Crenshaw (1995) explained that in our society, Black women face both sexism and racism – and are expected to conform to White middle-class norms of femininity, or else face exclusionary discrimination. Evidence suggests this extends to Black girls in public schools. Black girls are consistently over-represented in exclusionary discipline practices compared to girls from any other racial group (Addington, 2021; Blake et al., 2010; George, 2015; Jacobsen et al., 2019). Reasons for Black girls' exclusionary discipline are more often related to their dress/hairstyle or their language/communication than the reasons for girls from any other racial or ethnic group. For instance, Black girls often experience disciplinary practices for things as simple as wearing natural hairstyles considered to be

inappropriate by school personnel (George, 2015). Scholars attribute this disparity to teachers favoring White middle-class norms of femininity and discriminating against these girls for not fitting that mold (George, 2015).

***Boys*.** Though the discriminatory exclusionary discipline faced by Black girls is important to explore, overall boys are more likely to receive exclusionary discipline than girls (Jacobsen, 2018). Further, there is an interaction effect with race where Black boys are the most vulnerable of any racial/sex group to receive this harsh discipline (Skiba et al., 2002; Welsh & Little, 2018). Research suggests that, similar to racial differences, these sex differences are a result of teacher biases. For example, in one experimental study of 132 early care and education professionals (93.9% female, 66.7% White, 22% Black), professionals were told that they would watch a video of a classroom and their job would be to spot problem behavior before it occurred. For the study, there were no problem behaviors evident in the video. The computer system tracked the teachers' eye gazes and noted that teachers focused most heavily on Black boys (Gilliam et al., 2016). Biases that impact monitoring are likely one factor that leads to the exclusionary discipline prevalence differences – where Black boys are the most likely of any racial/gender group to receive exclusionary discipline (Jacobsen, 2018).

Though experimental studies show how biases and stereotypes are likely to impact teaching practices, they do not provide real-world evidence of whether the biases and stereotypes do in fact impact teaching practices and student outcomes.

The Relationship between the Discipline Gap and the Achievement Gap

Though the achievement gap and the discipline gap are both well established in the literature, less is known about the way the two interact or correlate with each other

over time. Only two studies have systematically examined the relationship between the achievement gap and the discipline gap.

Morris and Perry (2016), in their longitudinal regional research study of 16,248 middle school students in 17 schools in Kentucky, estimated that the disproportionality of school suspensions accounted for about one-fifth of the Black/White achievement gap suggesting a crucial relationship between the two. There has only been one study that has examined this relationship across the U.S. Pearman and colleagues (2019) used school district data from the Stanford Education Data Archive and the Civil Rights Data Collection to demonstrate the relationship between the Black/White achievement gap and the Black/White discipline gap at the national level. However, they recognized in their limitations section that using the school district as the unit of analysis (rather than the individual) may not be the most effective way to truly understand these gaps. More research is needed to fully understand the relationship between the discipline gap and the achievement gap.

Theoretical Explanations for the STPP

Critical Race Theory

According to CRT, the STPP is not caused by mere policies and procedures within schools, but rather is part of the systemic racism within society (Fornili, 2018). This systemic racism runs deep – perpetuated by implicit biases often invisible to most members of society (Lawrence, 1995). Because CRT posits that racism cannot be corrected based on laws or policies (Greene, 1995), examining the STPP through the lens of CRT means that the STPP for BIPOC populations will not be corrected by simply implementing new school policies. Rather, schools must grapple with the implicit racism

that plagues the institution as a disease plagues a body (Lawrence, 1995). Because finding a cure to the disease is often contaminated by the disease itself (Lawrence, 1995), it becomes necessary to step back and observe the situation from afar in order to eventually hone in on specific mechanisms of change. Solutions to the racial inequities caused by the STPP will not be easy nor involve subtle policy changes since, according to CRT, racism is an ordinary facet of U.S. culture that is not easily removed (Fornili, 2018). However, with a progressive race conscious view, it is possible to examine the power relationships in the schools and the structural inequalities that continue to maintain the STPP and disenfranchise marginalized children (Fornili, 2018).

Attributional Theory

CRT examines racism on a societal/institutional level. The Attributional Theory, however, can be used to understand how the STPP operates on an individual level. This theory suggests that individuals may use their own personal attitudes to explain events that occur. For example, teachers will often view student behavior through a lens dictated by their own ideas about the student. If a model student acts out one day, the teacher is likely to examine the possibility that there are external factors impacting behavior (e.g., family problems). But, these same teachers may also view other students as "problem students" and not give those students the same benefit of the doubt. When stigmas (i.e., recognizing differences and devaluing individuals based on those differences) and stereotypes (i.e., recognizing group differences without recognizing individual differences within the group) are overlaid in this Attribution Theoretical framework, students of color are likely to suffer (Riley 2010). Similar to Okonofua and Eberhardt who used an experimental method to examine whether the race of a child impacts

teachers' perceptions of the child's overall behavior, Kunesh and Noltemeyer (2019) took this idea one step further. Using the Attributional Theoretical lens, they experimentally examined whether the race of the child would impact how teachers would personally respond to student misbehavior. To do so, they randomly assigned vignettes of student misbehavior to 98 undergraduate student teachers. Some vignettes used stereotypical Black boy names and others used stereotypical White boy names, but the vignettes were otherwise identical. In vignettes where the child had a stereotypical Black name, participants in the study were more likely to report that the child would repeat his inappropriate behavior when compared to the vignettes where the child had a stereotypical White name. This suggests that teachers had some underlying implicit racial biases which played a role in how they viewed the children and behaviors in each vignette (Kunesh & Noltemeyer, 2019). This could potentially have negative implications for how the children are treated (Riley, 2010).

Research Hypotheses

The current study uses FFCWS data – a longitudinal, publicly available, national dataset of 4,898 children born from 1998 to 2000 – to explore factors that launch children onto the STPP. Findings from this study have the potential to inform policy and intervention development in order to help curb the misuse of disciplinary action and help prevent students from entering the STPP. Specifically, the study examines four research hypotheses:

First, the study examines, at the elementary school level, how teacher-student similarity of race impacts student academic achievement and exclusionary discipline at age 9. Because research suggests that individuals have strongest implicit biases against

out-group members (Project Implicit, n.d.), and because evidence suggests children do better when they are in a classroom with a teacher of the same race (Egalite et al., 2015), especially when the teacher has implicit biases which favor their ethnic group (Peterson et al., 2016), I use teacher-student race concordance as a proxy to examine teacher biases in schools. I hypothesize that students will have higher academic achievement and lower levels of exclusionary discipline at age 9 when they have the same race as their teacher and when controlling for socioeconomic variables including parental education level and household income (hypothesis 1); two variables which can also impact childhood academic and discipline trajectories (American Psychological Association, 2017a).

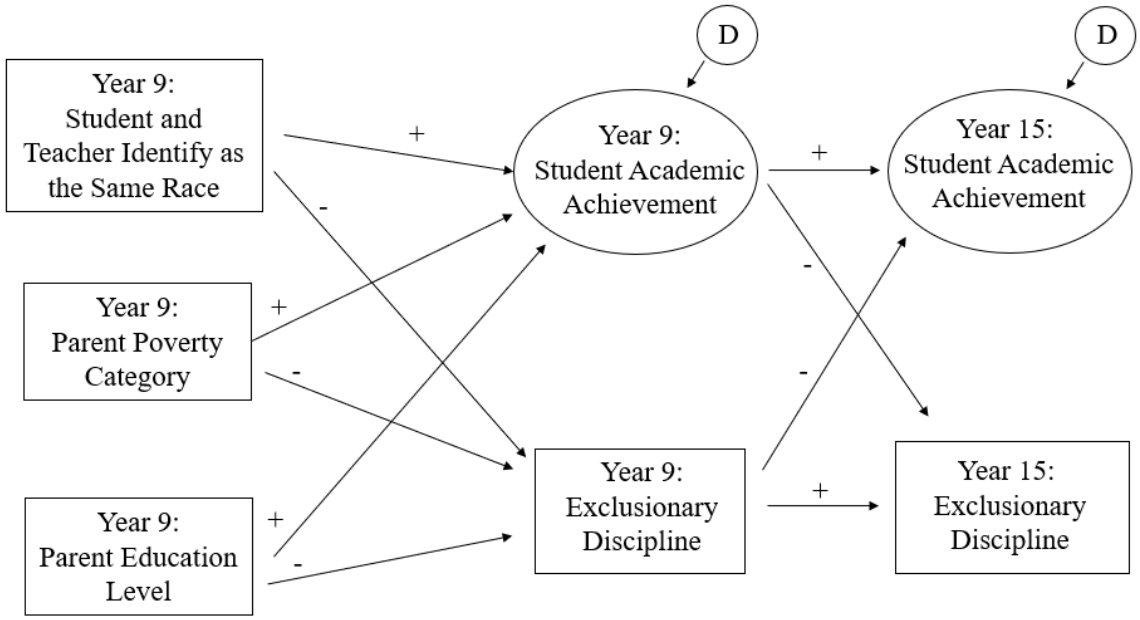
Next, the study examines whether student and teacher race concordance at age 9 is indirectly related to academic and discipline at age 15 through academic achievement and exclusionary discipline at age 9. I hypothesize that teacher student race concordance in elementary school will have an indirect positive effect on student academic achievement at age 15 and an indirect negative effect on student discipline at age 15 (hypothesis 2).

Last, the study examines model differences for sex and race. I hypothesize that teacher-student race concordance at age 9 years old will result in higher levels of academic achievement and lower levels of exclusionary discipline for Black students than White students at age 9 years old and, further, that these will impact student academic achievement and student discipline at age 15 years old to a greater extent for Black students than White students when controlling for SES variables (hypothesis 3). In addition, I hypothesize that teacher-student race concordance at age 9 years old will result in higher levels of academic achievement and lower levels of exclusionary discipline for

male students than female students at age 9 years old and, further, that these will negatively impact student academic achievement and student discipline to a greater extent for male students than female students at age 15 years old when controlling for SES variables (hypothesis 4).

Figure 1 provides a conceptual model of hypotheses 1-2 with socioeconomic indicators at age 9 included as controls in the model.

Figure 1: Conceptual Model



CHAPTER II

METHOD

Study Design

The FFCWS study has a total of 4,898 children. However, the current study uses the year 9 and Year 15 waves of the FFCWS data set which were collected when the children were 9 and 15 years old. For the purposes of this study, the sample was restricted to students who self-identified as Black/African American or White and whose Year 9 teacher self-reported race was available. Thus, the analytic sample includes students who are Black/African American (n = 915) and White (n = 388). Of the 915 Black students in the sample, 272 (29.73%) had a Black teacher and 643 (70.27%) had a non-Black teacher. Of the 388 White students in the sample, 367 (94.59%) had a White teacher and 21 (5.41%) had a non-White teacher.

Study Setting and Participants

Participants were recruited from hospitals in 20 cities in the United States where mothers were giving birth. Sixteen of the cities were selected using a stratified random sampling technique of U.S. cities with populations of over 200,000 people. The other four cities were selected because they were of particular interest to the principal researchers and/or funders (Reichman et al., 2001). Single mothers were overrepresented in the sampling in order to examine this single-mother type of family structure (which was the original intent of the research study). Although the original study used sample weights in order to accommodate the oversampling of single mothers, the current study uses only a subsample of the original sample, thus the sampling weights are not included in the analyses described below (The Trustees of Princeton University, 2021).

Data Collection Procedures

Mothers were first recruited to participate. Fathers – based on mother-provided information – were then recruited (though locating them, in some cases, was difficult). Mothers gave consent to access medical records at birth. Both parents – whenever possible – were surveyed again when the child reached ages 1, 3, 5, and 9 years. An in-home assessment began when the children were 3 years old and continued at ages 5, 9, and 15 years. A childcare provider was surveyed when the child was 3 years old. Teachers were surveyed when the children had reached ages 5 and 9 years old. Child DNA samples were collected when the child was 9 and 15 years of age. Primary caregivers were surveyed when the children were ages 3, 5, 9, and 15 years. Children were surveyed at ages 9 and 15 years (The Trustees of Princeton University, 2021).

For the purposes of this study, I utilized demographic variables from the parent surveys as well as teacher surveys when the children were 9 years old and follow-up parent and child surveys from when the children were 15 years old. I limited the study to only children who self-reported race as Black/African American or White (collected at Year 15) and had a teacher who self-reported race (collected at Year 9). The total sample for this study is n = 1,303.

Measures

Year 9: Student and Teacher Identify as the Same Race

When children were 15 years old, they were asked to report their race/ethnicity as White, Black, Hispanic/Latino, Other only/Non-Hispanic, or Multi-racial/non-Hispanic. Teachers of children at age 9 were asked to report their own race as American Indian/Alaska Native, Asian, Black/African American, Native Hawaiian/Pacific Islander,

White, Other, Multi-racial, or Latino/Latina (The Trustees of Princeton University, 2021). Race concordance was dichotomized with *yes* (= 1) used when students reporting their race as "White" had teachers reporting the same or when students reporting their race as "Black" had teachers reporting their race as "Black/African American." All other race combinations were reported as *no* (= 0).

Year 9: Student Academic Achievement

A latent factor representing "Year 9: Student Academic Achievement" was created from two student test scores administered by researchers when children were 9 years old. Researchers administered the Woodcock Johnson Passage Comprehension and Applied Problems test (Woodcock et al., 2001) and the Peabody Picture Vocabulary Test (Dunn & Dunn, 1997; The Trustees of Princeton University, 2021). Standard scores of the Woodcock Johnson passage Comprehension section and the Peabody Picture Vocabulary Test are used in this analysis described as reading and vocabulary tests respectively.

Year 9: Exclusionary Discipline

When the children were 9 years old, both the target child and their parent were asked whether the child had been suspended/expelled (The Trustees of Princeton University, 2021). If either the parent or the child reported "Yes" (=1), then children were counted as having been suspended or expelled.

Year 9: Parent Poverty Category

Poverty ratios for both the mother and father were calculated separately by the FFCWS. These were the ratios between the self-reported total household income and the U.S. Census Bureau poverty thresholds. They were then put into four categories based on

where they fell in the ratio with lower numbered categories indicating greater poverty (1 = 0-49%; 2 = 50-99%, 3 = 100-199%, 4 = 200-299%). In this analysis, the "Year 9: Parent Poverty Category" uses whichever parent's ratio category is higher.

Year 9: Parent Education Level

Education levels were self-reported by mothers and fathers separately as 1 = *less than high school degree*, 2 = *high school degree or equivalent*, 3 = *some college or technical school*, 4 = *college graduation or more*. In this analysis, the "Year 9: Parent Education Level" variable uses whichever parent's education level was higher.

Year 15: Student Academic Achievement

A latent factor representing "Year 15: Student Academic Achievement" was created from two sets of student self-reported grades when children were 15 years old. Students were asked to report their letter grades (*A, B, C, D or lower, No grade or pass/fail, N/A Homeschooled*) in English/Language Arts and Math (The Trustees of Princeton University, 2021). Letter grades were coded on a scale of 0-3 where 0 = D, 1 = C, 2 = B, 3 = A so increases in achievement would be shown positively in the model. If children did not receive a grade or took the course pass/fail, they were coded as missing data.

Year 15: Exclusionary Discipline

At Year 15, both the target child and their parent were asked how many times the child had been suspended/expelled in the past two years (The Trustees of Princeton University, 2021). The variable titled, "Year 15: Exclusionary Discipline" uses the highest reported number of suspensions/expulsions.

Analysis

To evaluate the study hypotheses, I conducted a longitudinal path analysis with latent outcomes using the Mplus software (version 8.6). The latent and longitudinal portion of the model was specified as an auto-regressive cross-lagged model (Bollen & Curran, 2006). The full recursive path model, as shown in Figure 1, was determined to be identified because it met the necessary *t*-rule where *t* is less than *k* when $k = [(p + q)(p + q + 1)/2] + (p + q) = [(6 + 1)(6 + 1 + 1)/2] + (6 + 1) = 35$ and t is equivalent to the number of free parameters in the model (t = 24).

I utilized the two-step Structural Equation Modeling (SEM) approach – as recommended by Anderson and Gerbing (1998). Prior to testing the study hypotheses, the measurement model was fit using Confirmatory Factor Analysis. Two latent factors were created for this model: "Year 9: Student Academic Achievement" and "Year 15: Student Academic Achievement." "Year 9: Student Academic Achievement" was created using reading and vocabulary test scores. "Year 15: Student Academic Outcomes" was created using the focal child's report of their grades in two core school subjects – Math and English.

After adequate fit of the structural model demonstration, the full path model was specified (as depicted in Figure 1) using maximum likelihood (ML) estimation. The overall model was assessed using five fit measures including nonsignificant $\chi 2$, Robust Tucker-Lewis Index (TLI) ≥ 0.90, Robust Comparative Fit Index (CFI) ≥ 0.90, Root Mean Square Error of Approximation (RMSEA) ≤ 0.08, and Standardized Root Mean Square Residual (SRMR) ≤ 0.05 (Afthanorhan et al., 2013; Hu & Bentler, 1999; Kline, 2016). Formal tests of indirect effects were evaluated with the unbiased corrected bootstrap 95% confidence intervals.

Next, regression weights, as specified in Figure 1, were interpreted to evaluate hypotheses 1-2. To evaluate hypothesis 3, race differences, the model was specified as a multiple group model to address potential race differences. To evaluate hypothesis 4, sex differences, the model was specified as a multiple group model to address potential sex differences.

Missing data

The current study has data missing due to non-response, but not missing data lost to follow-up due to the restricted panel design. Household income data was present for 98.70% of students and parental education level was present for 99.08% of students. Complete data for all indicators of the latent construct of "Year 9 Academic Achievement" was present for 98.23% of students. Complete data for all indicators of the latent construct "Year 15: Academic Achievement" was present for 92.79% of students. Exclusionary discipline data was present for 100% of students at age 9 and 99.92% of students at age 15. For missing data, I conducted Little's missing completely at random (MCAR) test. Maximum Likelihood was then used to estimate missing data as implemented in the Mplus software.

Power analysis

An important consideration for establishing adequate power for SEM is that the ratio of the number of cases per parameter estimate needs to be sufficiently large – recommended to be a minimum of 10:1 (Kline, 2010). Because the current study has 1,303 cases, there should be a maximum of 130 parameters in the model (1,303/10 = 130). The current model has 24 parameters which is well within this recommended limit. A second consideration is the use of SEMs routinely requires the evaluation between two

or more models. Examples include selecting among competing theoretical models or as in the current study, testing invariance assumptions across ethnic and racial groups. MacCallum, Browne, and Cai (2006) proposed an approach for estimating power between nested models based on overall model fit. Specifically, the authors proposed using the root-mean-square error of approximation (RMSEA) as the indicator of model fit. Power then becomes the probability of detecting a difference in fit, as measured by RMSEA, between two models. Recommended pairs of RMSEA values for power analysis include selecting values in the midrange of the scale (.03 to .10) with a small to moderate difference between pairs (at least .01-.02). Using a two-tailed alpha of .05 with a sample size of 1,303, power for detecting small differences in fit for nested models (RMSEAs .050 vs. .075, $\Delta df = 2$) is at least 80% with degrees of freedom as small as 11. The sample size is thus sufficiently large to estimate complex SEMs and evaluate nested models with a similar fit.

CHAPTER III

RESULTS

Descriptive Statistics

Table 1 provides descriptive statistics of the sample generally and descriptive statistics for each variable included in the analysis.

Missing Data

Results of the initial MCAR test were significant (at $p < .05$). This indicates the data is not likely to be missing completely at random. However, given that the variables in my analysis are highly correlated with each other, the numerical accuracy control in SPSS was increased. This function helps to remove variables that are too highly correlated with each other to give accurate MCAR results (IBM Corporation, 2016). Results of this MCAR were not significant ($\chi^2 = 665.85$, $p = 1.000$). Based on these tests, the missing data pattern is assumed to be random.

Measurement Model

Two latent factors were used in the model. First, academic achievement at Year 9 was created from results of a reading test and a vocabulary test. Second, academic achievement at Year 15 was created from Math and English grades in school. To measure the fit of the model, the study relies on five fit indices: χ^2, TLI, CFI, RMSEA, SRMR. Results indicated a significant χ^2, but that is likely due to the large sample size (Kline, 2016) and can therefore by ignored in favor of the other fit indices all falling within the range of acceptable values (Afthanorhan et al., 2013; Hu & Bentler, 1999; Kline, 2016). In this analysis, TLI = 1.00, CFI = 0.98, RMSEA = 0.05 (90% Confidence

Table 1

Descriptive statistics of the sample and the variables used in the analysis

General Descriptive Statistics of the Participants in the Sample		
	N	**%**
Child's Gender		
Boy	652	50.04
Girl	651	49.96
Child's Race		
Black/African American	915	70.22
White	388	29.78
Child's Living Arrangements at Year 9		
Lives with bio-mother	1265	97.08
Lives with bio-father	532	40.83
Lives with siblings	1092	83.81
Teacher's Self-Reported Race at Year 9		
Black/African American	282	21.64

Table 1, Continued

General Descriptive Statistics of the Participants in the Sample

	N	**%**
White	971	74.52
Asian	18	1.38
American Indian/Alaska Native	5	0.38
Native Hawaiian/Pacific Islander	2	0.15
Latino/Latina	14	1.07
Multi-racial	8	0.61
Other	3	0.23

General Descriptive Statistics for Variables Used in the Analysis

Continuous Variables	***N***	**Mean (*SD*)**	**Minimum-Maximum**	**Skew**	**Kurtosis**
Year 9: Parent Poverty Category	1286	3.52 (1.29)	1.00-5.00	-.38	-.95
Year 9: Parent Education Level	1291	2.84 (0.86)	1.00-4.00	-.52	-.23
Year 9: Reading Test Score	1286	94.81 (13.63)	21-135	-.50	1.85

Table 1, Continued

General Descriptive Statistics for Variables Used in the Analysis					
Continuous Variables	***N***	**Mean (*SD*)**	**Minimum-Maximum**	**Skew**	**Kurtosis**
Year 9: Vocabulary Test Score	1291	94.66 (14.93)	48-143	361	-.20
Year 15: Exclusionary Discipline	1302	1.19 (2.86)	0-32	4.57	27.47
Year 15: Math Grade	1231	1.75 (0.97)	0-3	-.27	-.88
Year 15: English Grade	1238	1.93 (0.88)	0-3	-.50	-.43
Dichotomous Variables		**Coding Used in the Analysis**			
		1	**0**	**Reference**	
Year 9: Student/Teacher Identify as Same Race		639 (49.04%)	664	0=No	
Year 9: Child Received Exclusionary Discipline		277 (21.26%)	1026	0=No	

Interval [CI] = 0.00, 0.10), and SRMR = 0.01 which are all indicative of adequate model fit to the data.

Structural Equation Models

Direct Effects – Hypothesis 1:

Structural Model 1 was used to gain insight into hypothesis 1 (that students will have higher academic achievement and lower levels of exclusionary discipline at age 9 when they have the same race as their teacher and when controlling for socioeconomic variables including parental education level and household income) and into hypothesis 2 (that teacher student race concordance in elementary school will have an indirect positive effect on student academic achievement at age 15 and an indirect negative effect on student discipline at age 15). To do so, I ran a full SEM based on the conceptual model. See Figure 2 for a depiction of the full SEM model. This model fit the data well according to four of the five fit measures. Though χ^2 was significant, this is likely a result of the large sample size (Kline, 2016). Other fit indices were all within the range of acceptable values; TLI = 0.94; CFI = 0.97; RMSEA = 0.05 (90% CI = 0.04, 0.06); SRMR = 0.03. Parameter estimates and inferential statistics from the full SEM are depicted in Table 2.

Results indicate that household income is positively associated with academic achievement at Year 9 (standardized estimate = 0.26, $p < 0.001$) and negatively associated with exclusionary discipline at Year 9 (standardized estimate = -0.18, $p < 0.001$). Parental education level is likewise positively associated with academic achievement at Year 9 (standardized estimate = 0.25, $p < 0.001$) and negatively associated with exclusionary discipline at Year 9 (standardized estimate = -0.06, $p <$

0.001). While controlling for socioeconomic variables, teacher and student reported race concordance is likewise positively associated with academic achievement at Year 9 (standardized estimate = 0.16, $p < 0.001$) and negatively associated with exclusionary discipline at Year 9 (standardized estimate = -0.11, $p < 0.001$). Year 9 academic achievement is positively associated with Year 15 academic achievement (standardized estimate = 0.32, $p < 0.001$) and negatively associated with Year 15 exclusionary discipline (standardized estimate = -0.16, $p < 0.001$). Year 9 exclusionary discipline is positively associated with Year 15 exclusionary discipline (standardized estimate = 0.28, $p < 0.001$) and negatively associated with Year 15 academic achievement (standardized estimate = -0.16, $p < 0.001$). All results have small effect sizes.

Indirect Effects – Hypothesis 2

To test the second hypothesis, I ran an SEM examining the indirect effects of teacher-student race concordance in Year 9 on academic achievement at Year 15 and exclusionary discipline at Year 15 (see Figure 3 for a visual representation). Though χ^2 was significant, this is likely a result of the large sample size (Kline, 2016). Other fit indices were all within the range of acceptable values; TLI = 0.94; CFI = 0.97; RMSEA = 0.05 (90% CI = 0.04, 0.06); SRMR = 0.03.

Figure 2

Manifest indicators, latent factors, and structural model with unstandardized loadings for latent constructs and standardized loadings for all other predictors

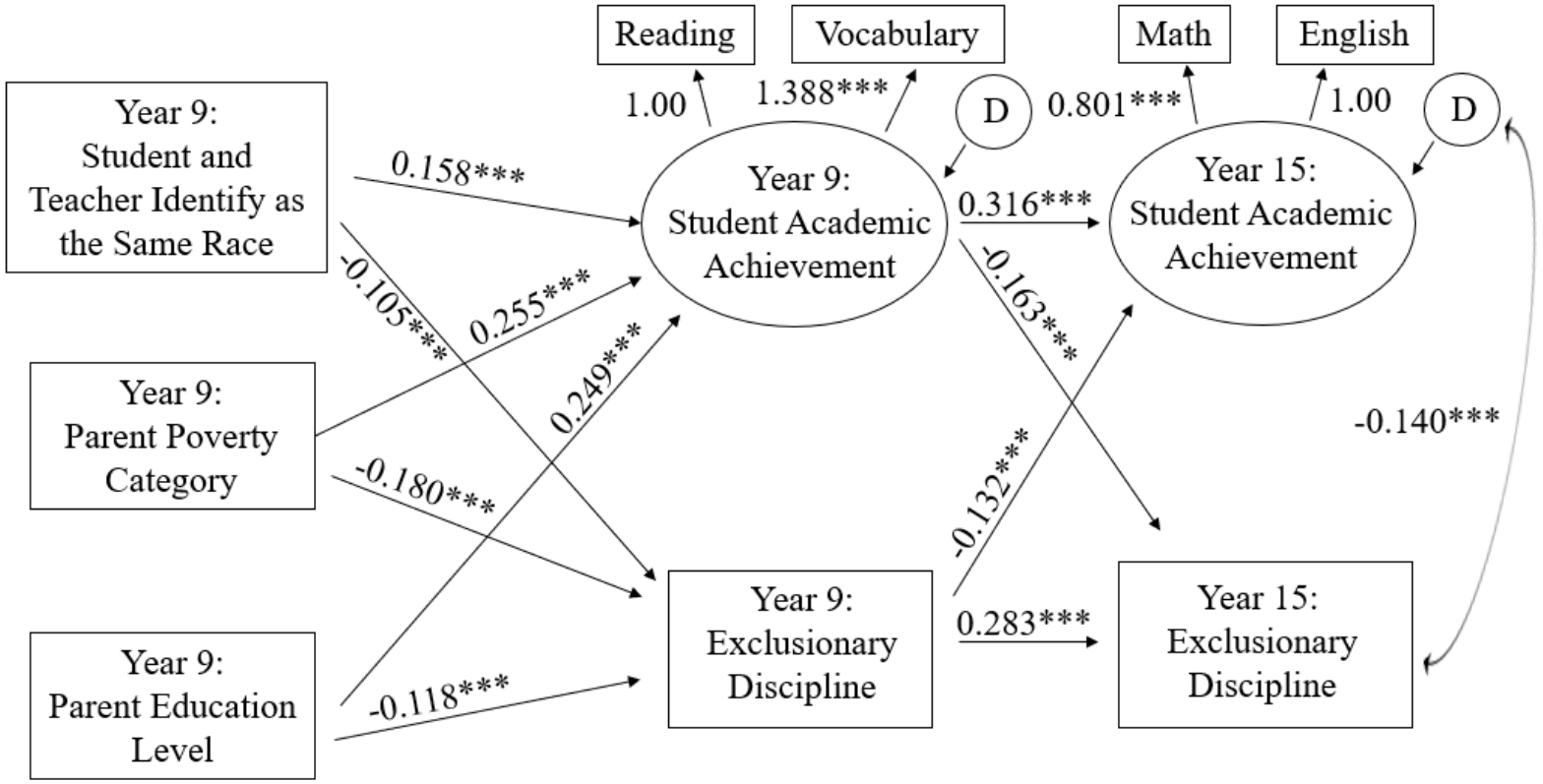


Table 2
Selected Parameter Estimates from the Model

Direct Paths				
Outcome:	Predictor	Unstand. Estimate	*p*	Stand. Estimate
Year 9: Academic Achievement	Year 9: Student/Teacher Identify as Same Race	3.01	< 0.001	0.16
	Year 9: Parent Poverty Category	1.86	< 0.001	0.26
	Year 9: Parent Education Level	2.76	< 0.001	0.25
Year 9: Exclusionary Discipline	Year 9: Student/Teacher Identify as Same Race	-0.09	< 0.001	-0.11
	Year 9: Parent Poverty Category	-0.06	< 0.001	-0.18
	Year 9: Parent Education Level	-0.06	< 0.001	-0.12
Year 15: Academic Achievement	Year 9: Academic Achievement	0.02	< 0.001	0.32
	Year 9: Exclusionary Discipline	-0.21	< 0.001	-0.13
Year 15: Exclusionary Discipline	Year 9: Academic Achievement	-0.05	< 0.001	-0.16
	Year 9: Exclusionary Discipline	1.97	< 0.001	0.28

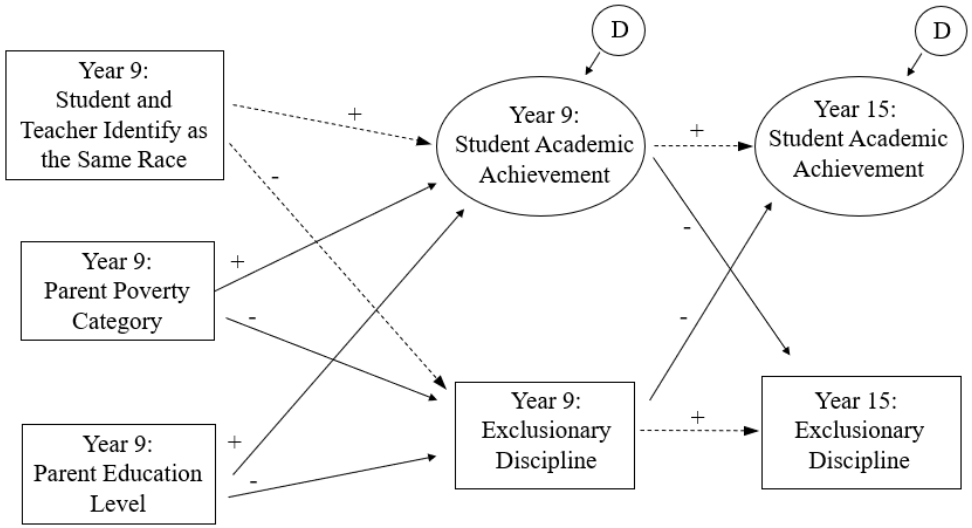
Table 2, Continued

Selected Parameter Estimates from the Model

Loadings				
Latent	Manifest	Unstand. Estimate	*p*	Stand. Estimate
Year 9 Academic Achievement	Reading test	1.000	—	0.70
	Vocabulary test	1.39	< 0.001	0.88
Year 15 Academic Achievement	English	1.00	—	0.75
	Math	0.80	< 0.001	0.55

Figure 3: Conceptual Model

Dashed arrows indicate the indirect effects being examined in Structural Model 2.



Results indicated that the total indirect effect of Year 9 teacher student race concordance on Year 15 academic achievement was significant (standardized estimate = 0.08, 95% CI = 0.06, 0.12, $p < 0.001$). The pathway from teacher student race concordance to Year 9 exclusionary discipline to Year 15 academic discipline was significant (standardized estimate = 0.02, 95% CI = 0.01, 0.03, $p = 0.011$). The pathway from teacher student race concordance to Year 9 academic achievement to Year 15 academic achievement is 0.07 (95% CI = 0.04, 0.10, $p < 0.001$).

Further, results indicated that the total indirect effect of teacher student race concordance on Year 15 exclusionary discipline was significant (standardized estimate = -0.32, 95% CI = -0.44, -0.20 $p < 0.001$). The pathway from teacher-student race concordance to year 9 exclusionary discipline to Year 15 exclusionary discipline was significant (standardized estimate = -0.17, 95% CI = -0.27, -0.08, $p = 0.001$). The pathway from teacher-student race concordance to Year 9 academic achievement to Year 15 exclusionary discipline was significant (standardized estimate = -0.15, 95% CI = -0.23, -0.08, $p < 0.001$).

Constrained Structural Model by Student Race – Hypothesis 3

To test hypothesis 3, I ran an SEM constraining the model to compare White students to Black students. This model fit the data well according to four of the five fit measures. Though χ^2 was significant, this is likely a result of the large sample size (Kline, 2016). Other fit indices were all within the range of acceptable values; TLI = 0.91; CFI = 0.95; RMSEA = 0.05 (90% CI = 0.04, 0.06); SRMR = 0.05. Results indicate that income is more negatively associated with exclusionary discipline at Year 9 for Black students than it is for White students, meaning that higher income is a bigger protective factor

against exclusionary discipline for Black students than it is for White students. Academic achievement at year 9 is more negatively associated with exclusionary discipline at Year 15 for White students than for Black students (meaning that higher academic scores at Year 9 are more likely to result in lower exclusionary discipline at Year 15 for White students than they are for Black students) and more positively associated with academic achievement at Year 15 for White students than for Black students (meaning that higher academic scores at Year 9 are more likely to result in higher academic scores at Year 15 for White students than for Black students). Exclusionary discipline at Year 9 is more positively associated with exclusionary discipline at Year 15 for Black students than for White students (meaning that Black students receiving exclusionary discipline at Year 9 are more likely to also receive it at Year 15 compared to White students who received exclusionary discipline at Year 9) and more negatively associated with academic achievement for White students than for Black students (meaning that higher levels of exclusionary discipline are more likely to result in lower academic achievement for White students than for Black students). All other model parameters were not significantly different for White students than Black students. It is important to note that while the model shows that teacher-student race concordance did not impact Black students differently than White students, this may be due to lack of variability in teacher-student concordance among White students rather than true null findings. While 70.27% of Black students had a non-Black teacher, only 5.41% of White students had a non-White teacher. Table 3 shows these parameter estimates.

Table 3

Selected Parameter Estimates from the Model when constrained as two separate group models: White and Black students

Direct Paths				
Outcome:	Predictor	Standardized Loadings for White Students	Standardized Loadings for Black Students	Unstandardized Loading Differences (parameters for White students minus parameters for Black students)
Year 9: Academic Achievement	Year 9: Student/Teacher Identify as Same Race	-0.02 (p = 0.660)	-0.05 (p = 0.182)	-0.04 (p = 0.985)
	Year 9: Parent Poverty Category	0.15 (p = 0.020)	0.19 (p < 0.001)	-0.03 (p = 0.951)
	Year 9: Parent Education Level	0.26 (p < 0.001)	0.20 (p < 0.001)	0.52 (p = 480)
Year 9: Exclusionary Discipline	Year 9: Student/Teacher Identify as Same Race	0.05 (p = 0.288)	-0.01 (p = 0.754)	0.06 (p = 0.293)
	Year 9: Parent Poverty Category	-0.01 (p = 0.810)	-0.16 (p < 0.001)	0.05 (p = 0.002)
	Year 9: Parent Education Level	-0.21 (p < 0.001)	-0.09 (p = 0.008)	0.27 (p = 0.991)
Year 15: Academic Achievement	Year 9: Academic Achievement	0.33 (p < 0.001)	0.21 (p < 0.001)	-6.97 (p < 0.001)
	Year 9: Exclusionary Discipline	-0.17 (p = 0.008)	-0.14 (p = 0.002)	-8.58 (p < 0.001)
Year 15: Exclusionary Discipline	Year 9: Academic Achievement	-0.19 (p < 0.001)	-0.10 (p = 0.007)	-9.03 (p < 0.001)
	Year 9: Exclusionary Discipline	0.23 (p < 0.001)	0.27 (p < 0.001)	-8.77 (p < 0.001)

Constrained Structural Model by Student Sex – Hypothesis 4

In order to test hypothesis 4, I ran an SEM constraining the model to compare female students to male students. This model fit the data well according to four of the five fit measures. Though χ^2 was significant, this is likely a result of the large sample size (Kline, 2016). Other fit indices were all within the range of acceptable values; TLI = 0.91; CFI = 0.95; RMSEA = 0.06 (90% CI = 0.05, 0.07); SRMR = 0.04.

Results show that academic achievement at Year 9 has a greater positive impact on academic achievement at Year 15 for females than it does for males (meaning academic achievement at Year 9 is more similarly related to academic achievement at Year 15 for females than for males) and a smaller negative impact on Year 15 exclusionary discipline for females than for males (meaning academic achievement at Year 9 is more strongly associated with lower exclusionary discipline levels at Year 15 for males than for females). Year 9 exclusionary discipline is more highly correlated with Year 15 exclusionary discipline for males than females (meaning that males who receive exclusionary discipline at Year 9 are more likely to receive it at Year 15 than females in similar circumstances). Year 9 exclusionary discipline is more negatively associated with Year 15 academic achievement for females than for males (meaning that when females receive exclusionary discipline in Year 9, their Year 15 academic scores are likely to suffer more than males in a similar situation). All other model parameters were not significantly different for females than males. Table 4 shows these parameter estimates.

Table 4

Selected Parameter Estimates from the Model when constrained as two separate group models: female and male students

Direct Paths				
Outcome:	Predictor	Standardized loadings for female students	Standardized loadings for male students	Unstandardized loading differences (parameters for female students minus parameters for male students)
Year 9: Academic Achievement	Year 9: Student/Teacher Identify as Same Race	0.17 ($p < 0.001$)	0.15 ($p < 0.001$)	0.28 ($p = 0.796$)
	Year 9: Parent Poverty Category	0.25 ($p < 0.001$)	0.26 ($p < 0.001$)	-0.21 ($p = 0.663$)
	Year 9: Parent Education Level	0.32 ($p < 0.001$)	0.19 ($p < 0.001$)	1.12 ($p = 0.120$)
Year 9: Exclusionary Discipline	Year 9: Student/Teacher Identify as Same Race	-0.10 ($p = 0.009$)	-0.11 ($p < 0.005$)	0.03 ($p = 0.546$)
	Year 9: Parent Poverty Category	-0.18 ($p < 0.001$)	-0.19 ($p < 0.001$)	0.02 ($p = 0.330$)
	Year 9: Parent Education Level	-0.12 ($p = 0.006$)	-0.14 ($p = 0.001$)	0.03 ($p = 0.363$)
Year 15: Academic Achievement	Year 9: Academic Achievement	0.37 ($p < 0.001$)	0.27 ($p < 0.001$)	-6.98 ($p < 0.001$)
	Year 9: Exclusionary Discipline	-0.14 ($p = 0.006$)	-0.09 ($p = 0.079$)	-8.25 ($p < 0.001$)
Year 15: Exclusionary Discipline	Year 9: Academic Achievement	-0.14 ($p < 0.001$)	0.19 ($p < 0.001$)	-9.04 ($p < 0.001$)
	Year 9: Exclusionary Discipline	0.26 ($p < 0.001$)	0.27 ($p < 0.001$)	-8.13 ($p < 0.001$)

CHAPTER IV

DISCUSSION

The purpose of this study was to gain insight into potential mechanisms through which the STPP operates. Since ample research suggests exclusionary discipline is highly correlated with increased chances of adult incarceration and is part of a complex infrastructure leading to racial inequity, understanding risk and protective factors for exclusionary discipline is key to understanding how to diminish these injustices.

The Short- and Long-Term Impacts of Teacher-Student Race Concordance

Results from the current study indicate that when 9-year-old students shared the same race as their teachers, they were more likely to excel academically and less likely to receive exclusionary discipline that year. While this was true for all students in the sample, 94.59% of White students had White teachers. This lack of variability makes it difficult to draw any conclusions regarding the impact of teacher/student race concordance versus race discordance for White students. This race concordance not only impacted their 9-year-old academic achievement and discipline, but also indirectly impacted academic achievement and exclusionary discipline when they were 15 years old mediated through their Year 9 academic achievement and exclusionary discipline.

The reasons for this need more examination. However, one potential explanation is that teacher-student race concordance may diminish adverse teacher racial biases. That is to say, when teachers share the same race as their students, they may be less likely to exhibit harmful racial biases against their students. Prior research suggests that individuals, especially those in privileged groups, are likely to have implicit biases against out-group members (Project Implicit, n.d.). Further, when these biases occur in

teachers, they can negatively impact student performance (Egalite et al., 2015; Gilliam et al., 2016; Okonofua & Eberhardt, 2015; Peterson et al., 2016). Because 13.4% of the U.S. population is Black (U.S. Census Bureau, 2020), but only 7% of U.S. teachers are Black (Institute of Education Sciences, 2021), Black students are unlikely to have a teacher of their same race. This was certainly true in the current sample where only 29.73% of Black students had a Black teacher while 94.59% of White students had a White teacher. Furthermore, one national analysis showed that while 99.7% of White students go to schools where the proportion of White teachers at the school matches the proportion of White students attending the school, only 7% of Black students attend schools where they see Black teachers at the same rate they see Black students (Meckler & Rabinowitz, 2019). If indeed this discordance of teacher-student race is related to harmful teacher racial biases, then the discordance may create additional structural disadvantage for Black students. This, in turn, is more likely to result in lower levels of academic achievement and more exclusionary discipline – further perpetuating both the racial achievement and discipline gaps.

The Role of Socio-Economic Factors

Though included as controls, socioeconomic factors (i.e., household income level, parental education level) played important roles in perpetuating the STPP. Prior research suggests that SES greatly impacts childhood trajectories. This is in part due to lack of access to learning materials, educational experiences, and informational resources (American Psychological Association, 2017a). Unsurprisingly, children in this sample from higher income families were more likely to perform well academically and less likely to receive exclusionary discipline. Similarly, children who had parents with higher

education levels were also more likely to perform better academically and less likely to receive exclusionary discipline. The impact of these SES differences in the current study adds to the already large body of literature highlighting the importance of family education, income, and wealth. This includes access to higher paid jobs with livable wages (Carnevale et al., 2019) and a greater ability to accrue wealth through such means as financial investments, real estate, and inheritance (Markley et al., 2020; Ray & Perry, 2020; Sullivan et al., 2015). These factors help individuals also access other important supports such as adequate healthcare, nutrition, and childcare which are necessary for individuals to thrive (Sherman et al., 2013).

Prior research suggests that socio-economic factors can be contributors to the STPP. However, they are typically found to be less meaningful contributors to the STPP than a students' racial identity (McCarter, 2017). Interestingly, in the current study, socio-economic factors actually had a larger effect on the academic and exclusionary discipline trajectories of youth than did the measure of teacher-student race concordance. Perhaps this discrepancy from the current literature may be simply because the current study does not measure student race alone, but rather teacher-student race concordance. This may have had less impact than just the students' race. Additionally, the current study does not examine the intersection of race and sex together. More analysis of how race alone as well as the intersection of race and sex might operate in this sample is needed to fully analyze whether this discrepancy persists in the given sample.

Differences by Race

Though the model did operate differently by race as hypothesized, the differences in how it operated were not in line with the hypothesized differences. Differences from

the hypothesized model constraints included teacher-student race concordance, familial income, and long-term impacts of elementary achievement. However, it should be noted that the difference in teacher-student race concordance provided limited information for White students given that the vast majority (94.59%) of White students had a teacher of their same race.

Teacher-Student Race Concordance

Contrary to hypothesized, there were no statistically significant differences in how race concordance impacted children when the model was run by constraining it to two groups (i.e., Black students, White students). However, this finding was consistent with Egalite et al.'s (2015) study showing Black and White students both do better when in a classroom with a teacher of the same race. One potential explanation of this might be that children, themselves, have biases. This had not been considered when designing this study. Perhaps this finding suggests that all children – by age 9 years and regardless of race – have internalized racial socialization and are moderately impacted by the race of their teacher. If this is the case, students may be more likely to perform better in a class with a teacher of their same race where they are not exhibiting racial biases toward their teacher.

As suggested in prior research, children from all backgrounds can develop biases against out-groups (Roberts et al., 2017; Dunham et al., 2011; Mandalaywala et al., 2019). However, these biases are strongest when children have not had much exposure to out-groups (Lei et al., 2020; Mandalaywala et al., 2019). In such cases, the students are more likely to have an essentialist view of race rather than seeing it as a social construct (Mandalaywala et al., 2019). An essentialist view of race is a belief that the way race

operates in society is based on intrinsic biological differences. A social construct of race, on the other hand, is a belief that the way race operates is dependent on the socialized norms and customs of the given community. Even as young as three months old, children who have not had exposure to other racial groups are more likely to prefer people from their own racial groups (Anzures et al., 2013; Bar-Haim et al., 2006; Kelly et al., 2005). However, when three-month-old children have had regular exposure to other racial groups, they exhibit no biases (Anzures et al., 2013; Dunham et al., 2008), suggesting that biases are learned rather than innate. The way these learned biases manifest over time depends on the developmental stage of the child. For example, toddlers appear to have limited racial biases and regularly play with children from various races (Anzures et al., 2013). However, by age 5, evidence demonstrates that children start preferring playmates of the same race (Anzures et al., 2013). Between ages 5 and 7, children are at their peak of exhibiting explicit biases (Raabe & Beelmann, 2011). As children grow and learn about racism, their explicit racial biases often subside and by 8-10 years old, they are less likely to have these explicit racial biases though they still exhibit implicit racial biases (Raabe & Beelmann, 2011). In a sample of mainly White children, Apfelbaum et al. (2008) found that 8-9-year-olds are comfortable mentioning race, but by 10-11 years old, they are no longer comfortable mentioning it indicating that they are worried about the implications of their conversations (Apfelbaum et al., 2008). Notably, most of this cited research was conducted on primarily White samples of children in the U.S., and primarily focusing on how White children develop racial biases. While evidence suggests adults of dominant racial group are more likely to exhibit out-group implicit biases than

members of non-dominant racial groups (Project Implicit, n.d.), little research has examined the development of biases in non-White children.

The current study examines children starting when they are 9 years old. If the children in the current study have experienced these same childhood racial socialization processes described above (e.g., Roberts et al., 2017; Dunham et al., 2011; Mandalaywala et al., 2019), by age 9 years they may have been transitioning from the stage where they are comfortable talking about race to the stage where they are recognizing their discomfort in discussing it, as described by Apfelbaum et al. (2008). In a country where 76.3% of the population is White (U.S. Census Bureau, 2020), children who are White on a whole may have had fewer personal direct connections with non-White individuals. These children may thus be more likely to harbor strong racial biases against non-White individuals as suggested by existing research (Lei et al., 2020; Mandalaywala et al., 2019). If the White students in the current study did harbor these biases that prior research suggests is likely (Lei et al., 2020; Mandalaywala et al., 2019), perhaps, then, if placed with a non-White teacher at age 9 years old, they may have been less likely to perform well academically or behaviorally because of their potential developmental biases (Lei et al., 2020; Mandalaywala et al., 2019) against their non-White teachers.

Because Black children in the sample have likely had more regular contact and exposure to White people and White culture through news media, books, movies, and popular culture, prior research would suggest these children were less likely to harbor negative biases against White teachers (e.g., Lei et al., 2020; Mandalaywala et al., 2019). For these Black students, then, performing better in classrooms with Black teachers might suggest that this had less to do with the children's biases, and more to do with research

suggesting that White teachers have implicit biases toward non-White children (Gilliam et al., 2016; Okonofua & Eberhardt, 2015). Additionally, research suggests that representation matters for Black children as Black children have more positive academic trajectories when there are people from their own race in positions of power within their school (Grissom et al., 2017; Rodriguez, 2021). It is important to note that only 21 White children in the sample had a teacher that was not White. The results and subsequent conclusions about how White children perform with non-White teachers should be replicated to test whether these findings are true for samples with more racially discordant teacher/student pairs. More research is needed to explore this more thoroughly.

Familial Income

In the current study, familial income level was more of a protective factor against exclusionary discipline for Black students than it was for White students. Prior research suggests that there is a link between exclusionary discipline and racism/racial biases within the school system (Kunesh & Noltemeyer, 2019; Okonofua & Eberhardt, 2015; Okonofua et al., 2016; Owens & McLanahan, 2019). If this is true for the current sample as well, perhaps the measured familial income helps mitigate some of the harmful impacts of racism that Black students face regularly. This could provide insight into the possible importance of reparations (Matsuda, 1995) or other financial factors such as access to more lucrative jobs (Carnevale et al., 2019) and opportunities for wealth accrual (Markley et al., 2020) for Black individuals in order to help mitigate the structural disadvantages faced by Black students.

Long-Term Impacts of Elementary Exclusionary Discipline

When children receive exclusionary discipline when they are 9 years old, the long-term impact of this varied by the race of the student and was contrary to the hypothesized model. Black students who received exclusionary discipline at age 9 were actually less likely to receive it at age 15 than White students who received exclusionary discipline at age 9. Exclusionary discipline at age 9 also seemed to impact Black students' academic achievement less harshly long-term than their White counterparts. That is to say, when a Black student received exclusionary discipline at age 9, their long-term academic trajectories were not as negatively impacted as were White students' long-term academic trajectories when they received exclusionary discipline at age 9. One potential explanation for this is research regarding ethnic socialization among Black families. Evidence suggests Black children are more likely to be taught by their parents about the biases they may encounter over their development and how to respond to these biases (Hughes et al., 2008; Simon, 2020). This parenting strategy can lead to fewer negative outcomes for children as they are taught to have a positive racial identity (Burt et al., 2017). In this study, if Black students who received exclusionary discipline at age 9 were taught to understand possible structural inequities associated with exclusionary discipline, they may have been better prepared to encounter these biases at age 15 and been more likely to avoid exclusionary discipline. However, the research on this phenomena is mixed (Dunbar et al., 2017). More research is warranted to examine possible mechanisms related to this finding.

Long-Term Impacts of Elementary Academic Achievement

When children performed well academically at 9 years old, the impact of this long-term varied by the race of the child. White children who performed well

academically at age 9 were more likely to perform well academically at age 15 than Black children who performed well academically at age 9. Additionally, children who performed well academically at age 9 were less likely to receive exclusionary discipline at age 15. This was more likely for White students than for Black students. This observation could possibly be explained by the structural racism that these Black students face over the course of their school years.

Students who have experienced structural racism against them throughout their lives may have difficulty maintaining the same academic achievement in high school as they experienced in elementary school due to the burden of this immense hardship. As prior research suggests, BIPOC children are more likely to get in trouble than their White counterparts for similar infractions (Delale-O'Connor et al., 2017). Research also suggests they are more likely to have been in classrooms where teachers have implicit biases against them (Glock et al., 2019; Glock & Klapproth, 2017; Meissel et al., 2017). Further, they have been less likely to receive constructive feedback necessary for learning progress from their teachers (Harber et al., 2012). Aside from these barriers at school, the children may face challenges at home. Evidence suggests that BIPOC families are likely to face structural racial inequality in healthcare (FitzGerald & Hurst, 2017), in the workplace (Quillian et al., 2017), in housing (Friedman, 2015), and in the criminal justice system (Laurencin & Walker, 2020; Jordan & Freiburger, 2015). These unfair disadvantages faced by their families in their communities may make it even more challenging for the children to attend to their academics. Taken together, these children are bearing very difficult burdens over the course of their education which may make it difficult to maintain a high academic standing.

Differences by Sex

Results from the current study show subtle sex differences for girls and boys. Socioeconomic factors and teacher-student race concordance impacted student trajectories similarly for girls and boys. However, academic achievement and discipline at age 9 years had differing impacts on academic achievement and discipline at age 15 years for each sex. For females, early academic achievement was more impactful long-term than it was for boys. When girls had high academic achievement at age 9 years, they were more likely to have high academic achievement and low levels of exclusionary discipline at age 15 years than males who had high levels of early academic achievement. The impact of early exclusionary discipline was more nuanced – impacting boys and girls in different ways. When boys received exclusionary discipline at age 9, they were more likely to experience it again at age 15 (though early exclusionary discipline did not statistically significantly predict their academic achievement at Year 15). When girls received exclusionary discipline at age 9, they were more likely to perform worse academically at age 15, and, though not as severe as boys, they were also more likely to receive exclusionary discipline at age 15 than had they not received exclusionary discipline. Prior research suggests that boys are more likely to receive exclusionary discipline (Skiba et al., 2002; Welsh & Little, 2018) but the current finding suggests that the consequences of this early exclusionary discipline for boys creates a harsher reality as they navigate their relationship with the STPP. For girls, this finding suggests that though they may not be as likely to enter the STPP when they receive exclusionary discipline at age 9 years, exclusionary discipline still negatively impacts their academic trajectories which can have other lasting implications. Regardless of the subtle gender differences,

these results clearly show that exclusionary discipline at age 9 years negatively impacts all students and therefore this discipline practice warrants critical examination at the school level.

Limitations

Though results from the study provide important insight into how the STPP operates, several limitations should be noted. First, the academic achievement variables may have measurement errors. The elementary academic achievement scores were based on scores from tests administered by the researcher (not based on any school-based measure). Further, Year 15 academic achievement measures were based on high school grades. Because academic achievement was measured in two different ways at two different settings, there may be inherent measurement inconsistencies. It is also important to note that grades at Year 15 may have been fraught with teacher biases in a way that the researcher administered tests possibly were not. Perhaps, then, the trajectory from age 9 years to age 15 years does not accurately measure change in a student's academic achievement. Additionally, the reliance on self-report of student grades at age 15 may have varying levels of accuracy. Grading practices may vary by teacher, school, and district. Additionally, some student self-reports may be inaccurate (especially among the students least engaged in school). Future research examining a similar model but with more consistent and possibly robust academic achievement measures might reduce these grading variations and improve the overall model.

The next limitation is in regard to the measurement of teacher-student race concordance. First of all, this study only examined the impact of student-teacher race concordance at one time point during the child's K – 12 education. The model did not

examine student-teach race concordance across other years. Additionally, only 5.41% of White children had a non-White teacher as compared to 70.27% of Black students who had a non-Black teacher. Due to such limited variability among White participants, it is unclear whether results for this population are accurate. While the results show that teacher-student race concordance at one time point seem to have a lasting impact on child trajectories, future research should examine the impact of having multiple teachers of the same race across K-12 education and the impact this has on child academic and discipline trajectories. Further, future research should examine, in more diverse samples, what happens when White children have non-White teachers.

Third, though using a weighted least square mean and variance (WLSMV) estimator for missing data would have been preferrable to accommodate the categorical nature of some of the variables in the study's models, a unique solution could not be found using WLSMV. Thus, the models were estimated with ML. Though not ideal, the fit indices were within the acceptable range indicating the estimated variance/covariance matrix adequately represented the observed matrix. Future research should replicate findings with a different data set.

Fourth, prior research suggests an interaction effect between race and sex and their impact on exclusionary discipline and academics (Skiba et al., 2002; Welsh & Little, 2018). However, the current study did not have a large enough sample of White students of each sex with non-White teachers to run the model by race and sex. Future research should examine the interaction of these race and sex variables on exclusionary discipline and academic achievement.

Finally, though ample research shows that exclusionary discipline is correlated with higher levels of adult incarceration, this data does not provide adult outcome variables. Future research should utilize forthcoming waves of the FFCWS to examine whether exclusionary discipline does, in fact, lead to higher levels of adult incarceration.

Implications

Despite the limitations of the current study, the study provides insight into the role that teacher-student race concordance plays in exclusionary discipline practices and academic achievement in elementary education and the long-term impact these have on discipline and academic achievement in high school. The current study shows that teacher-student race concordance and socioeconomic status both impact student academic achievement and exclusionary discipline. Furthermore, this study suggests that elementary academic achievement and exclusionary discipline impact high school academic achievement and exclusionary discipline. Also, the study highlights that there are differences in how these factors operate over time depending on both the race and the sex of the child. These findings lead to several implications for practice and research.

Teacher-Student Race Concordance

The current study examined teacher-student race concordance at just one time point – when the children are 9 years old. It did not examine other years, nor other racial socialization factors (e.g., demographics of the school or neighborhood) in the children's lives. Yet, the impact of teacher-student race concordance at this one point in time resulted in statistically significant differences in academic achievement and exclusionary discipline across time. Future research should examine this more extensively to understand how multiple years of teacher-student race concordance impacts children.

When either Black or White children share the same race as their teacher, the current study shows they are likely to perform better academically and have lower incidences of exclusionary discipline. More research is needed to understand why this is and whether this holds true in samples with greater heterogeneity in student/teacher racial combinations for White students (i.e., more White students with non-White teachers). However, the results highlight that Black children benefit from having a Black teacher, possibly due to having a positive role-model from their race (Grissom et al., 2017). This suggests that teacher training programs should recruit more Black teachers across all grade levels, given the low prevalence of Black teachers in primary and secondary education settings (Institute of Education Sciences, 2021). However, results may also point to White teacher biases against Black students. This suggests the importance of working to combat teacher's explicit and, perhaps more importantly, implicit racial biases. The results indicating that White children similarly benefit from having a same-race teacher should be treated with caution due to the very limited number of White students without a White teacher in the current sample. Such result may instead indicate a need for addressing children's biases against non-White teachers. Unfortunately, little research exists showing best practices for combatting children's racial biases (Scott et al., 2020). However, evidence suggests that children develop fewer biases when they have less essentialist views of race and understand it as more of a social construct (Pauker et al., 2010). They also exhibit fewer biases when they are exposed more readily to members of other racial/ethnic groups (Anzures et al., 2013; Dunham et al., 2008). There may be a need to develop programs which teach children from a young age about the social construction of race while simultaneously providing opportunities for more

exposure to people of all races and cultural background. Such exposure might come in different forms. It could be direct exposure by recruiting more diverse early education teachers or working to create less segregated classrooms and neighborhoods. It could also happen by creating more positive and accurate exposure and representation of non-White individuals in media, literature, books, movies, and toys (Williams, 2017). Future research should study the impact of these different measures on slowing or stopping the development of White students' biases.

Teacher biases were not directly examined in the current study. However, teacher-student race concordance was conceptualized as a potential proxy for teacher biases – based on prior research that shows that individuals are likely to have implicit biases against out-groups (Project Implicit, n.d.), and that children perform better in classrooms when the teacher implicitly favors their ethnicity (Peterson et al., 2016). Notably, even this crude measure of potential teacher biases resulted in measurable differences of academic achievement and exclusionary discipline across time. Future research should examine how these potential biases operate and work toward creating systems that can dismantle harmful biases. Prior evidence suggests trainings to help dismantle implicit biases are likely to have far reaching positive effects on child trajectories (Worrell, 2021), but the types of trainings and the effectiveness of them are largely debated in public discourse.

Prior evidence suggests that approximately 20% of teachers make 80% of office discipline referrals (Blake et al., 2010). While only a minority of teachers make the referrals, having training for all teachers on strategies to more effectively deal with classroom behavior will likely improve everyone's teaching. Including information in the

trainings about implicit biases may help create a more equitable classroom and educational system for all. While trainings are a first step, they are not likely to be sufficient in combatting structural racism within the educational system. Education scholar Paul Gorski (2019) points out some helpful solutions as well as harmful detours for addressing equity issues.

In creating a helpful training for school personnel, Gorski (2019) recommended schools implement five principles of "equity literacy" (p. 60) that should be adhered to. These include:

1. "Direct Confrontation Principle" (p. 60). Schools need to ask directly how racism is operating within their policies and practices to avoid detouring around the problem.
2. "Redistributive Principle" (p. 60). Schools should critically examine how each policy is implemented and whether students of color are receiving fewer resources in any specific areas.
3. "Prioritization Principle" (p.60). School personnel should constantly prioritize the needs of families of color. Whenever new policies are being implemented, school personnel need to critically self-reflect on how the policy may further disenfranchise these families.
4. "Equity Ideology Principle" (p. 60). School trainings need to help faculty understand how racism operates in society so that each member of the faculty can begin to understand the role that they need to play in striking racism out of the school.

5. "#FixInjusticeNotKids Principle" (p. 61). All policies should be implemented with the intent to fix the structural inequities, not change the children who are suffering.

Goski (2019) also warned against many school-based policies that are implemented. He notes these school-based policies are simply taking "detours" around racial equity without actually confronting equity head on. For example, Gorski described and outlined four of these types of detours which schools often implement, with the intention to help equity issues, but instead steer around confronting the equity issues as follows:

1. "Pacing-for-Privilege Detour" (p. 57). In this detour, policies seek to not disrupt the comfort of the dominant group, thereby lengthening the time it takes to implement true equitable policies and disenfranchising non-dominant groups for unnecessarily long periods of time. The problem is, "racial equity cannot be achieved with an obsessive commitment to 'meeting people where they are' when 'where they are' is fraught with racial bias and privilege" (p. 58).
2. "Poverty of Culture Detour" (p. 58). This detour occurs when schools seek to only be more culturally aware, but do not recognize that many inequities are not culturally related but are rather embedded in racism. The problem here is that "We cannot fix a problem we refuse to name. If our equity initiatives feature the word culture more than the word racism, we're probably off track" (p. 58).
3. "Deficit Ideology Detour" (p. 58). Sometimes policies are enacted with the goal to repair the deficits of non-dominant groups, detouring around the reality that those

deficits are not actually individual deficits, but rather a product of systemic racism.

4. "Celebrating Diversity Detour" (p. 59). In this detour, rather than addressing racism, schools skirt around this hard topic by trying to encourage the celebration of diversity. However, this often leaves students of color feeling like they are being forced to celebrate a system which systematically disenfranchises them. The celebration detours around the hard work that must be done to confront racism.

Complementing this list of principles is the notion of implementing "culturally sustaining pedagogy" (p. 93) – a term coined by education scholar Django Paris (2012). Utilizing this culturally sustaining pedagogical framework, schools "perpetuate and foster – to sustain – linguistic, literate and cultural pluralism as part of the democratic projects of schooling" (p. 93). This type of education seeks to encompass pluralistic cultures, rather than requiring students to conform to the dominant culture. This framework is congruent with CRT scholars' frameworks which suggest that creating a monolithic conforming culture is not equality or neutrality, but rather a type of genocide that erases nondominant cultures from our society (Crenshaw et al., 1995; Graf, 2015; Peller, 1995).

Regardless of the exact type of intervention or policies implemented, what is most important is to confront racism directly and work to specifically dismantle the biases that perpetuate it (Gorski, 2019). This is congruent with the notion of CRT scholars – that simply changing laws or implementing policies are not actual fixes to the problems (Greene, 1995). No matter the programming, schools need to examine the implicit racism plaguing their institution (Lawrence, 1995).

Socioeconomic Status

The study also points to the impact that socioeconomic status can have on children's academic achievement and exclusionary discipline. When children are from higher socioeconomic backgrounds, they are likely to perform better academically and have a lower incidence of exclusionary discipline. The relationship between SES and child well-being is well documented in the literature – with ample evidence showing that children of higher SES backgrounds do better in terms of academics (Selvitopu & Kaya, 2021), behavior (Taylor et al., 2019), and physical/mental health (Herrmann et al., 2018; Roubinov et al., 2018). Particularly troubling is the data that shows that Black and Latinx minor children are over twice as likely as White and Asian children to experience poverty (American Psychological Association, 2017b). Systemic barriers such as Black/White wage inequalities (Wilson & Rodgers, 2016), unemployment rate disparities (Marte, 2020), and familial wealth gaps (Mineo, 2021) contribute to these conditions. There are multiple ways to address these disparities. For example, Federal programs (e.g., Earned Income Tax Credit, Child Tax Credit, Medicaid, Children's Health Insurance Program, Supplemental Nutrition Assistance Program) have helped bring millions of children out of poverty (Sherman et al., 2013). However, the U.S. still has a higher poverty rate than many other nations (OECD, 2021) with BIPOC populations experiencing highest levels of poverty (American Psychological Association, 2017b). Activists often suggest more should be done to address these inequities including such measures as expanding government safety-net aid, providing guaranteed funded sick and family leave from employment, increasing public early childhood education, childcare opportunities, increasing job opportunities, and promoting higher wages (Pathak & Ross, 2021). Such

actions could, in turn, create a more equitable educational experience for children from all socioeconomic backgrounds.

These issues are especially critical within BIPOC populations who live in a structurally racist system where their families are less likely to have decent job opportunities (Carnevale et al., 2019) and are less likely to accrue wealth (Markley et al., 2020). In addition to needed supports to better address these concerns, results of the current study may provide limited evidence for potential financial reparations for Black families. According to the legal CRT scholar Mari Matsuda (1995), when evidence suggests that historical atrocities impact current group membership, then assessing ways for financial reparations is necessary. Matsuda suggests that to distribute financial reparations from the government, in-group members (in this case, Black individuals) should be allowed to distribute funds to those most entitled to relief.

Long-Term Impacts of Elementary Exclusionary Discipline and Academic Achievement

Results of the current study suggest a need to reduce the use of exclusionary discipline in early grades for all children, given that exclusionary discipline at age 9 years old is predictive of lower academic achievement (especially for girls) at age 15 years old and higher rates of exclusionary discipline (especially for boys) at age 15 years old. Furthermore, results of the current study show that academic achievement at age 9 years old is positively associated with academic achievement at age 15 years old. Though this association holds true for all children, the protective impact of high academic achievement at age 9 years on future exclusionary discipline and academic achievement is less for Black students than it is for White students. As discussed previously, this may

possibly be due to the burden of racism that Black children bear throughout their childhoods. If this is the case, school-based interventions that help curb institutional racism within the educational system could be helpful.

Two evidence-based programs, Positive Behavioral Interventions and Supports (PBIS) and Restorative Justice in Education (RJE), have been found especially effective at reducing (or eliminating) incidences of exclusionary discipline and eliminating some of the racial inequalities within schools in order to help children excel academically. Utilizing these interventions within school systems could help mitigate some of the harmful impacts of the institutional racism within schools.

Positive Behavioral Interventions and Supports (PBIS). PBIS is an evidence based behavioral program for schools. PBIS is a system-wide educational program designed to improve student behavior, mental health and academic trajectories, reduce the use of exclusionary discipline, and improve teacher perceptions of their school climate and safety. The program uses three tiers of support to help students at varying degrees of risk. The first tier, designed for every student, includes creating a school-wide climate of positive behavior expectations, specific norms for behavior reinforcement, strong leadership, and utilizing school-side data to make decisions. The second tier is designed for students who have not been successful with only the Tier 1 protocols. In Tier 2, students are given additional adult supervision, extra opportunities to receive positive behavioral reinforcement, more pre-teaching regarding their behavior, and more academic supports. The third tier goes one step further than Tier 2 for the 1-5% of students who need additional support than can be provided in either Tier 1 or Tier 2. Many of these students have been diagnosed with mental health issues including autism

or emotional and behavioral disorders. Students in Tier 3 have a multi-disciplinary team that supports them with wraparound services with an eye toward the culture and context of the student (Centre for Justice & Reconciliation, 2021).

Critics of PBIS state that the program is too "colorblind" – meaning the standard protocols of the program do not delve deeply enough into various cultural needs. However, these critics also acknowledge that PBIS can be implemented in a way that addresses these cultural needs (Addington, 2021). Indeed, the Center on PBIS does expect that the implementation of PBIS be done in a culturally responsive way. For example, in a report issued by the Center on PBIS outlining instructional strategies, Chaparro et al. (2015) stated specific strategies for creating classroom instruction in a way that can increase equity at the school level. Within these specific strategies were suggested self-reflection questions for educators to regularly ask themselves regarding equity in their classrooms (e.g., "Do I have a basic understanding of my students' cultures and how that might affect their background knowledge, participation, or understanding of new knowledge?", "Did I provide an equitable number of opportunities to respond for all student groups?").

By specifically following the guidelines from the Center on PBIS on culturally responsive instruction, the hope is that systemic racism within the schools can be questioned, discussed, and diminished. However, Paris (2012) argues that utilizing the term "culturally responsive" is detrimental to progress. This term, he argues, implies a deficit model. Rather than schools taking immediate action, the term shows that the schools are merely reacting to biases they may happen to notice. For Paris, utilizing the term "culturally sustaining pedagogy" is critical in order to proactively address the

inequity within the educational system. Though some may argue the distinction is simply a matter of semantics and nothing more, it is important to note the impact language may have on reducing implicit biases and correcting errors that may contribute to recurring harm.

Restorative Justice in Education (RJE). Another evidence-based program that has been found to decrease exclusionary discipline in the school setting is RJE. When behavior occurs that is deemed unacceptable, RJE programs seek to use the experience as a learning opportunity for all parties involved (Anderson et al., 2014) with the goal of healing or fixing the harm that was caused by the misbehavior (Centre for Justice & Reconciliation, 2021). Using this philosophy, the students involved in the misbehavior (including those committing the misdeed and victims of it) sit together with school personnel to discuss the incident. They are encouraged to openly share their feelings and describe how the situation impacted them. In the end, all parties must come to terms with each other's feelings. Arrangements to fix the harm are implemented (Anderson et al., 2014). RJE is designed to focus on equity because of the way it encourages all people to have a say in the situation and the outcome – instead of a top-down approach where only school personnel make decisions for the offending students (Gregory & Evans, 2020).

Though RJE shows clear evidence for reducing exclusionary discipline and is supposed to help with equity issues, critics worry it still disproportionately impacts students of color – especially Black girls. Just as with exclusionary discipline, students of color, and Black girls especially, are more frequently required to engage in Restorative Justice programs and have often been sent there for merely "subjective rule violations" (p. 10) due in part to the implicit biases held by teachers. This can be detrimental to those

students as they are unfairly required to admit wrongdoing, even in cases where their behavior may have been interpreted through lenses of implicit biases (Addington, 2021).

Indeed, proponents of RJE also understand these systemically racist problems that can accompany RJE if RJE is not implemented in a way that specifically focuses on these equity issues. In a recent report from the National Education Policy Center, Gregory and Evans (2020) emphasized the need for implementing RJE with a focus on equity issues. They advised that "RJE practices need to explicitly identify opportunity gaps and challenge disciplinary disproportionality as it relates to a range of student characteristics including race, ethnicity, religion, ability, socioeconomic status, language, culture, sexuality, and gender expression" (p. 4). Furthermore, they state that the "Sole focus on a reduction in suspensions and expulsions will not address the systemic and structural inequalities that impact students' social, emotional, and academic well-being" (p. 4). Given that school personnel have varying levels of implicit biases, it is important to understand these biases and implement specific systems to combat the effects of these biases. Both PBIS and RJE show promising results for helping reduce the use of exclusionary discipline while working toward combatting racial disparities in education.

While systemic racism in the school system is merely one area where BIPOC populations confront racism, rooting out the racism in education, is a step in the right direction. Given that BIPOC individuals face racism across multiple systems and social institutions, future research should critically examine other social institutions and the roles they play in perpetuating racial inequity and examine ways to dismantle this racism in order to make a more equitable society for all children in our nation.

Conclusion

Ample research suggests that children who receive exclusionary discipline are more likely to experience adult incarceration. Black students are three times more likely than White students to be pushed into the STPP (Glock & Klapproth, 2017; U.S. DOE Office for Civil Rights, 2014; Skiba et al., 2014a). Understanding the mechanisms through which the STPP is perpetuated within populations of color is key to mitigating this trauma. Results of this study show that children who share the same race as their teacher at age 9 are more likely to have positive academic and disciplinary trajectories – suggesting possible racial biases impacting the rates of exclusionary discipline. This is especially important to examine as children who receive exclusionary discipline at age 9 years old are at risk of future exclusionary discipline and low academic trajectories – leading to heightened risk of future criminality and incarceration.

The findings suggest a need for more diverse school faculty to help both Black and White students. For Black students, this will provide them with the opportunity to thrive in an environment with fewer racial biases and where they have positive racial role models at their school. White students may develop fewer racial biases as they have more exposure to non-White people. Findings also point to the possibility of implicit biases coming into play. Providing various teacher trainings which focus on both alternative disciplinary practices that teach teachers to be empathic rather than punitive (Okonofua et al., 2016) would be helpful. Additionally, trainings which highlight implicit racial biases and the impact these biases may have on children (Worrell, 2021) could reduce disparities across the educational system. Both of these measures may provide important first steps towards dismantling the STPP, reducing systemic racism within the U.S.

school system, and creating a more equitable society with better outcomes for all children.

REFERENCES CITED

Adelman, L. (2019). *The tough-on-crime law Democrats are overlooking*. Washington Post. Retrieved May 6, 2021 from https://www.washingtonpost.com/opinions/2019/06/30/theres-another-tough-on-crime-law-democrats-should-focus-their-criticism/.

Afthanorhan, W. M. A. B. W. (2013). A comparison of partial least square structural equation modeling (PLS-SEM) and covariance based structural equation modeling (CB-SEM) for confirmatory factor analysis. *International Journal of Engineering Science and Innovative Technology, 2*(5), 198-205. ISSN:2319-5967

Alexander, M. (2020). *The new Jim Crow: Mass incarceration in the age of colorblindness*. New York, NY: New Press. ISBN-10:1620971933

Alexander, M. (2011). The new Jim Crow. *Ohio State Journal of Criminal Law, 9*(1), 7-26.

American Psychological Association. (2017, July). *Education and socioeconomic status factsheet.* American Psychological Association. Retrieved September 15, 2021, from https://www.apa.org/pi/ses/resources/publications/education.

American Psychological Association. (2017, July). *Ethnic and Racial Minorities & Socioeconomic Status factsheet*. American Psychological Association. Retrieved January 27, 2022, from https://www.apa.org/pi/ses/resources/publications/minorities.

Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin, 103*(3), 411. doi:10.1037/0033-2909.103.3.411

Anderson, C., Sumner Barnes, M., Beane, C., Bishop, J., Davis, E., Fishkind, P., Fountain, G., Gilbert, K., Guldin, M., King, L., Lawson, H., Mumin, K., Nicole, D., Ricks, D., Rousey, J., Spicer, R., St John, P., Thomas, L., Thompson, G., & Truman, S. (2014). *Restorative Practices: Fostering Healthy Relationships & Promoting Positive Discipline in Schools A Guide for Educators.* Restorative Practices Working Group.

Anzures, G., Quinn, P. C., Pascalis, O., Slater, A. M., Tanaka, J. W., & Lee, K. (2013). Developmental origins of the other-race effect. *Current Directions in Psychological Science, 22*(3), 173-178. doi:10.1177/0963721412474459

Apfelbaum, E. P., Pauker, K., Ambady, N., Sommers, S. R., & Norton, M. I. (2008). Learning (not) to talk about race: When older children underperform in social categorization. *Developmental Psychology, 44*(5), 1513. doi:10.1037/a0012835

Apfelbaum, E. P., Pauker, K., Sommers, S. R., & Ambady, N. (2010). In blind pursuit of racial equality?. *Psychological Science, 21(*11), 1587-1592. doi:10.1177/0956797610384741

Balfanz, R., & Fox, J. (2014). Sent home and put off-track: The antecedents, disproportionalities, and consequences of being suspended in the ninth grade. *Journal of Applied Research on Children: Informing Policy for Children at Risk, 5*(2), 13.

Balfanz, R., Spiridakis, K., Neild, R. C., & Legters, N. (2003). High-poverty secondary schools and the juvenile justice system: How neither helps the other and how that could change. *New Directions for Youth Development, 2003*(99), 71-89. doi:10.1002/yd.55

Barnes, J. C., & Motz, R. T. (2018). Reducing racial inequalities in adulthood arrest by reducing inequalities in school discipline: Evidence from the school-to-prison pipeline. *Developmental Psychology*, *54*(12), 2328. doi:10.1037/dev0000613

Bar-Haim, Y., Ziv, T., Lamy, D., & Hodes, R. M. (2006). Nature and nurture in own-race face processing. *Psychological Science*, *17*(2), 159-163. doi:10.1111/j.1467-9280.2006.01679.x

Bertrand, M., Chugh, D., & Mullainathan, S. (2005). Implicit discrimination. *American Economic Review, 95*(2), 94-98. doi:10.1257/000282805774670365

Black Lives Matter. (n.d.). *Black lives matter*. Black Lives Matter. Retrieved January 4, 2022, from https://blacklivesmatter.com/

BLM at School. (n.d.). *The Demands*. BLM AT SCHOOL. Retrieved January 4, 2022, from https://www.blacklivesmatteratschool.com/the-demands.html

Bodovski, K., Nahum-Shani, I., & Walsh, R. (2013). School climate and students' early mathematics learning: Another search for contextual effects. *American Journal of Education*, *119*(2), 209-234. doi:10.1086/667227

Bohrnstedt, G., Kitmitto, S., Ogut, B., Sherman, D., and Chan, D. (2015). School Composition and the Black–White Achievement Gap (NCES 2015-018). U.S. Department of Education, Washington, DC: National Center for Education Statistics. Retrieved May 22, 2020 from http://nces.ed.gov/pubsearch

Bollen, K.A., & Curran, P.J. (2006). *Latent curve models: A structured equation approach*. Hoboken, NJ: Wiley. ISBN-10:047145592X

Bryan, N. (2017). White teachers' role in sustaining the school-to-prison pipeline: Recommendations for teacher education. *The Urban Review*, *49*(2), 326-345. doi:10.1007/s11256-017-0416-y

Buchanan, L., Bui, Q., & Patel, J. (2020, July 03). Black Lives Matter may be the largest movement in U.S. History. Retrieved April 19, 2021, from https://www.nytimes.com/interactive/2020/07/03/us/72rince-floyd-protests-crowd-size.html

Bump, P. (2021, April 30). 'There is not systemic racism' says a governor who named April as Confederate Heritage Month. Retrieved May 3, 2021, from https://www.washingtonpost.com/politics/2021/04/30/there-is-not-systemic-racism-says-governor-who-named-april-confederate-heritage-month/

Burt, C. H., Lei, M. K., & Simons, R. L. (2017). Racial Discrimination, Racial Socialization, and Crime: Understanding Mechanisms of Resilience. *Social Problems, 64*(3), 414–438. doi:10.1093/socpro/spw036

Burt, J. (2014). From zero-tolerance to compassion: Addressing the needs of girls caught in the school-to-prison pipeline through school-based mental health services. *Geo. JL & Mod. Critical Race Persp.*, *6*, 97.

Carnevale, A. P., Strohl, J., Gulish, A., Van Der Werf, M., & Peltier Campbell, K. (2019). *The unequal race for good jobs: How Whites made outsized gains in education and good jobs compared to Blacks and Latinos*. Georgetown University Center on Education and the Workforce. http://hdl.handle.net/10919/96132

Centers for Disease Control and Prevention. (2020, March 2). *The Tuskegee Timeline*. Centers for Disease Control and Prevention. https://www.cdc.gov/72arvard72/timeline.htm.

Centre for Justice & Reconciliation. (2021). *Tutorial: Introduction to restorative justice. Restorative Justice*. Retrieved December 17, 2021, from http://restorativejustice.org/restorative-justice/about-restorative-justice/tutorial-intro-to-restorative-justice/#sthash.reR9IR2E.dpbs

Christensen, P., Sarmiento-Barbieri, I., & Timmins, C. (2020). Housing Discrimination and the Toxics Exposure Gap in the United States: Evidence from the Rental Market. *Review of Economics and Statistics*, 1-37. doi:10.1162/rest_a_00992

Crenshaw, K., Gotanda, N., Peller, G., & Thomas, K. (1995). *Critical race theory: The key writings that formed the movement.* The New Press. ISBN-10:1565842715

Cullen, F. T., Jonson, C. L., & Nagin, D. S. (2011). Prisons do not reduce recidivism: The high cost of ignoring science. *The Prison Journal, 91*(3_suppl), 48S-65S. doi:10.1177/0032885511415224

Curran, F. C. (2016). Estimating the effect of state zero tolerance laws on exclusionary discipline, racial discipline gaps, and student behavior. *Educational Evaluation and Policy Analysis*, *38*(4), 647-668. doi:10.3102/0162373716652728

Dee, T.S. (2005). A teacher like me: Does race, ethnicity, or gender matter? *The American Economic Review*, 95, 158-165. doi:10.1257/000282805774670446

Delale-O'Connor, L. A., Alvarez, A. J., Murray, I. E., & Milner, IV, H. R. (2017). Self-efficacy beliefs, classroom management, and the cradle-to-prison pipeline. *Theory Into Practice*, *56*(3), 178-186. doi:10.1080/00405841.2017.1336038

Delaney, R., Subramanian, R., Shames, A., & Turner, N. (2018, September 01). American history, race, and prison. Retrieved April 19, 2021, from https://www.vera.org/reimagining-prison-web-report/73arvard73-history-race-and-prison.

Demaske, C. (2009). Critical Race Theory. Retrieved December 27, 2020, from https://www.mtsu.edu/first-amendment/article/1254/critical-race-theory.

Downer, J.T., Goble, P., Myers, S.S., & Pianta, R.C. (2016). Teacher-child racial/ethnic match within pre-kindergarten classrooms and children's early school adjustment. *Early Childhood Research Quarterly, 37*, 26-38. doi:10.1016/j.ecresq.2016.02.007

Downey, D. B., & Pribesh, S. (2004). When race matters: Teachers' evaluations of students' classroom behavior. *Sociology of Education, 77*(4), 267-282. doi:10.1177/003804070407700401

Dunbar, A. S., Leerkes, E. M., Coard, S. I., Supple, A. J., & Calkins, S. (2017). An integrative conceptual model of parental racial/ethnic and emotion socialization and links to children's social-emotional development among African American families. *Child Development Perspectives, 11*(1), 16-22. doi:10.1111/cdep.12218

Dunham, Y., Baron, A. S., & Banaji, M. R. (2008). The development of implicit intergroup cognition. *Trends in Cognitive Sciences, 12*(7), 248-253. doi:10.1016/j.tics.2008.04.006

Dunham, Y., Baron, A. S., & Carey, S. (2011). Consequences of "minimal" group affiliations in children. *Child Development, 82*(3), 793-811. doi:10.1111/j.1467-8624.2011.01577.x

Dunham, Y., Chen, E. E., & Banaji, M. R. (2013). Two signatures of implicit intergroup attitudes: Developmental invariance and early enculturation. *Psychological Science, 24*(6), 860-868. doi:10.1177/0956797612463081

Dunn, L.M. and L.M. Dunn (1997). *Examiner's Manual for the Peabody Picture Vocabulary Test, Third Edition*. American Guidance Services, Inc.

Durlauf, S. N., & Nagin, D. S. (2011). Imprisonment and crime: Can both be reduced?. *Criminology & Public Policy*, *10*(1), 13-54. doi:10.1111/j.1745-9133.2010.00680.x

Egalite, A.J., Kisida, B., & Winters, M.A. (2015). Representation in the classroom: The effect of own-race teachers on student achievement. *Economics of Education Review, 45,* 44-52. doi:10.1016/j.econedurev.2015.01.007

Fenning, P., & Rose, J. (2007). Overrepresentation of African American students in exclusionary discipline the role of school policy. *Urban Education, 42*(6), 536-559. doi:10.1177/0042085907305039

FitzGerald, C., & Hurst, S. (2017). Implicit bias in healthcare professionals: a systematic review. *BMC Medical Ethics, 18*(1), 1-18. doi:10.1186/s12910-017-0179-8

Fornili, K. S. (2018). Racialized mass incarceration and the war on drugs: A critical race theory appraisal. *Journal of Addictions Nursing, 29*(1), 65-72. doi:10.1097/JAN.0000000000000215

Friedman, S. (2015). Commentary: Housing discrimination research in the 21st century. *Cityscape, 17*(3), 143-150. http://www.jstor.org/stable/26326966

George, J. A. (2015). Stereotype and school pushout: Race, gender and discipline disparities. *Arkansas Law Review, 68*, 101.

Gilliam, W. S., Maupin, A. N., Reyes, C. R., Accavitti, M., & Shic, F. (2016). Do early educators' implicit biases regarding sex and race relate to behavior expectations and recommendations of preschool expulsions and suspensions. *Yale University Child Study Center*.

Glock, S., & Klapproth, F. (2017). Bad boys, good girls? Implicit and explicit attitudes toward ethnic minority students among elementary and secondary school teachers. *Studies in Educational Evaluation*, *53*, 77-86. doi:10.1016/j.stueduc.2017.04.002

Glock, S., Kovacs, C., & Pit-ten Cate, I. (2019). Teachers' attitudes towards ethnic minority students: Effects of schools' cultural diversity. *British Journal of Educational Psychology*, *89*(4), 616-634. doi:10.1111/bjep.12248

Goings, R. B., Brandehoff, R., & Bianco, M. (2018). To diversify the teacher workforce, start early. *Educational Leadership, 75*(8), 50-55.

Graff, G. (2015). Redesigning racial caste in America via mass incarceration. *The Journal of Psychohistory, 43*(2), 120.

Greene, L. (1995). Race in the Twenty-First Century: Equality through Law? In K. Crenshaw, N. Gotanda, G. Peller, & K. Thomas (Eds.), *Critical race theory: The key writings that formed the movement* (pp. 292–301). The New Press.

Greenwald, A. G., & Lai, C. K. (2020). Implicit social cognition. *Annual Review of Psychology, 71,* 419-445. doi:10.1146/annurev-psych-010419-050837

Gregory, A., & Evans, K.R. (2020). *The Starts and Stumbles of Restorative Justice in Education: Where Do We Go from Here?* Boulder, CO: National Education Policy Center. Retrieved October 28, 2021 from https://nepc.colorado.edu/publication/restorative-justice.

Gregory, A., & Weinstein, R. S. (2008). The discipline gap and African Americans: Defiance or cooperation in the high school classroom. *Journal of School Psychology,* 46, 455–475. doi:10.1016/J.JSP.2007.09.001

Gregory, A., Skiba, R. J., & Noguera, P. A. (2010). The achievement gap and the discipline gap. *Educational Researcher*, 39, 59–68. doi:10.3102/0013189X09357621

Grissom, J. A., Rodriguez, L. A., & Kern, E. C. (2017). Teacher and principal diversity and the representation of students of color in gifted programs: Evidence from national data. *The Elementary School Journal, 117*(3), 396-422. doi: 10.1086/690274

Gun-Free Schools Act, H.R. 987. (1993). https://www.congress.gov/bill/103rd-congress/house-bill/987?s=1&r=65

Hannah-Jones, N. (2019, August 14). *Our democracy's founding ideals were false when they were written. Black Americans have fought to make them true.* NYTimes. Retrieved May 4, 2021, https://www.nytimes.com/interactive/2019/08/14/magazine/black-history-american-democracy.html

Hanushek, E. A., Peterson, P. E., Talpey, L. M., & Woessmann, L. (2019). The achievement gap fails to close: Half century of testing shows persistent divide between haves and have-nots. *Education Next*, *19*(3), 8-18.

Harbatkin, E. (2021). Does student-teacher race match affect course grades?. *Economics of Education Review, 81,* 102081. doi:10.1016/j.econedurev.2021.102081

Harber, K.D., Gorman, J.L., Gengaro, F.P., Butisingh, S., Tsang, W., & Ouellette, R. (2012). Students' race and teachers' social support affect the positive feedback bias in public schools. *Journal of Educational Psychology, 104,* 1149–1161. doi: 10.1037/a0028110

Heitzeg, N. A. (2009). Education or Incarceration: Zero Tolerance Policies and the School to Prison Pipeline. In *Forum on public policy online* (Vol. 2009, No. 2). Oxford Round Table. 406 West Florida Avenue, Urbana, IL 61801.

Herrmann, J., Vogel, M., Pietzner, D., Kroll, E., Wagner, O., Schwarz, S., Müller, E., Kiess, W., Richter, M. & Poulain, T. (2018). Factors associated with the emotional health of children: high family income as a protective factor. *European Child & Adolescent Psychiatry, 27*(3), 319-328. doi:10.1007/s00787-017-1049-0

Hughes, D., Rivas, D., Foust, M., Hagelskamp, C., Gersick, S., & Way, N. (2008). How to catch a moonbeam: A mixed-methods approach to understanding ethnic socialization processes in ethnically diverse families. In S.M. Quintana & C. McKown (Eds.), *Handbook of Race, Racism, and the Developing Child* (pp. 278-312). John Wiley & Sons, Inc.

IBM Corporation. (2016). *EM Subcommand (MVA command)*. SPSS Statistics 24.0.0. Retrieved September 15, 2021, from https://www.ibm.com/docs/pt/spss-statistics/24.0.0?topic=mva-em-subcommand-command#syn_mva_em.

Institute of Education Sciences. (2021, May). *Characteristics of Public School Teachers*. National Center for Education Statistics. Retrieved September 15, 2021, from https://nces.ed.gov/programs/coe/indicator/clr.

Jordan, K. L., & Freiburger, T. L. (2015). The effect of race/ethnicity on sentencing: Examining sentence type, jail length, and prison length. *Journal of Ethnicity in Criminal Justice, 13*(3), 179-196. doi:10.1080/15377938.2014.984045

Kang-Brown, J., Montagnet, C., & Heiss, J. (2021, June). *People in Jail and Prison in Spring 2021*. Vera Institute of Justice. https://www.vera.org/downloads/publications/people-in-jail-and-prison-in-spring-2021.pdf.

Kelly, D. J., Quinn, P. C., Slater, A. M., Lee, K., Gibson, A., Smith, M., Ge, L. & Pascalis, O. (2005). Three-month-olds, but not newborns, prefer own-race faces. *Developmental science, 8*(6), F31-F36. doi:10.1111/j.1467-7687.2005.0434a.x

Kline, R. B. (2010). Principles and practice of structural equation modeling (3rd ed.). New York, NY: Guilford Press.

Knoester, M., & Au, W. (2017). Standardized testing and school segregation: like tinder for fire?. *Race Ethnicity and Education, 20*(1), 1-14. doi:10.1080/13613324.2015.1121474

Kozlowski, K. P. (2015). Culture or teacher bias? Racial and ethnic variation in student–teacher effort assessment match/mismatch. *Race and Social Problems, 7*(1), 43-59. doi:10.1007/s12552-014-9138-x

Kunesh, C. E., & Noltemeyer, A. (2019). Understanding disciplinary disproportionality: Stereotypes shape pre-service teachers' beliefs about black boys' behavior. *Urban Education, 54*(4), 471-498. doi:10.1177/0042085915623337

Laurencin, C. T., & Walker, J. M. (2020). Racial profiling is a public health and health disparities issue. *Journal of Racial and Ethnic Health Disparities, 7*(3), 393-397. doi:10.1007/s40615-020-00738-2

Lawrence III, C.R. (1995). The Word and the River: Pedagogy as Scholarship as Struggle. In K. Crenshaw, N. Gotanda, G. Peller, & K. Thomas (Eds.), *Critical race theory: The key writings that formed the movement* (pp. 336–351). The New Press.

Lei, R. F., Leshin, R. A., & Rhodes, M. (2020). The development of intersectional social prototypes. *Psychological Science, 31*(8), 911-926. doi: 10.1177/0956797620920360

Lofstrom, M., & Raphael, S. (2016). Incarceration and crime: Evidence from California's public safety realignment reform. *The ANNALS of the American Academy of Political and Social Science, 664*(1), 196-220. doi:10.1177/0002716215599732

López, I. F. H. (2010). Post-racial racism: Racial stratification and mass incarceration in the age of Obama. *California Law Review, 98*(3), 1023-1074.

MacCallum, R. C., Browne, M. W., & Cai, L. (2006). Testing differences between nested covariance structure models: Power analysis and null hypothesis. *Psychological Methods, 11*(1), 19-35. doi:10.1037/1082-989X.11.1.19

Mandalaywala, T. M., Ranger-Murdock, G., Amodio, D. M., & Rhodes, M. (2019). The nature and consequences of essentialist beliefs about race in early childhood. *Child Development, 90*(4), e437-e453. doi:10.1111/cdev.13008

Marable, M. (2007) Racializing Justice, Disenfranchising Lives. New York, NY: Palgrave Macmillan.

Markley, S. N., Hafley, T. J., Allums, C. A., Holloway, S. R., & Chung, H. C. (2020). The limits of homeownership: Racial capitalism, black wealth, and the appreciation gap in Atlanta. *International Journal of Urban and Regional Research, 44*(2), 310-328. doi:10.1111/1468-2427.12873

Marte, J. (2020, July 2). *Gap in U.S. black and white unemployment rates is widest in five years*. Reuters. Retrieved February 17, 2022, from https://www.reuters.com/article/us-usa-economy-unemployment-race/gap-in-u-s-black-and-white-unemployment-rates-is-widest-in-five-years-idUSKBN2431X7

Matsuda, M. (1995). Looking to the Bottom: Critical Legal Studies and Reparations. In K. Crenshaw, N. Gotanda, G. Peller, & K. Thomas (Eds.), *Critical race theory: The key writings that formed the movement* (pp. 63–79). The New Press.

McCarter, S. (2017). The school-to-prison pipeline: A primer for social workers. *Social Work, 62*(1), 53-61. doi:10.1093/sw/sww078

Meckler, L.& Rabinowitz, K. (2019). *America's schools are more diverse than ever. But the teachers are still mostly white.* Washington Post. Retrieved February 8, 2021 from https://www.washingtonpost.com/graphics/2019/local/education/teacher-diversity/.

Meissel, K., Meyer, F., Yao, E. S., & Rubie-Davies, C. M. (2017). Subjectivity of teacher judgments: Exploring student characteristics that influence teacher judgments of student ability. *Teaching and Teacher Education*, *65*, 48-60. doi:10.1016/j.tate.2017.02.021

Mineo, L. (2021, June 3). *Racial wealth gap may be a key to other inequities*. Harvard Gazette. Retrieved February 17, 2022, from https://news.harvard.edu/gazette/story/2021/06/racial-wealth-gap-may-be-a-key-to-other-inequities/

Mittleman, J. (2018). A downward spiral? Childhood suspension and the path to juvenile arrest. *Sociology of Education, 91*(3), 183-204. doi:10.1177/0038040718784603

Morris, E. W., & Perry, B. L. (2016). The punishment gap: School suspension and racial disparities in achievement. *Social Problems, 63*(1), 68-86. doi:10.1093/socpro/spv026

Muñiz, J. O. (2021). Exclusionary Discipline Policies, School-Police Partnerships, Surveillance Technologies and Disproportionality: A Review of the School to Prison Pipeline Literature. *The Urban Review*, *53*, 735–760. doi:10.1007/s11256-021-00595-1

Nelson, L., & Lind, D. (2015). The school to prison pipeline, explained – Justice Policy Institute. Retrieved May 23, 2020, from http://www.justicepolicy.org/news/8775

OECD (2021), Poverty rate (indicator). doi:10.1787/0fe1315d-en (Accessed on 16 December 2021)

Okonofua, J.A., & Eberhardt, J.L. (2015). Two strikes: Race and the disciplining of young students. *Psychological Science*, 26, 617-624. doi:10.1177/0956797615570365

Okonofua, J. A., Paunesku, D., & Walton, G. M. (2016). Brief intervention to encourage empathic discipline cuts suspension rates in half among adolescents. *Proceedings of the National Academy of Sciences, 113*(19), 5221-5226. doi:10.1177/0956797615570365

Okonofua, J.A., Walton, G.M., & Eberhardt, J.A. (2016). A vicious cycle: A social-psychological account of extreme racial disparities in school discipline. *Perspectives on Psychological Science, 11,* 381-398. doi:10.1177/1745691616635592

Owens, J., & McLanahan, S. S. (2019). Unpacking the drivers of racial disparities in school suspension and expulsion. *Social Forces, 98*(4), 1548-1577. doi:10.1093/sf/soz095

Pathak, A. & Ross, K. (2021, June 30). The top 12 solutions to cut poverty in the United States. Retrieved December 16, 2021, from https://www.americanprogress.org/article/top-12-solutions-cut-poverty-united-states/

Pauker, K., Ambady, N., & Apfelbaum, E. P. (2010). Race salience and essentialist thinking in racial stereotype development. *Child Development, 81*(6), 1799-1813. doi:10.1111/j.1467-8624.2010.01511.x

Pearman, F. A., Curran, F. C., Fisher, B., & Gardella, J. (2019). Are Achievement Gaps Related to Discipline Gaps? Evidence From National Data. *AERA Open*, 5(4), 1-18. doi:10.1177/2332858419875440

Peller, G. (1995). Race-Consciousness. In K. Crenshaw, N. Gotanda, G. Peller, & K. Thomas (Eds.), *Critical race theory: The key writings that formed the movement* (pp. 127–158). The New Press.

Peterson, E. R., Rubie-Davies, C., Osborne, D., & Sibley, C. (2016). Teachers' explicit expectations and implicit prejudiced attitudes to educational achievement: Relations with student achievement and the ethnic achievement gap. *Learning and Instruction*, *42,* 123-140. doi:10.1016/j.learninstruc.2016.01.010

Project Implicit. (n.d.). *Project Implicit Frequently Asked Questions.* Project Implicit. Retrieved October 22, 2021, from https://implicit.harvard.edu/implicit/faqs.html.

Quillian, L., Pager, D., Hexel, O., & Midtbøen, A. H. (2017). Meta-analysis of field experiments shows no change in racial discrimination in hiring over time. *Proceedings of the National Academy of Sciences, 114*(41), 10870-10875. doi:10.1073/pnas.1706255114

Raabe, T., & Beelmann, A. (2011). Development of ethnic, racial, and national prejudice in childhood and adolescence: A multinational meta-analysis of age differences. *Child Development, 82*(6), 1715-1737. doi:10.1111/j.1467-8624.2011.01668.x

Ramey, David M. 2015. "The Social Structure of Criminalized and Medicalized School Discipline." *Sociology of Education* 88(3):181-201. doi:10.1177/0038040715587114

Ray, R., & Perry, A. M. (2020). Why we need reparations for Black Americans. *Brookings Policy*.

Reichman, N. E., Teitler, J. O., Garfinkel, I., & McLanahan, S. S. (2001). Fragile families: Sample and design. *Children and Youth Services Review, 23*(4-5), 303-326. doi:10.1016/S0190-7409(01)00141-4

Roberts, S. O., Gelman, S. A., & Ho, A. K. (2017). So it is, so it shall be: Group regularities license children's prescriptive judgments. *Cognitive Science, 41*, 576-600. doi:10.1111/cogs.12443

Rodriguez, J. (2021). *Diversity in the Classroom: Why Representation Matters.* Diverse Issues in Higher Education. Retrieved February 16, 2022 from https://www.diverseeducation.com/opinion/article/15109575/diversity-in-the-classroom-why-representation-matters.

Rosenbaum, J. (2020). Educational and criminal justice outcomes 12 years after school suspension. *Youth & Society, 52*(4), 515-547. doi:10.1177/0044118X17752208

Rosenberg, E. (2021, March 24). 'People shouldn't be afraid of the word white privilege': New labor secretary talks inequality, racism and union power in first interview. Retrieved May 3, 2021, from https://www.washingtonpost.com/business/2021/03/24/marty-walsh-labor-secretary-racism/

Roubinov, D. S., Hagan, M. J., Boyce, W. T., Adler, N. E., & Bush, N. R. (2018). Family socioeconomic status, cortisol, and physical health in early childhood: the role of advantageous neighborhood characteristics. *Psychosomatic medicine, 80*(5), 492. doi:10.1097/PSY.0000000000000585

Scott, K. E., Shutts, K., & Devine, P. G. (2020). Parents' role in addressing children's racial bias: The case of speculation without evidence. *Perspectives on Psychological Science, 15*(5), 1178-1186. doi:10.1177/1745691620927702

Selvitopu, A., & Kaya, M. (2021). A Meta-Analytic Review of the Effect of Socioeconomic Status on Academic Performance. *Journal of Education*. doi:10.1177/00220574211031978

Shapiro, B. (2021, May 2). Ben Shapiro: The circular logic of systemic racism. Retrieved May 3, 2021, from https://www.grandforksherald.com/opinion/columns/7008709-Ben-Shapiro-The-circular-logic-of-systemic-racism.

Sherman, A., Trisi, D., & Parrott, S. (2013, July 30). *Various supports for low-income families reduce poverty and have long-term positive effects on families and children*. Center on Budget and Policy Priorities. Retrieved September 15, 2021, from https://www.cbpp.org/research/various-supports-for-low-income-families-reduce-poverty-and-have-long-term-positive.

Simon, C. (2020). The role of race and ethnicity in parental ethnic-racial socialization: A scoping review of research. *Journal of Child and Family Studies*, 1-14. doi:10.1007/s10826-020-01854-7

Skiba, R. J., Arredondo, M. I., & Williams, N. T. (2014). More than a metaphor: The contribution of exclusionary discipline to a school-to-prison pipeline. *Equity & Excellence in Education*, *47*(4), 546-564. doi:10.1080/10665684.2014.958965

Skiba, R. J., Chung, C. G., Trachok, M., Baker, T. L., Sheya, A., & Hughes, R. L. (2014). Parsing disciplinary disproportionality: Contributions of infraction, student, and school characteristics to out-of-school suspension and expulsion. *American Educational Research Journal*, 51(4), 640-670. doi:10.3102/0002831214541670

Skiba, R. J., Michael, R. S., Nardo, A. C., & Peterson, R. L. (2002). The color of discipline: Sources of racial and gender disproportionality in school punishment. *The Urban Review*, 34(4), 317-342. doi:10.1023/A:1021320817372

Skiba, R.J., Horner, R.H., Chung, C.G., Rausch, M., May, S.L., & Tobin, T. (2011). Race is not neutral: A national investigation of African American and Latino disproportionality in school discipline. *School Psychology Review*, 40, 85–107. doi:10.1080/02796015.2011.12087730

Smith, B. (2020, June 30). The problem is white supremacy. Retrieved April 19, 2021, from https://www.bostonglobe.com/2020/06/29/opinion/problem-is-white-supremacy/

Strauss, V. (2019). *No systemic racism? Look at student achievement gaps in reading*. Washington Post. Retrieved January 28, 2022 from https://www.washingtonpost.com/education/2021/06/19/systemic-racism-reading-scores/.

Sullivan, L., Meschede, T., Dietrich, L., & Shapiro, T. (2015). The racial wealth gap. *Institute for Assets and Social Policy, Brandeis University. DEMOS.*

Taylor, M., Bilfield, J., Livengood, Z., & Sickmund, M. (2019). Mapping Decision Points From School Based Incidents to Exclusionary Discipline, Arrest and Referral to the Juvenile Justice System. Annotation.

The Sentencing Project (2018). Report to the United Nations on Racial Disparities in the U.S. Criminal Justice System. Retrieved May 23, 2020, from https://www.sentencingproject.org/publications/un-report-on-racial-disparities/

The Trustees of Princeton University. (2021). *About the Fragile Families and Child Wellbeing Study*. Fragile Families and Child Wellbeing Study | Princeton | Columbia. Retrieved December 15, 2021, from https://fragilefamilies.princeton.edu/about

United States Census Bureau. (2020). Quick Facts United States. https://www.census.gov/quickfacts/fact/table/US/PST045219.

U.S. Department of Justice (n.d.). Understanding Bias: A Resource Guide. *Community Relations Services Toolkit for Policing*. Retrieved May 6, 2021, from https://www.justice.gov/crs/file/836431/download#:~:text=Explicit%20bias%20is%20the%20traditional,are%20examples%20of%20explicit%20biases.

Villettaz, P., Gillieron, G., & Killias, M. (2015). The effects on re-offending of custodial vs. non-custodial sanctions: An updated systematic review of the state of knowledge. *Campbell Systematic Reviews, 11*(1), 1-92. doi:10.4073/csr.2015.1

Wacquant, L (2010) Class, race and hyperincarceration in revanchist America. *Daedulus 139*(3): 74–90. doi:10.1162/DAED_a_00024

Wallis, J. (2007). America's original sin: The legacy of White racism. *CrossCurrents*, 197-202. https://www.jstor.org/stable/24461363

Welsh, R. O., & Little, S. (2018). The school discipline dilemma: A comprehensive review of disparities and alternative approaches. *Review of Educational Research, 88*(5), 752-794. doi:10.3102/0034654318791582

Williams, J. (December 15, 2017). Diversity Spotlight: The case for inclusion in Hollywood. *SNL Kagan Media & Communications Report*. Retrieved February 16, 2021 from https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5R6V-3XG1-F19Y-C423-00000-00&context=1516831.

Wilson, V., & Rodgers, W. M. (2016, September 20). *Black-white wage gaps expand with rising wage inequality*. Economic Policy Institute. Retrieved February 16, 2022, from https://www.epi.org/publication/black-white-wage-gaps-expand-with-rising-wage-inequality/

Woodcock, R. W., McGrew, K. S., & Mather, N. (2001). *Woodcock-Johnson III Tests of Achievement*. Itasca, IL: Riverside Publishing.

Worland, J. (2020, June 11). America's long overdue awakening on systemic racism. Retrieved April 19, 2021, from https://time.com/5851855/systemic-racism-america/

World Prison Brief. (2018, November). *Highest to lowest - prison population rate*. Highest to Lowest - Prison Population Rate | World Prison Brief. https://www.prisonstudies.org/highest-to-lowest/prison_population_rate?field_region_taxonomy_tid=All.

Worrell, F. C. (2021). Who will teach the teachers? Examining implicit bias in the educator workforce. *Learning and Instruction*, 101518. doi:10.1016/j.learninstruc.2021.101518