

DIFFERENCES IN OUT-OF-SCHOOL SUSPENSIONS BETWEEN BLACK AND  
WHITE HIGH SCHOOL STUDENTS WHEN CONTROLLING FOR STUDENT FACTORS,  
SCHOOL FACTORS, AND DELINQUENCY.

By

Steven Craig Davidson

Liberty University

A Dissertation Presented in Partial Fulfilment

Of the Requirements for the Degree

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APPROVED BY:

Richard Jensen, Ed. D, Committee Chair

Michelle Barthlow, Ed. D, Committee Member

## ABSTRACT

This quantitative, correlational study aims to determine how accurately out-of-school suspensions can be predicted from a linear combination of student delinquency, in-school delinquency, and prior suspensions for Black and White high school students. Further, a causal-comparative design is used to determine if there is a statically significant difference in out-of-school suspensions between Black and White high school students when controlling for student factors, school factors, and student delinquency factors. The study consists of five guiding theories that inform two general hypotheses. The first hypothesis, referred to as the differential selection hypothesis, is guided by critical race theory (CRT) and implicit bias theory. The second hypothesis, referred to as the differential involvement hypothesis, is guided by self-control, social learning, and attachment theories. These general hypotheses are used to guide the selection of control variables to determine if there is a statistically significant difference in out-of-school suspensions between Black and White high school students. This study will fill a gap in the literature concerning the understudied differential involvement hypothesis and the fidelity of the differential selection hypothesis. Using a series of instruments and student survey to collect demographic, school, and delinquency information, data was collected from 120 White and 120 Black high school students in central California. Data was analyzed using multiple regression and an ANCOVA. A discussion of the study's limitations and future recommendations is offered following the findings.

*Keywords:* discipline gap, differential involvement, differential selection, critical race theory, implicit bias, self-control theory, social learning theory

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### **List of Abbreviations**

Adolescent Health Self-Report Delinquency (AHSRD)

Critical Race Theory (CRT)

Early Childhood Longitudinal Study (ECLS)

High percent Black school (HPBS)

Implicit Association Test (IAT)

Low/mid percent Black school (L/MPBS)

Out-of-School suspension (OSS)

National Center for Education Statistics (NCES)

## **CHAPTER ONE: INTRODUCTION**

### **Overview**

This quantitative, correlational study aims to determine how accurately out-of-school suspensions can be predicted from a linear combination of general delinquency, in-school delinquency, and prior suspensions for Black and White high school students. Further, a causal-comparative design was used to determine if there is a statically significant difference in out-of-school suspensions between Black and White high school students when controlling for student factors, school factors, and student delinquency factors. Chapter One lays out the background of the discipline gap, introduces the two silent hypotheses, and discusses the supporting theoretical frameworks. Further, the problem statement, purpose statement, and significance of the study are put forth; finally, the study's two research questions are posited. This section concludes with definitions of key terms found throughout the study.

### **Background**

The discipline gap is a long, consistent, and pervasive issue that has been well-documented in the literature for several decades (Young & Butler, 2018). The discrepancy in disciplinary sanctions between Black and White students appears as early as Kindergarten and increases with grade-level progression (Gopalan & Nelson, 2019). The U.S. Department of Education Office of Civil Rights (2018) estimates that in K-12 public schools Black male students are suspended two-to-three times more than White male students, and Black female students are suspended approximately five times more than White female students. These disparate outcomes have led researchers to a wide variety of explanatory causes (Welsh & Little, 2018). In recent years, two primary hypotheses have come to dominate the literature. The differential involvement hypothesis holds that the difference in disciplinary sanctions between

groups, typically composed of racial groups, is primarily the result of a difference in student behavior between those groups (D'Alessio & Stolzenberg, 2003; Piquero, 2008). Conversely, the differential selection hypothesis maintains that the primary mechanism driving the discipline gap is school authority figures', particularly teachers and administrators, biased selection of behavior to target and sanction one group more than another, particularly a minority group (D'Alessio & Stolzenberg, 2003; Piquero, 2008; Strake et al., 2018). The discipline gap exists within a historical and societal context that is framed by an array of divergent and, at times, conflicting theoretical models. The following section covers these three contexts: historical overview, society-at-large, and theoretical background.

### **Historical Overview**

The history of the racial discipline gap can be properly contextualized as beginning at the end of the Jim Crow era (James-Gallaway, 2018). A decade after public schools became fully integrated, a gap in the number of disciplinary incidents between Black and White students was identified (Children's Defense Fund, 1975) that has perpetuated to the end of the 2010s (Young & Butler, 2018). This gap is conceptualized as the disparate number of disciplinary incidences, as recorded by infractions, suspensions, and expulsions, between White and Black students. The gap is frequently found to be larger in urban populations although the discipline gap is relatively robust across a variety of locations (Gopalan & Nelson, 2019; Welsh & Little, 2018). There has been a deluge of educational reforms, interventions, and studies attempting to close this gap (Ritter, 2018). However, most of these attempts are reported to have had a little-to-no positive influence in closing the gap and the attempts that appear moderately effective tend to decrease disciplinary rates for Black and Whites students alike (Gopalan & Nelson, 2019), but not Black students disproportionately. Thus, the gap has persisted.

Although the direct causes of the discipline gap and its persistence are largely disputed among scholars (Welsh & Little, 2018), explanations for its existence have historically diverged into two main arguments. One of the earliest explanations for the gap is that it is primarily caused by substantially higher rates of single-parent families in the African American community (Moynihan, 1965) relative to the White community. This argument maintains that single-parent families have fewer resources and social capital to properly socialize their children, resulting in relatively higher rates of disciplinary incidents in schools. In more recent years, a counterargument has contested the single-parent explanation by placing the primary cause of racial disparities on systemic forces and racial discrimination (Bell, 1980, 1992; Crenshaw, 1989; Delgado & Stefancic, 2001; Harris, 1993). In this account, the higher rate of disciplinary incidents that Black students receive, relative to their White counterparts, is due to systemic forces within educational institutions, and institutions in general, that take the form of discriminatory legal structures, implicit bias, and racial discrimination against Black students. Both explanations are paralleled by a corresponding hypothesis; the systemic bias explanation aligns with the differential selection hypothesis, while the differences in family structure between races explanation favors the differential involvement hypothesis. This framing is typical of much of the literature regarding disparate outcomes between Black and White populations, and the discipline gap is no exception.

### **Society-at-Large**

While two primary theoretical frameworks can be found within the literature, there is very little consensus regarding the primary causes of the discipline gap (Gopalan & Nelson, 2019). However, there is little doubt that the gap exists and has significant ramifications for the lives of the individuals who directly experience it, and for society at large. Several studies have

demonstrated significant correlations between exclusionary discipline and delinquency outcomes (Gerlinger et al., 2021). Moreover, there is good reason to view the discipline gap as causally related to the achievement gap (Gregory et al., 2010; Morris & Perry, 2016; Pearman et al., 2019; Shores et al., 2020). Thus, if effective solutions are implemented in closing the discipline gap, then the achievement gap is also likely to diminish. However, solutions to the discipline gap tend to be arbitrarily implemented without a clear understanding of the underlying causes. This author intends to frame this study's problem as a lack of clarity, research, and understanding of this long-standing gap. Furthermore, this lack of clarity appears to be related to opposing theoretical frameworks that guide studies that reach divergent conclusions.

### **Theoretical Background**

Regarding the discipline gap, there exist two generalized hypotheses that divide the literature along different sets of assumptions. These assumptions tend to inform and guide the choice of variables selected by researchers to study, which are then followed by corresponding interpretations, conclusions, and recommendations. A significant portion of the education literature investigates the differential selection hypothesis which is primarily framed by critical race theory (Delgado & Stefancic, 2001) and implicit bias theory (Greenwald & Banaji, 1995). More frequent in the criminological literature is the differential involvement hypothesis, often framed by self-control theory (Gottfredson & Hirschi, 1990), social learning theory (Bandura & Walters, 1963), or attachment theory (Bowlby, 1958).

The differential selection hypothesis tends to look at variables within a system, such as structural laws, racism, or biases, and infer these mechanisms as the cause of disparate outcomes. A primary theoretical construct that took hold of the law departments in universities during the 1980s and early 90s, is Critical Race Theory (Bell, 1980, 1992; Crenshaw, 1989; Delgado &

Stefancic, 2001; Harris, 1993). This theory was quickly adopted by schools of education as well as primary and secondary schools during the mid-to-late 1990s (Ladson-Billings, 1995, 1998, 1999; Lynn, 1999). By the mid-2010s CRT had become one of the dominant theoretical constructs in education (Ladson-Billings & Tate, 2016). The central tenets of CRT include the assumption that racism is endemic in society; an emphasis on intersectionality, structural determinism, and social justice; and criticism of liberalism and incrementalism (Delgado & Stefancic, 2001).

Another theory within the systemic framework is implicit bias theory. This theory was primarily derived from the research of Greenwald and Banaji (1995). They developed an Implicit Association Test (IAT) which is intended to measure an individual's unconscious bias toward or against social objects like race (Brownstein et al., 2020). This theory underlies several studies that argue that implicit bias influences teachers and school administrators' subjective decisions about minority students, most notably Black students, and that it is this bias that creates disparate disciplinary outcomes between Black and White students (Beachum & Gullo, 2020; Dee, & Gershenson, 2017; Neitzel, 2018; Staats, 2016; Worrell, 2021).

On the other hand, the differential involvement hypothesis tends to look for variables within individuals and groups that may explain differences in behavior. Common variables include family structure (Ramberg et al., 2021), peer relationships (Ciranka & van den Bos, 2019), and cultural patterns (Anderson, 2019). The differences in these variables are thought to influence differences in behavior patterns among individuals and groups, and it is these behavioral differences that can be inferred to be the primary cause of disparate disciplinary outcomes.

One widely utilized theory within the criminological literature that frequently frames the differential involvement hypothesis is self-control theory. Developed by Gottfredson and Hirschi (1990), self-control theory posits that human beings are self-interested and will act on our base desires unless prevented from doing so by some external force. However, through socialization, this control mechanism can be internalized. As such, this theory assumes that the role of parents is fundamental to raising properly socialized and enculturated children. Attachment theory, first conceptualized by Bowlby (1958), shares many parallels with self-control theory, similarly assuming that an infant's social environment plays a pivotal role in the child's social development. Specifically, it is the sensitivity and responsiveness of the parents to an infant's cues that are thought to promote bonding with the child. Moreover, the theory states that low attachment levels between parent and child correspond with maladaptive and at-risk behaviors in children. This theory continues to be widely used in the literature and recent meta-analyses (Fearon & Roisman, 2017; Groh et al., 2017) indicate that medium to large overall effect sizes supports the theory.

Finally, differential association (Sutherland, 2010) and differential involvement are frequently informed by social learning theory. Social learning theory was introduced by Albert Bandura and Walters (1963) and later adapted within the criminology literature by Akers (1973). The theory posits that much of learning takes place through observations of behaviors and mimicry of those behaviors. Therefore, the differences in abusive or criminal behaviors that are observed within family life, peer groups, and subcultures can account for the differences in delinquent behavior between groups (Akers, 2017). These two hypotheses, "differential selection" and "differential involvement" are supported by previously described theories and are utilized throughout the study to guide the selection of variables and to interpret its findings.

## Problem Statement

The current academic literature about the discipline gap is largely investigatory of the differential selection hypothesis and is framed and greatly influenced by corresponding theoretical frameworks. However, a study published by Wright et al., (2014) purported to fully account for the Black-White gap in school suspensions when controlling for student factors, school factors, and student delinquency. According to the study, this was “a finding never before reported in the literature” (p. 257). This study squarely placed the differences in student behavior between racial groups as the primary driver of the discipline gap. A subsequent study by Morgan and Wright (2018) further demonstrated that student behavior explained the disparity in school suspensions between White students and Asian students, with White students receiving three times more suspensions than Asian students. Both studies showed that student delinquency and prior problem behaviors are primary drivers of disparities in school suspensions between races.

However, a more recent study by Huang (2020) reanalyzed the data from the Wright et al., (2014) study. Upon this reanalysis, Huang (2020) concluded that the Wright et al., (2014) study suffered from sample selection bias causing the data to be unrepresentative of the Black student population. Although both studies confirmed that differences in student delinquency between races do account for a significant portion of the suspension gap, Huang (2020) concluded that past delinquency does not completely account for the differences in suspensions between Black and White students. Nonetheless, the concession from Huang (2020) that delinquency and prior problem behaviors between student groups are relevant to account for the suspension gap is in sharp contrast to his conclusions in a previous study (Huang, 2016) that explored this topic.



Conflicting studies (Huang, 2016, 2020; Morgan & Wright, 2018; Owens & McLanahan, 2020; Rocque, 2010; Wright et al., 2014) demonstrate a lack of clarity concerning the role that student behavior plays in the well-documented racial discipline gap. A study guided by the theoretical constructs of the differential involvement hypotheses and that empirically investigates predictive variables that previous studies have demonstrated to be correlated to suspensions will help to shed light on potential causal relationships that are linked to disparities in discipline. Conclusively, the problem is that more research is needed to determine if there is a statistically significant difference in out-of-school suspensions between black and white high school students when controlling for student factors, school factors, and student delinquency (Huang, 2016, 2020; Morgan & Wright, 2018; Owens & McLanahan, 2020; Wright et al., 2014).

### **Purpose Statement**

The purpose of this quantitative, correlational study is to determine how accurately out-of-school suspensions can be predicted from a linear combination of general delinquency, in-school delinquency, and prior suspensions for Black and White high school students. Further, a causal-comparative design is used to determine if there is a statistically significant difference in out-of-school suspensions between Black and White high school students when controlling for student factors, school factors, and student delinquency factors. The correlational aspect of the study will consist of one criterion variable and five predictor variables. The criterion variable is the number of out-of-school suspensions received during the past 12 months. This variable refers to a student being removed from school property for more than one-half day, but less than the remainder of the school year. The first predictor variable is student delinquency. This variable refers to a youth's engagement in criminal activity, such as selling hard drugs, stealing, destruction of property, or violence (Pechorro et al, 2019). This is measured using the

Adolescent Health Self-Report Delinquency (AHSRD). The second predictor variable is in-school fights. This variable refers to a youth's engagement in a serious physical altercation with another person on school property. This data is gathered by a survey that asks students how many in-school fights they have engaged in during the last 12 months. The third predictor variable is in-school drug use. This variable refers to the use of drugs that are illegal for minors while on school property. This data is gathered by a survey that asks students how many times they have engaged in on-campus drug use during the last 12 months. The fourth predictor variable is covert delinquency. This variable refers to a student carrying weapons, using threats, or committing property offenses on school property. This data is gathered by a survey that asks students how many times they have engaged in covert delinquency on school grounds during the last 12 months. Finally, the fifth predictor variable is prior student suspensions. This variable refers to a student having previously received an out-of-school suspension at any point during their K-5<sup>th</sup> grade education. This data is gathered by a survey that asks students the total number of out-of-school suspensions they have had during their K-5<sup>th</sup> grade education.

The causal-comparative aspect of the study will look at the independent variable of Black or White race in relation to the dependent variable, the number of out-of-school suspensions. The control variables will consist of student factors, school factors, and delinquency factors. Student factors include race, gender, family structure, school grades, and delinquent peer scores. School factors include percent of Black enrollment and school environment scores. Delinquency factors include student delinquency scores, in-school delinquency scores, and the number of prior out-of-school suspensions. An instrument taken from the Early Childhood Longitudinal Study (ECLS) is used to measure the school factor of the school environment and the Friend's Delinquent Behavior instrument is used to measure the influence of delinquent peers.

The study consists of two groups. One group is comprised of male and female Black high school students and the other group consists of male and female White high school students. The sample is drawn from a population of two suburban school districts in central California. The nine high schools that make up the sample all have relatively similar demographic makeups. Notable differences, for purposes of this study, include the disparities in the Black student enrollment and school environment, both of which are controlled for. Descriptive statistics, multiple regression, and ANCOVA analyses will be conducted to answer the research questions of this study.

### **Significance of the Study**

This study will contribute to the literature in several ways. First, there is substantial evidence that the discipline gap is strongly correlated to the achievement gap (Gerlinger et al., 2021; Gregory et al., 2010; Lacoé & Steinberg, 2019; Pearman et al., 2019; Shores et al., 2020; Young & Butler, 2018). This study intends to isolate variables that are predictive of suspension rates to determine if differences between population behaviors explain differences in population suspension rates. As such, this study will add to the literature regarding the importance or lack of importance of these variables, thereby, suggesting potential solutions for diminishing the discipline gap, and by logical extension, aiding in the closing of the achievement gap.

Second, this study seeks to provide empirical evidence that supports and/or refutes widely used hypotheses and corresponding theoretical constructs that frequently frame the discipline gap in the literature. Within the education literature, the differential selection hypothesis commonly implies endemic racism or implicit bias as a central causal variable contributing to the unequal outcomes between Black and White students (Annamma et al., 2019; Anyon et al., 2014; Blake et al., 2017; Bryan et al., 2018; Wun, 2016), while the differential

involvement hypothesis commonly implies family structure (Hirschi, 2002), parental practices (Beckmeyer & Russell, 2017; Mafumbate & Mkhatjwa, 2020; Morgan, 2018) peer relations (Haggerty et al., 2013; Haynie & Payne, 2006), and cultural patterns (Anderson, 2019; Burnside et al., 2018; Sampson, & Wilson, 2020) as causally connected to disparate outcomes. By controlling for student factors, school factors, and delinquency—all known variables that contribute to exclusionary discipline—this study endeavors to provide empirical evidence for or against one of these competing hypotheses and corresponding theoretical frameworks. Results from this study will add more knowledge to the body of literature on potential explanatory causes for the discipline gap.

Finally, the discipline gap has significant ramifications for minority populations and policymakers; it is a topic that has been widely researched and contested (Gerlinger et al., 2021). The discipline gap is a problem that researchers and practitioners have been attempting to rectify for decades. However, greater clarification of the predictor variables involved is required to account for the well-documented disparate outcomes of exclusionary discipline between racial groups.

### **Research Question**

**RQ1:** How accurately can the number of out-of-school suspensions be predicted from a linear combination of student delinquency scores, number of in-school fights, number of times in-school drug use occurred, frequency of in-school covert delinquency, and the number of prior out-of-school suspensions for Black high school students?

**RQ2:** How accurately can the number of out-of-school suspensions be predicted from a linear combination of student delinquency scores, number of in-school fights, number of times

in-school drug use occurred, frequency of in-school covert delinquency, and the number of prior out-of-school suspensions for White high school students?

**RQ3:** Is there a difference in the number of out-of-school suspensions among Black and White high school students when controlling for student's gender, family structure, school grades, delinquent peers, school environment, school's percentage of Black student enrollment, delinquency scores, number of in-school fights, number of times in-school drug use occurred, frequency of in-school covert delinquency, and the number of prior out-of-school suspensions?

### **Definitions**

1. *Attachment theory* – A theory that maintains that child development is strongly influenced by environmental factors, most notably the degree of attachment between parent and child (Bowlby, 1958).
2. *Differential involvement hypothesis* – A hypothesis that posits that behavioral differences in offending between minority and White populations explains the racial discipline gap (Piquero, 2008).
3. *Differential selection hypothesis* – a hypothesis that proposes that authorities within systems of justice treat minority and White offenders differently, resulting in disproportionate discipline rates (Piquero, 2008).
4. *Discipline gap* – This is the difference in discipline incidents, as reflected by out-of-school suspensions, between Black and White students (Gopalan & Nelson, 2019).
5. *Family structure* – Family structures can come in a myriad of combinations; for this study, “family structure” includes two categories: (1) the child currently resides with

- both biological parents who are married, or (2) the child does not currently reside with both biological parents, who are married (Pribesh et al., 2020).
6. *Incrementalism* – The concept that minority populations will, over time, incrementally attain equality within a society. This concept is rejected as a central tenet of CRT (Bell, 1980).
  7. *Intersectionality* – The study of how intersecting social identities, such as those based on race, class, or gender, combine within a person or group to confer overlapping sociological advantages and/or disadvantages (Crenshaw, 1989).
  8. *Parental management* – This refers to parents’ awareness, monitoring, and supervision of their child’s whereabouts, peer affiliations, and how free time is spent. It also refers to parents’ communication of rules and consistent follow-through on rule enforcement and punishment if rules are broken (Gibbs et al., 1998).
  9. *Peer delinquency* – The affiliation of deviant peers whose proximate influence promotes and increases engagement in risky behaviors including aggression, violence, drugs, truancy, alcohol abuse, and crime. (Zhu et al., 2015).
  10. *Self-control* – The ability to govern one’s own behavior. Individuals with low self-control act impulsively and do not consider the consequences or long-term effects of their actions. According to Gottfredson and Hirschi (1990), these individuals are “impulsive, insensitive, physical (as opposed to mental), risk-taking, short-sighted, and nonverbal” (p. 90).
  11. *Self-control theory* – A theory in criminology which maintains that individuals with low self-control are more prone to engaging in criminal behaviors (Hirschi, 2002).

12. *Social justice* – Social justice is the belief that laws are equally applied to all populations of society, regardless of race, gender, ethnicity, or sexual orientation (Bell, 1992).
13. *Social learning theory* – A theory that maintains that learning is an active process that primarily occurs through observation and imitation of modeled behavior (Bandura & Walters, 1963).
14. *Structural determinism*- The philosophical view that structural factors and processes necessarily determine outcomes. (Cabrera, 2018).
15. *Student delinquency* – A youth's engagement in criminal activity, such as using or selling hard drugs, stealing, destruction of property, or violence (Pechorro et al., 2019)

## **CHAPTER TWO: LITERATURE REVIEW**

### **Overview**

A review of the literature was conducted exploring the problem of the discipline gap within a high school context. This review examines the traditional Black/White gap in disciplinary incidents and suggests that disparities may, in part, be accounted for by differences in behavior between racial groups. Two general hypotheses referred to as the differential selection hypothesis and the differential involvement hypothesis, are brought forth, along with five widely recognized theories that inform these hypotheses. These hypotheses and frameworks are discussed and utilized to synthesize the current literature on the racial discipline gap. A close examination of the literature reveals that studies have inconsistent and outright conflicting explanations for the existence of disparate disciplinary outcomes for Black and White students. This gap in the literature justifies the current quantitative, predictive correlational, and causal-comparative study.

### **Theoretical Framework**

The two hypotheses that guide this study are the differential selection hypothesis and the differential involvement hypothesis. The differential selection hypothesis is framed by CRT (Delgado & Stefancic, 2001) and Implicit Bias Theory (Greenwald & Banaji, 1995). The differential involvement hypothesis is framed by self-control theory (Gottfredson & Hirschi, 1990), social learning theory (Bandura & Walters, 1963), and attachment theory (Bowlby, 1958). The following section discusses these widely utilized hypotheses, how they are supported by their different and, at times, conflicting frameworks, and how these frameworks are relevant to the current study.

### **Structural and Systemic Theories**



“Social structures” include laws, policies, and hierarchical structures which orient, form, and organize society (Whitmeyer, 1994). “Social systems” are comprised of individuals and groups that, through their social interactions and relationships, generate a culture of norms, values, and patterns of thinking and behaving that exist within and across social structures (Bonilla-Silva, 2021b). Thus, social structures consist of formal constructs, such as laws and hierarchy, while social systems refer to “networks of individuals acting in concert” (Bonilla-Silva, 2021b, p. 519). Under the umbrellas of structural and systemic theories resides theories of structural and systemic racism.

“Structural racism” is a historically informed concept constituted by prior and present-day codifications of law, policies, and hierarchical structures perpetuated by societal, political, and economic systems (Bonilla-Silva, 2021b). According to the critical race theory, race-based discriminatory structures are partially, and at times fundamentally (Merolla & Jackson, 2019), responsible for distributing economic, social, psychological, and cultural advantages and disadvantages along racial lines (Bonilla-Silva, 2021b). Although the literature regularly uses the terms “systemic racism” and “structural racism” interchangeably (Groos et al., 2018), the concept of systemic racism more frequently refers to the ubiquitous and endemic nature of racism within contemporary Western societies, most commonly in America. Contemporary references to systemic racism commonly conceive of it as a network that involves the total number of participants that comprise the system (Bonilla-Silva, 2021). Through a systemic racism lens, being part of a race is seen as central to one’s self-concept and fundamental to how individuals and groups form beliefs, develop attitudes, and engage in behaviors toward those of their race and towards those of other races.

A consistent theme of structural and systemic racism is that emphasis is taken off overt racist acts or individual racist actors and is placed instead on covert or unconscious practices and procedures within and among organizations (Carmichael & Hamilton, 1992). Further, these theories tend to frame causal explanations for outcomes as the results of the accumulation of discrimination, rather than any one discriminatory act or actor (Blaisdell, 2016); however, there are exceptions to this approach. According to CRT, the influence of systemic racism is highly impactful within the everyday lives of minorities and is regularly cited as being significantly contributory or outright causally connected to the disparities in outcomes between races (Annamma et al., 2019; Blake et al., 2017; Bryan et al., 2018; Butler-Barnes & Inniss-Thompson, 2020; Merolla & Jackson, 2019; Wun, 2016). Both critical race theory (CRT) (Delgado & Stefancic, 2001) and implicit bias theory (Greenwald et al., 2016) are systemic theories that are commonly utilized to frame inequities between groups.

### ***Critical Race Theory***

Critical race theory was not initially recognized or intended to be a *theory* as such. CRT was originally used as a critique of the concept of “colorblindness” within the context of critical legal studies (Cabrera, 2018), and thus has its roots in the writings of legal scholars, most notably in the works of Derrick Bell (1980) and Kimberle Crenshaw (1989). The theory was finally consolidated and recognized as such in the work of Delgado and Stefancic (2001). Although the theory is primarily couched in legal studies, it has since moved into the field of education; this move occurred at the secondary and post-secondary levels synonymously during the late 1990s (Ladson-Billings, 1998, 1999; Ladson-Billings & Tate, 2016; Lynn, 1999). Although the concept of “Whiteness as property” was introduced by Harris in 1993, it was not until the mid-to-late 2000s that scholars began to stress the conceptual importance of “Whiteness” as a central

concept within the theory (Rogers & Mosley, 2006). In more recent years, CRT has had an increased presence in the field of education (Bennett et al., 2019; Ladson-Billings & Tate, 2016). Most recently, the literature documents scholarly arguments about the central components that constitute the present-day understanding of the theory; most widely contested are disputes among Marxists, who critique the role of “White supremacy” within the theory, as depicted in the writings of Cole (2017) and Cabrera (2018).

The current iterations of CRT, both in the legal field model and in the field of education, have several overlapping concepts. The theory’s ontological assumptions are grounded in collectivism (Roy, 2017) and social constructivism (Treviño et al., 2008); it is epistemically framed by a significant degree of skepticism towards objective knowledge (Delgado & Stefancic, 2001); and its ethics are informed by a radical egalitarianism in the form of equality of outcomes (Butcher & Gonzalez, 2020), commonly referred to as “equity.” Several central vocabulary terms within the theory have distinct meanings from their traditional understandings; this is particularly evident with the terms: “racism,” “white supremacy,” and “justice.” Some central tenets of CRT are: (a) racism is endemic (Bell, 1980, 1992); (b) “interest convergence” (Bell, 1992); (c) a critique of liberalism and meritocracy (Delgado & Stefancic, 2001; Gotanda, 1991); (d) “social justice” (Bell, 1980); (e) “intersectionality” (Crenshaw, 1989); (f) structural determinism and a critique of incrementalism (Delgado & Stefancic, 2001); and (g) “Whiteness as property” (Harris, 1993).

**Racism is Endemic.** Perhaps *the* central concept of CRT is the belief in endemic racism. This is the belief that racism is a normal and natural state of human affairs (Bell, 1980). In other words, racism is not an aberration within social systems, it is the ordinary condition of societies. As a result, the dominant racial group will racialize and subordinate the minority group. This

conception of racism is dovetailed by the concept of systemic racism, in that all people are regularly involved in racism, even if they did not intend to engage in racism or are unaware of doing so (DiAngelo, 2018). Even more, according to theorists, systemic racism can never be fully eradicated (Burrell-Craft, 2020); as such, it is an uninterrupted and perennial feature of societies. This modern understanding of racism differs from the traditional conception, which views racism the belief that racial differences correspond with differences in traits, characteristics, and abilities that are inherently superior or inferior, typically leading to intentional prejudicial, discriminatory, or oppressive actions towards the “inferior” race (Ridley, 2005). Likewise, the term “White supremacy,” traditionally understood as the belief that the White race is superior to that of other races, is understood within CRT to be the use of social, economic, and political systems by Whites to repress non-Whites for the purposes of maintaining power (Ridley, 2005).

**Interest Convergence.** According to Bell (1992), this phenomenon occurs when racial equality is improved and/or maintained only as a byproduct of the dominant group’s and the non-dominant group’s interests converging; however, this improvement is not intended to be an objective of the dominant racial group. An illustration of this point in an educational context is when schools and universities implement inclusive, racially diverse, and equitable policies, such as restorative justice programs, because it is in the interest of the White-dominated institutions to do so; thus, the interests of the minority group and the dominant group have converged.

**A Critique of Liberalism and Meritocracy.** A fundamental component of the working philosophy of CRT is the critique of liberal principles, including, objectivity, “colorblindness,” meritocracy, and conceptions of equal opportunity (Burrell-Craft, 2020). This critical view replaces objectivity with radical subjectivity and relativism. Much of this philosophical

perspective is informed by postmodernist axioms, which sets power, relativism, and subjectivity as primary metaphysical presuppositions (Hutcheon, 2003). Merit is not viewed as a genuine artifact, because the dominant group determines what is valued (Delgado & Stefancic, 2001). Furthermore, because CRT assumes that racism is permanent, taking a colorblind or race-neutral perspective is thought to ignore historical effects, such as slavery, segregation, and legalized oppression (DeCuir & Dixson, 2004). Finally, after rejecting the concept of equality of opportunity for purposes of achievement, the goal of many proponents of CRT has become equality of outcomes between populations (Kendi, 2019). While the terms “equality” and “equity” are commonly perceived to be synonymous, once again, the terminology of CRT often conflicts with traditional understandings of these concepts. Where “equality” is traditionally understood as the belief that all persons and groups should have equal access to opportunity, the CRT notion of equality maintains that all social, educational, economic, and political outcomes should be equal for all groups, a belief referred to in the literature as “equity.”

**Social Justice and Praxis.** A significant feature of CRT is a commitment to “social justice.” The CRT-informed version of “justice” contrasts with the conventionally held notion of justice as an equal application of the law. Instead, CRT’s “social justice” asserts that social values like wealth, income, liberty, opportunity, inclusion, political participation, and self-respect ought to be distributed equally for the benefit of all; however, the principle of equal distribution can be overridden when the unequal distribution of social goods can be justified as a collective good (Lynn & Dixson, 2021). In short, according to CRT, “social justice” is the distribution of all social goods for the purpose of creating and maintaining equal outcomes for all racial and intersecting groups. Further, CRT has a strong focus on a concept referred to as “praxis.” This concept implores proponents of CRT to move beyond an abstract, scholarly approach to the

theory. “Praxis” stresses the importance of activism, policy-making, and rhetorical persuasion as a means of rectifying racial and social inequities (Bell, 1980).

**Intersectionality.** Introduced by Crenshaw (1989), “intersectionality” considers how the intersection of different marginalized social identities, such as being both Black and a woman, can compound the disadvantages of multiple socially marginalized categories within a single subordinated identity. In an educational context, proponents of CRT would point to the fact that the difference in out-of-school suspension rates is even greater between Black and White girls than between Black and White boys, and this difference is greater still for Black girls with individual educational plans (Annamma et al., 2019). In this sense, intersectionality posits that a unique social group can be made up of multiple marginalized social groups when those categories intersect.

**Structural Determinism and the Critique of Incrementalism.** Structural determinism holds that structural factors determine outcomes for marginalized groups (Delgado & Stefancic, 2001). As a result of structural determinism, supporters of CRT frequently critique the concept of, and belief in, incrementalism. This concept refers to the belief that small structural and systemic changes over time will eventually lead to racial equality. As such, proponents of CRT promote fundamental and dramatic destructuralization of systems of power (Delgado & Stefancic, 2001).

**Whiteness as Property.** Introduced by Harris (1993), this concept takes a historically informed perspective which views “Whiteness” as deeply associated with “assumptions, privileges, and beliefs” that are considered culturally valuable (p. 1713). This CRT tenet is also deeply informed by Marxist assumptions (Roediger, 2019), transmuting the concept of private ownership of property into the concept of private ownership of “Whiteness” as a cultural (rather

than economic) artifact (Harris, 1993). As such, the dominant White culture has the power to exclude non-white cultures, just as private property owners have the power to exclude non-owners from their private property.

While CRT is widely used in both legal and educational studies, it is not without its conceptual and empirical problems. Many of the themes of CRT are coherently grounded in the philosophical assumptions of the theory, but there is debate among scholars as to the internal consistency among the tenets of the theory (Cabrera, 2018; Cole, 2017; Mocombe, 2017). For example, the theory stresses the importance of social justice and racial equality; however, the anti-meritocratic concept within CRT may be conceptually inconsistent or directly contradictory when applied to Jewish and Asian minorities (Hudson, 2018). Along with internal coherency issues, some detracting scholars point to the lack of rigorous empirical evidence and testability of the theory (Sablan, 2019), while others have criticized the heavy influence of social constructivism and skepticism (Farber & Sherry, 1997), which may replace empirical evidence, fact, and objectivity with a radical subjectivity and storytelling, thereby rendering several tenets of the theory unfalsifiable (Lakatos, 1978).

### ***Implicit Bias Theory***

The contemporary manifestation of implicit bias theory comes from several prior formative theories and studies. However, the most recognized formulation of the theory resides in the work of Greenwald and Banaji (1995). Their development and utilization of the Implicit Association Test (IAT) is the most widely used instrument for measuring implicit bias (Brownstein, 2020). The definition of “implicit bias” that Greenwald and Banaji (1995) put forth is that it is conceptualized as “introspectively unidentified (or inaccurately identified) traces of prior experience that mediate favorable or unfavorable feeling, thought, or action toward social

objects” (p.8). This definition puts the source of bias on environmental factors which individuals have unconsciously stored and which function as intermediaries that influence the attitudes of those individuals toward others. Although there is scholarly debate regarding the specific cognitive nature of these biases (Holroyd et al., 2017), the most currently accepted theory is that they are both unconscious and somewhat malleable; however, there is inconsistent empirical evidence concerning the latter (Forscher et al., 2019; Vuletich & Payne, 2019).

Implicit bias among school faculty, staff, and administration is frequently referenced in the literature as being a significant influential factor that greatly contributes to academic and disciplinary disparities between Black and White students (Beachum & Gullo, 2020; Carter et al., 2017; Neitzel, 2018; Staats, 2016; Worrell, 2021). However, a review of the literature suggests that the charge that implicit bias, as measured by the IAT, has such a direct and overarching influence on disparate student outcomes is, perhaps, inflated and premature (Oswald, et al., 2013). Studies indicate that the IAT’s test-retest reliability and predictive validity scores are problematically inconsistent (Payne & Vuletich, 2017; Rae & Olson, 2018). A meta-analysis by Oswald et al. (2013) on the effectiveness of the IAT to measure the concept of implicit bias found small effect sizes of ( $r = .148$ ), demonstrating how little practical use the IAT has in predicting behaviors; however, the debate still rages with regards to its accuracy and usefulness (Bartlett, 2017; Greenwald et al., 2016; Oswald, et al., 2015). The difficulty of capturing the conceptual phenomenon of implicit bias is also reflected in the lack of success of implicit bias training sessions, in that they appear to have little or no effect on the behaviors of the individuals who partake in the sessions (Forscher et al., 2019; Lai et al., 2016; Onyeador et al., 2021). Based on this review of “implicit bias,” one must conclude that the empirical evidence



does not appear to support this concept as a reflection of stable qualities that are the source of discriminatory behavior (Brownstein et al., 2020).

### **Developmental Theories**

As opposed to systemic theories such as CRT and implicit bias theory, which tend to frame overarching social structures as the primary cause of disparate outcomes between groups, developmental theories of psychology frame localized environments and genetic factors as the primary causes of individual and group outcomes. Developmental theories are frequently divided into cognitive, behavioral, and social theories (Brummelman & Thomaes, 2017). These frameworks provide theoreticians and researchers with scaffolding to engage in the sense-making of systematically collected data (Lerner, 2018). Within the context of the differential involvement hypothesis, three social-developmental theories are used to frame this study, including self-control theory, social learning theory, and attachment theory.

#### ***Self-Control Theory***

Self-control theory was introduced by Gottfredson and Hirschi (1990). The theory posits that the primary factor that determines delinquency and criminal behavior is low self-control within the individual (Gottfredson, 2017). Self-control is conceived of as existing on a continuum. Individuals with higher self-control demonstrate the ability to abstain from short-term desires in order to focus on long-term goals (Hirschi, 2002). The theory maintains that the early stages of childhood have a significant influence on the individual's development of self-control (Gottfredson & Hirschi, 1990). Further, this theory is strongly supported by empirical evidence (Pratt & Cullen, 2000; Mikuška & Kelly, 2017; Vazsonyi et al., 2017), and maintains that once a level of self-control has been established, around the age of ten, it remains stable throughout one's lifetime (Hirschi, 2002). The most significant factors that mediate self-control

and delinquency include age, family, school, peers, and opportunities for crime (Gottfredson, 2017; Hirschi, 2002).

The theory's philosophical assumptions are rooted in the Hobbesian belief that humans are primarily self-interested and have a natural tendency to engage in self-interested behaviors unless inhibited from doing so (Gottfredson & Hirschi, 1990). As the theory was initially grounded in bonding theory and social-control theory (Hirschi, 1969), it maintains that the primary mechanism that influences the abstention from self-interested behaviors is the familial bonds between parent and child (Gottfredson & Hirschi, 1990). The literature demonstrates that delinquency and parental bonds are intrinsically tied to each other (Gibbs et al., 2003; Gottfredson, 2017). Thus, it is the quality of the parental-child relationship, as well as the influence of peer groups and school ties, that moderate self-control and delinquent behaviors.

### ***Social Learning Theory and Attachment Theory***

Albert Bandura questioned the behaviorist assumption that learning was purely a behavior and suggested that cognition plays a pivotal role in learning (Bandura & Walters, 1963). Social learning theory posits that learning takes place through cognitive processes within a social context. These processes include observation of behavior, extraction of information, and experiencing the outcomes produced as a result of this behavior-informed learning (Bandura & Walters, 1977). Thus, the nature of learning is not passive, as the behaviorists assumed, but active. Although Bandura stressed the importance of the social environment, he did also maintain the behaviorist tenet that reinforcement and punishment do encourage the reproduction or annihilation of behaviors (Bandura & Walters, 1977). In essence, the theory postulates that observation and imitation are vital in the learning process and central to forming behaviors.

Social learning theory is a widely applied paradigm within the field of criminology and adolescent delinquency (Akers & Jennings, 2019). There have been many empirical studies and a handful of meta-analyses that have consistently shown medium-to-large effect sizes correlating social learning with delinquency and criminal behaviors (Kruis et al., 2020; Pratt et al., 2010). Akers & Jennings (2019) state that, while many variables have been empirically tested to predict delinquent behavior, only a few substantially and consistently do. These variables consist of previous deviant or anti-social behaviors, parental factors, deviant peer associations, deviant attitudes, and low-school achievement (Akers & Jennings, 2019).

There are substantial parallels between self-control theory and attachment theory. Self-control theory focuses on abnormal development, assuming that when the affectional bonds between child and parent are not strong, they cease to have an inhibiting influence on delinquent behaviors (Gottfredson, 2017). Attachment theory, however, considers both normal and abnormal developmental patterns and focuses on the importance of parent-child attachment, particularly during the child's infancy (Bowlby, 1958). Attachment theory, being rooted in ethnology and evolutionary biology, posits that the environment plays a fundamental role, if not decisive role in determining behavioral outcomes (Hoeve et al., 2012). In particular, it is the parental sensitivity to infant cues and communications that is thought to determine the attachment-promoting parental behaviors that will shape the infant's learning environment (Fearon & Roisman, 2017). Several meta-analyses have found that infant and parental attachment stability is significantly correlated to children's adaptive or maladaptive behavior, with a wide range of effect sizes spanning from ( $r = .47$ ) in the earliest meta-analysis to ( $r = .26$ ) in the most recent (Fearon & Roisman, 2017). While this range is relatively vast, all coefficients are significant and are comprised of medium-to-large sizes. In short, attachment theory is a

widely accepted framework that is likely to be useful in accounting for differences between groups.

**Parenting.** All three of these theories —self-control theory, social learning theory, and attachment theory —view parental-child relationships as critical in child development. Studies framed by self-control theory consistently find that parenting and child-parent relationships predict children's self-control (Gottfredson, 2017; Gülseven et al., 2021, Hay, 2001; Wright et al., 2008). Through the lens of attachment theory studies have found that parental supervision or monitoring, low parental-child involvement, and parental rejection of the child are significant predictors of delinquent and criminal behaviors (Farrington, 2020; Shaw & Gilliam, 2017).

Within the context of social learning theory, overly harsh or unpredictable parental discipline and parental disharmony consistently predict delinquent and criminal behaviors in adolescents and young adults (Farrington, 2020). Moreover, a meta-analysis linking attachment to low-quality parenting and delinquency has shown an overall effect size of 0.18 (Hoeve et al., 2012). A similar 2009 meta-analysis study by Hoeve et al. (2009) found that two dimensions of parenting were particularly correlated to child delinquency. Parental monitoring showed an effect size ranging between ( $r = .23$ ) to ( $r = .31$ ), while parental rejection, hostility, and neglect showed effect sizes ranging from ( $r = .26$ ) to ( $r = .33$ ), medium to large effects. Both meta-analyses showed that fathers have a greater influence on inhibiting their sons' delinquent behaviors than do mothers (Hoeve et al., 2009, 2012). A more recent meta-analysis found similar results for children's school behavior, where delinquency was negatively correlated with parental involvement (Barger et al., 2019). Finally, a 2020 meta-analysis by Tehrani and Yamini found that effective parenting has a negative small, but statistically significant effect on the anti-social behaviors of children. While a few of these studies demonstrate smaller effect sizes, several

show moderate-to-large effects, observations which are rare within the social sciences and give credibility to these frameworks. This body of evidence demonstrates that there exists an important link between family structures, parenting, and delinquency, and corroborates self-control theory and attachment theory.

**Peer Influence.** Through the lens of attachment theory, research suggests that the quality of a father-child relationship is associated with a child's self-control. Further evidence shows that lower self-control is also strongly correlated with deviant peer association (Liu et al., 2020). The quantity and degree of deviant peer association have been demonstrated to be a significant predictor of adolescent delinquency (Akers & Jennings, 2019; Keenan et al., 1995). According to social learning theory, deviant peers will model deviant behaviors, which in turn will be imitated by associated group members. Moreover, social reactions to deviant behaviors can be reinforced by acceptance of such behaviors; thus, deviant peer behavior is highly influential for catalyzing and maintaining delinquent acts (Akers & Jennings, 2019). A meta-analysis by Kruis et al., (2020) used the theoretical construct of social learning theory to explain substance abuse with the moderator of peer influence and associations. Although the causal direction is debated, the study demonstrated medium-to-large correlational effect, indicating that the social learning theory model is a reliable construct in framing the relationship between delinquent peer associations and influence and delinquent behaviors.

Another meta-analysis conducted by Pratt et al., (2010) indicated that, through the lens of social learning theory, peer behaviors were the most significant predictor of delinquent behavior, exceeding every other variable, including parent behaviors. Another more recent meta-analysis (Gallupe et al., 2019) demonstrated that both delinquent peer selection and delinquent peer influence are positively associated with offending. Although the literature demonstrates robust

evidence for social learning theory, peer influence, and its correlations to delinquent behavior, there continues to be debate concerning the causal pathways (McGloin & Thomas, 2019). It is unclear if delinquent adolescents select deviant peers or if the deviant peers influence peer members to further engage in delinquent behaviors. However, as indicated previously, there is some research indicating that parent relationships moderate self-control, which in turn correlates to deviant peer associations (Liu et al., 2020). To conclude, the literature indicates that social learning theory provides researchers with a robust theory to understand peer influence, while self-control theory and attachment theory provide researchers with empirically-backed frameworks for parental factors that significantly contribute to adolescent delinquency and school discipline.

### **Related Literature**

The nature of the racial discipline gap, reform measures to address the gap, explanations for the gap, and the differential selection and involvement hypotheses are explored in the following section. Specifically, the connections between exclusionary discipline, academic achievement, and delinquency outcomes are examined. The literature that is explored concerns the developmental variables of family structure, parental management, self-control, delinquency, and peer delinquency, and their relationships to school discipline. Finally, the literature that explores the structural and systemic variables, such as systemic racial bias and its connection to school discipline is considered.

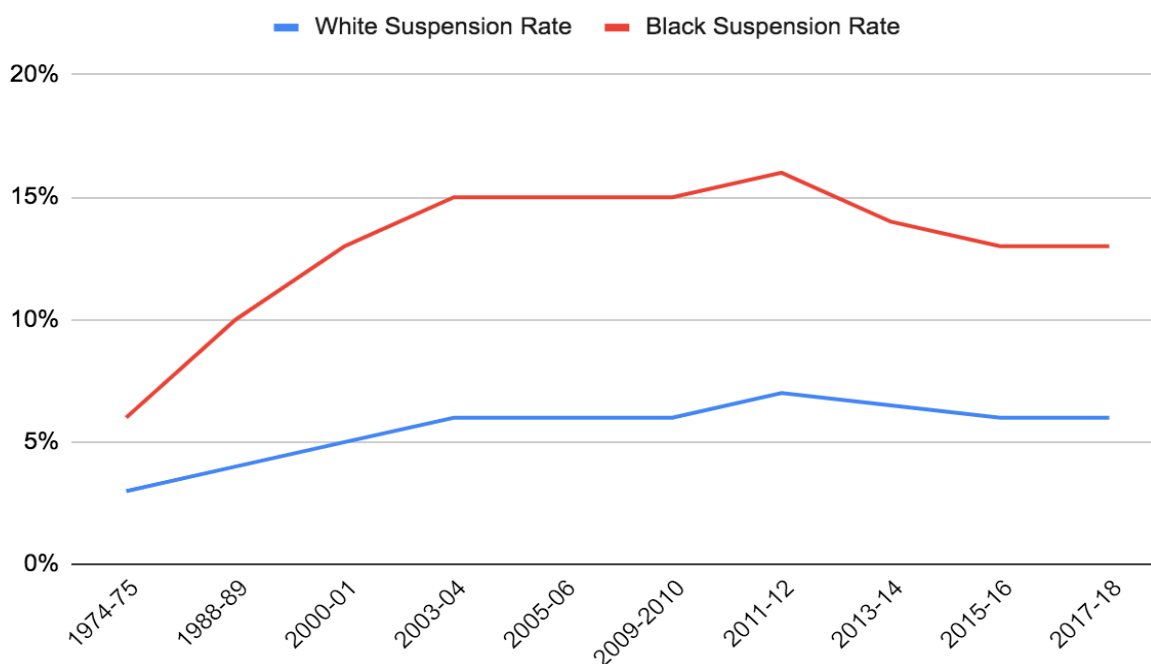
### **The Discipline Gap**

The racial discipline gap is a widely researched and documented phenomenon (Welsh & Little, 2018). The gap between White and Black students' disciplinary occurrences is substantive in scope and has been robust since, at least, the mid-1970s (Defense Fund, 1975). Although the

width of the gap varies among studies, a metaanalysis conducted by Young and Butler (2018) concluded that Black students are two-and-a-half times more likely to receive discipline than White students. According to the U.S. Department of Education, Office for Civil Rights (2018), the earliest records state that Black students were suspended twice as often as Whites in the mid-1970s. The gap consistently widened during the 1980s and 90s, before reaching a relatively level plateau by the early 2000s, when Black students were suspended approximately two-and-a-half times more than Whites. Suspension rates peaked for both Black and White secondary students in 2011-12, and the gap slightly decreased from 2013 to 2018 (see figure 1). Within the literature, the most common form of exclusionary discipline that has been examined is out-of-school suspensions (Bowman-Perrott et al., 2013).

### Figure 1

*Rate of Secondary School Suspensions by Race*



During the 1990s researchers began to recognize that the use of out-of-school suspension as a means of discipline was significantly increasing, and evidence began to mount that Black students were disproportionately affected (Losen & Skiba, 2010). Scholars began to draw parallels between the criminal justice system and the educational system (Wald & Losen, 2003). Much of the increase in school discipline is thought to be related to the increase in zero-tolerance policies that were implemented in schools across the nation to decrease violent acts on school campuses and increase child safety (Hoffman, 2014).

Though there is relatively little research that explores the role that discipline policies play in the discipline gap (Camacho & Krezmien, 2020), some research indicates that school discipline policies are largely comprised of punitive language that highlights the use of exclusionary discipline (Fenning et al., 2008). Moreover, while it is common for school staff to refer students for discipline, school administration plays a key role in interpreting, adjudicating, and administering the use of exclusionary discipline (Fenning et al., 2008; DeMatthews et al., 2017; Williams et al., 2020).

The most cited behavioral infraction that results in an out-of-school suspension is insubordination (Heilbrun et al., 2015). This is a general category that encapsulates a wide variety of offenses, including truancy, willful defiance, disrespectful and disruptive behaviors, destruction of property, and theft. In a widely cited article, Skiba et al., (2002) found that, relative to White students, Black students were more frequently referred to the office for behaviors that required more subjective interpretation by the teacher, such as disrespect, threats, and excessive noise. A 2015 study by Forsyth et al., reaffirmed these findings but also found substantive conflicting evidence —curiously under-reported —which showed that Black students were overrepresented in all but one of the eight categories for behavioral infractions. Most



notably, the study showed that Black students engage in violent behaviors three times more than White students, including being four times more likely to engage in fights while under school supervision. A more recent study by Fenning and Jenkins (2018) consolidated previous research on teachers' and administrators' decisions to issue discipline to minority students for more subjective offenses, and found that this is a common practice that disproportionately affects minorities. This study concludes by recommending implicit bias and empathy training for all staff and administration.

While there is debate among scholars regarding the extent and the causal Direction of the link between exclusionary discipline and negative life outcomes, it is clear that such a link exists. Some of the negative outcomes associated with exclusionary discipline include poor academic outcomes (Anderson et al., 2019; Pearman et al., 2019), an increase in future suspensions (Fisher et al., 2021), delinquency (Gerlinger et al., 2021), criminality (Novak, 2018, 2019), and imprisonment (Barnes & Motz, 2018). As the influence of these associations appears to be race-neutral, and Black students disproportionately experience exclusionary discipline, they are also disproportionately likely to experience these negative associations. The following subsection unpacks these undesired outcomes.

### ***Exclusionary Discipline, The Discipline Gap, and Academic Outcomes***

Evidence shows that a robust inverse relationship exists between exclusionary discipline and academic achievement; further, a positive relationship exists between exclusionary discipline and school dropout (Noltemeyer et al., 2015; Taylor, et al., 2022). Studies suggest that schools with higher rates of suspensions are also more likely to have lower math and reading scores (Lacoe & Steinberg, 2019) and a lower rate of college attendance (Jabbari & Johnson, 2020). Conversely, Skiba et al., (2014) found that students who were high academic achievers were also

less frequently subject to out-of-school suspension, and a 2019 study by Duckworth et al., demonstrated similar findings by consolidating longitudinal evidence indicating that self-control was significantly connected to academic achievement. The evidence suggests that exclusionary discipline has an equally deleterious influence on both Black and White students' academic achievement (Noltemeyer et al., 2015; Young & Butler, 2018). However, disparate discipline rates between racial groups indicate that Black students are more adversely affected by the strong correlation between school discipline and academic achievement (Merolla & Jackson, 2019).

The racial discipline gap and the racial achievement gap are well-documented phenomena; however, only in recent years have scholars begun to theorize that the two gaps are likely to be related to each other (Gregory et al., 2010; Pearman et al., 2019). Using national data Pearman et al., (2019) found that school districts with larger gaps in racial discipline also have correspondingly large gaps in racial academic achievement. Along these same lines, a study by Morris and Perry (2016) found that suspensions are responsible for one-fifth of the Black-White disparities in academic performance. Further, a 2020 study by Shores et al., suggested that underlying socioeconomic variables, like family income and parent education, were significantly predictive of a wide variety of educational outcomes between Black and White students, most notably disciplinary action and academic achievement. Although there is debate regarding the primary underlying variables and direction of causation, these studies suggest that closing the discipline gap is likely to diminish the achievement gap.

### ***Exclusionary Discipline, Delinquency, and Criminality***

Along with negative associations between school discipline and academic achievement, exclusionary discipline has also been linked to other undesirable outcomes, such as future increases in delinquency and criminality (Gerlinger et al., 2021). However, the research is mixed

regarding whether school discipline is simply reflective of student behaviors patterns or if it has a causal role in increasing future criminality. A meta-analysis by Gerlinger et al., (2021) concluded that exclusionary discipline may inadvertently increase delinquency in youth and that this influence is consistent across all sub-groups, including race and gender. However, this study, and others like it, do not account for mediating factors between exclusionary discipline and delinquency. One of the most widely empirically-supported and universal factors would be the age-crime curve (Farrington, 1986; Hirschi & Gottfredson, 1983; Kim et al., 2015; Le Blanc, 2020). This well-documented phenomenon shows that criminal offending, defined as the transgression of a rule or law, rapidly increases from the age of 12, reaches an apex for 16 to 19-year-olds, and declines during an adult's early 20s (Farrington, 1986; Le Blanc, 2020). This factor is likely a salient confounding variable for studies that attempt to demonstrate that exclusionary discipline is a significant contributor to an increase in delinquency.

Other scholars (Barnes & Motz, 2018) have statistically demonstrated the correlation between the disparate issuance of exclusionary discipline in schools and the disproportionate number of Blacks in prison. Within the literature, this correlation is commonly referred to as the school-to-prison pipeline (Schiff, 2018; Wald & Losen, 2003; Welch et al., 2022). Although not without criticism for being undertheorized (McGrew, 2016; Rocque & Paternoster, 2011) and deterministic (Kupchik, 2014), the school-to-prison pipeline is frequently found framing the titles of several studies within the literature. Many of these studies demonstrate that students in general (Novak, 2018, 2019), or students within a particular school (Bacher-Hicks et al., 2019), who have higher suspension rates are also more likely to be incarcerated in the future. While a portion of the literature on this topic tends to imply racial bias as a significant explanatory mechanism for disparate discipline and incarceration outcomes (Welch et al., 2022), other

studies framed by CRT are quite explicit about this connection (Allen & White-Smith, 2014; Grace & Nelson, 2018). However, even though there are significant correlations between exclusionary discipline and incarceration, this does not infer causation (Wald & Losen, 2003) and a variable that may drive both outcomes is behavior.

Although studies frequently show that exclusionary discipline is generally positively correlated with future criminal offending, a longitudinal study by Morgan (2018) found that receiving a single out-of-school suspension was a relatively weak or inconsequential predictor of future criminality. However, the study also found that students who accumulated a disproportionate number of out-of-school suspensions or who were expelled from school were much more likely to engage in future criminal acts. A more recent study by Novak and Fagan (2022) showed similar results. These findings suggest that receiving exclusionary discipline may not necessarily contribute to an increase in future delinquency or criminal offending, but instead reflect stable antisocial behavioral patterns that persist from early childhood into adulthood. As all the previously cited negative outcomes appear to be related to exclusionary discipline, and Black youth are subject to a disparate amount of these negative outcomes, there has been a host of reform measures implemented at multiple levels to help reduce these disparities.

### **Reform Measures**

Over the past decade and a half, the federal government, states, and local districts have been engaged in a concerted effort to close the discipline gap (Schlesinger & Schmits-Earley, 2021). These efforts have taken several varying approaches. One approach stresses the importance of preventative and restorative discipline measures in place of punitive measures, referred to in the literature as “restorative justice” (Darling-Hammond et al., 2020). Another widely used approach focuses on instructing teachers with the use of an anti-bias curriculum

within schools of education (Escayg, 2019; Lin et al., 2008), while other approaches involve implementing culturally responsive teacher training (Lodi et al., 2021; Lustick, 2016). Most recently, several large school districts have taken to eliminating out-of-school suspensions for certain categories of behavioral infractions committed by students, the most widely cited category is commonly referred to as willful defiance (Wang, 2022). The following subsections cover each of these approaches and outcomes that these efforts have generated in attempting to close the discipline gap.

### ***Restorative Discipline***

While there are a variety of restorative practices, restorative justice, unlike punitive discipline, is built upon “restorative theory” (Johnstone, 2013). The practices that follow this approach consider conflict in terms of harm that ought to be repaired, rather than behavior that ought to be punished (Lustick, 2020). Commonly used strategies include conflict management, mediation, and redemption. “Conflict management” refers to strategies that provide students with alternative forms of confrontation; this often provides students with opportunities to have a conversation with other students in a non-violent and peaceful manner (Lodi et al., 2021). Mediation is often in response to serious conflict and frequently involves external personnel to mediate between the person(s) who invoked the harm and the individual(s) who were harmed; the mediation session often promotes active listening and space for discussions (Lodi et al., 2021). Finally, “redemption” occurs when a student is reintegrated into the school or specific class after being excluded via suspension. This typically involves a counseling session that includes tutoring between school staff and the student (Lodi et al., 2021). All these forms of intervention are purposed to resolve conflict in a non-violent manner through social awareness-building.

Frequently used practices to this ends take the form of community-building circles, restorative circles, and reentry circles (Lodi et al., 2021; Lustick, 2020). These circles vary in size, intensity, and function to facilitate the construction and restoration of positive relationships among students, teachers, and administration. Circles will often consist of moderated discussions or conversations that include students and/or teachers to facilitate genuine connections, develop empathy, and build trust (Lustick, 2020). Frequently, this approach is in addition to punitive measures and not intended to fully replace punishment up to and including out-of-school suspension for violent behaviors.

Several studies have concluded that restorative and positive discipline practices appear to slightly lower the overall number of disciplinary referrals administrated (Darling-Hammond et al., 2020); however, these approaches have little-to-no effect on moderating disparate disciplinary outcomes between Black and White students (Anyon et al., 2014; Gregory et al., 2018; Hashim et al., 2018; Schlesinger & Schmits-Earley, 2021; Vincent et al., 2011, 2012; Vincent & Tobin, 2010). A 2021 review of the literature found “limited evidence” that restorative practices moderate disparate student outcomes (Lodi et al., 2021, p.17). One explanation for the limited success of restorative approaches to close racial gaps is that restorative practices are not implemented with consistency (Zakszeski & Rutherford, 2021) or fidelity (Dhaliwal et al., 2021; Lustick, 2020). Another common explanation is that the teachers and administrators who implement these practices are doing so in a biased, culturally prejudicial, and unreflective manner, blind to the power dynamics and structural forces at work. It is argued that these educators are defaulting to a hegemonic worldview regarding students of color, a culture of zero-tolerance, and punitive disciplinary practices (Lustick, 2016). As a result of the significant shortcomings of restorative approaches to diminish racial disparities and to address

the potential causes for their failure, anti-bias and culturally responsive teacher training have more recently been employed for purposes of attaining racial equity.

### ***Anti-Bias and Culturally Responsive Training***

An overwhelming amount of the educational literature that investigates the implementation of anti-bias teacher training and culturally responsive teaching practices is critical of race-blind policies (Schlesinger & Schmits-Earley, 2021). These studies are frequently framed by CRT (Anyon et al., 2021) and implicit bias theory (Beauchum & Gullo, 2020; Carter et al., 2017), and presuppose the differential selection hypothesis (Gregory et al., 2018). The intent of anti-bias and culturally responsive teacher training is to challenge teacher candidates, with their assumptions of Whiteness, to develop a “critical consciousness” (Lin et al., 2008). This form of consciousness, initially proposed by Ladson-Billings (1995) in the context of education, is one where teachers perpetually question and examine their own identities, cultural values, and their assumptions of race, gender, and class, and how they project these understandings onto their minority students (Lin et al., 2008). This internalized dialog is intended to function as the primary mechanism for teachers to create a fair, just, and above all, equitable discipline system. Further, culturally responsive teaching is formalized as teaching practices that use ethnically diverse learning styles, frames of reference, and cultural knowledge to increase content relevance and engage ethnic learners (Gay, 2018). Culturally responsive and anti-bias training frequently come in the form of in-service interventions headed by trained facilitators and vary in specificity.

The effectiveness of in-service interventions and the use of culturally responsive teaching practices to moderate disparate student outcomes is difficult to ascertain within the literature. In a systemic review of this topic, Bottiani et al., (2017) found only 10 studies that empirically investigated the impact of in-service interventions to facilitate and foster culturally responsive

practices. Of the 10 articles reviewed, most were qualitative, and not one demonstrated evidence that the intervention had had a significant effect on participant bias or student outcomes (Bottiani et al., 2017). This lack of supporting evidence engenders some researchers with the view that the volume of theorizing and call for the expansive use of culturally responsive practices is significantly out of proportion with its empirical support (Song et al., 2020).

While the effectiveness of in-service interventions to foster culturally responsive teaching practices is virtually unknown due to a lack of empirical evidence, there is substantial evidence that the effectiveness of anti-bias training in a multitude of environments appears to have little-to-no positive effect (Forscher et al., 2019; Lai et al., 2016; Onyeador et al., 2021; Paluck & Green, 2009) and in some instances may inadvertently reinforce, exacerbate, or generate bias (Ajunwa, 2019; Bezrukova et al., 2008; Jackson, 2018). In a review and assessment of hundreds of research studies in a wide variety of contexts, Paluck and Green (2009) found that a trivial number of studies maintained that anti-bias intervention reduced bias in participants. Furthermore, as the implicit association test has substantial reliability and predictive validity issues (Oswald, et al., 2013; Payne & Vuletich, 2017; Rae & Olson, 2018; Schimmack, 2019), it is unclear if researchers are, in any way, accurate in measuring unconscious bias in a pre-post manner.

Putting aside the problem of measuring unconscious bias and its role in promoting racial discriminatory behavior, some researchers maintain that the literature on diversity and unconscious bias training is amorphous and theoretically and methodologically unsound (Alhejji et al., 2016; Devine & Ash, 2022), and that the degree of enthusiasm and monetary investment has vastly outpaced the evidence for these types of trainings (Devine & Ash, 2022). As restorative discipline, culturally responsive training, and anti-bias training have generated little



success at reducing bias and closing racial gaps, more recent efforts towards achieving racial equity have targeted the school discipline policies directly, by eliminating the discretionary use of out-of-school suspensions.

### ***Eliminating Out-of-School Suspensions***

During the past decade, several large school districts have eliminated the use of out-of-school suspensions as a means of attaining equity in school discipline (Lacoe & Steinberg, 2018). Although there is significant variation in the forms that suspension bans have taken, they predominately include banning teacher and/or school principal discretion for the use of out-of-school suspension, or banning its use for certain types of behavior, particularly for several forms of student insubordination, including truancy, dress code violations, and willful defiance. School districts with more stringent versions of suspension bans refuse to suspend students off campus for any willfully defiant behaviors, excluding violence and drug use (Wang, 2022). While evidence has shown that the implementation of suspension bans, expectedly, decreases the issuance of out-of-school suspension (Hashim et al., 2018) and may increase student attendance, there appears to be a host of deleterious, unintended outcomes.

Studies indicate that, while suspension bans decrease the total number of out-of-school suspensions, they do not appear to diminish the racial discipline gap (Anyon et al., 2021; Hashim et al., 2018; New York Civil Liberties Union, 2018). On the contrary, it has been found that these policies have increased the percent of Black students receiving out-of-school suspensions (Wang, 2022) and may decrease the rate of suspensions more effectively for non-minority groups (Lacoe & Steinberg, 2018). Additionally, classroom climate appears to be affected by suspension rates, as measured by spillover effects when disruptive student behavior is not removed from the classroom environment (Blank & Shavit, 2016; Burns et al., 2021).

Studies have found that in districts that have banned suspensions, the reduction in suspension rates was followed by a decrease in math scores (Lacoe & Steinberg, 2018; Pope & Zuo, 2020; Zarecki, 2019) and reading scores (Lacoe & Steinberg, 2018; Pope & Zuo, 2020; Zarecki, 2018) and an increase in student absences and teacher turnover (Pope & Zuo, 2020). Although there is some conflicting evidence indicating that the harm caused to a suspended student is more prominent than the negative spillover effects for peers (Lacoe & Steinberg, 2019), other evidence suggests that the appropriate use of suspensions improves the academic performance of students in the school who were not suspended, this appears to be especially true for minority and special needs students (Hwang & Domina, 2021). Furthermore, it appears that the overall school climate suffers when suspension bans are implemented. Studies show that crime on school campus is reduced when suspensions for violent behavior are increased (Gerlinger, 2021) and that fewer suspensions decrease mutual respect among students and staff (Eden, 2017, 2019) and increase serious behavioral incidents, such as violence and drug use (Eden, 2017, 2019; Lacoe & Steinberg, 2018).

The literature strongly suggests that decades of discipline reform measures have had very little positive influence in closing the discipline gap (Anyon et al., 2021; Bottiani et al., 2017; Hashim et al., 2018; Lodi et al., 2021). There are several potential reasons for this lack of success, including, lack of fidelity or lack of scope (Dhaliwal et al., 2021; Lustick, 2020; Zakszeski & Rutherford, 2021). However, another plausible reason is that the causal explanations for the racial discipline gap are not fully understood; therefore, such reform measures may be misaligned in their attempts to address the source of the problem (Welsh & Little, 2018).

### **Explanations for the Discipline Gap**

There is substantive consensus among scholars that the discipline gap exists and that discipline referrals, poor academic outcomes, future delinquency, and criminality are all strongly correlated with student discipline. However, a review of the literature offers very little agreement concerning the gap's causes (Welsh & Little, 2018). Widely speaking, two general categories of explanation for the gap have emerged within the literature. One explanation suggests that developmental factors, such as broken family structures, delinquent peer influence, and cultural factors significantly contribute to low self-control, higher rates of poverty, and higher rates of delinquent behaviors that perpetuate the gap. The other explanation posits that structural factors and systemic forces, such as socio-economic status, discipline policies, and systemic bias or racism account for the gap. The following section explores these underlying mechanisms and their relationship to disparate discipline outcomes between Black and White students.

### ***Developmental Factors***

This section covers developmental factors and their role in the discipline gap. The factors of interest include family structure, parental practices, self-control, delinquent peer influence, and cultural influence. These factors and their relationship to the discipline gap are explored in the following subsections.

**Family Structure and Race.** National data shows that 71% of Black children are born out of wedlock relative to 29% of White children (CDC, 2022; U.S. Census Bureau, 2020). This, coupled with more data from the U.S. Census Bureau (2020) reveals that only 37.9% of Black children are raised in a two-parent household relative to 75.5% of White children. Moreover, Black women are the only demographic in which the divorced population outnumbered the marriage population, and Black couples are twice as likely as White couples to get divorced (Schweizer, 2019). Finally, other U.S. Census Bureau (2020) data further shows that Black

children are 2.5 times more likely than Whites to have no parents raising them. Clearly, the data displays striking differences in family structure between Black and White families. As Black children are much more frequently raised in single-parent families, compared to Whites, they are likewise subject to more of the undesirable outcomes affiliated with single-parent families.

**Family Structure and Child Outcomes.** Decades of research have shown that a plethora of beneficial and desirable child outcomes are positively linked with two-parent family structures, while detrimental and undesirable child outcomes that have been linked to single-parent households. For example, family structure impacts children's physical and mental health outcomes (Lut et al., 2021), poverty outcomes (Lerman & Wilcox, 2014; Wilcox et al., 2016; U.S. Census Bureau, 2020), educational outcomes (Barger et al., 2019; Malczyk & Lawson, 2017; McLanahan et al., 2013), sexual abuse rates (Assink et al., 2019; Daly & Wilson, 1985; Felson et al., 2021) criminal offending rates (Hirschi, 2017; Kroese et al., 2020) and, most saliently for this study, delinquency rates (Gomes & Gouveia-Pereira, 2019; Mafumbate & Mkhathjwa, 2020; Wasserman, 2020). It is clear from this body of research that family structure is a variable that significantly impacts child outcomes, and it is reasonable to posit that, in aggregate, researchers would be hard-pressed to identify a single desirable outcome associated with the single-parent family structure compared to the two-parent family structure.

Further, while it is common for studies to examine the role that educational institutions play in the racial discipline gap, there are good reasons to believe that family structure also plays a germane role. First, illegitimacy and divorce rates increased (U.S. Census Bureau, 2020) simultaneously with suspension rates (U.S. Department of Education, 2018) from the 1970s to the 2000s. Second, suspension rates by race parallel the rates of students who are not living with both married birth parents; this is the case for Whites, Blacks, Hispanics, and Asians (National

Household Education Survey, 2016). For example, Asians have the lowest suspension rate and the lowest rate of children who are not living with their married birth parents, while conversely, Blacks have the highest suspension rate and the highest rate of children who are not living with their married birth parents (National Household Education Survey, 2016). Finally, Black students who live in a household with their married birth parents have a lower suspension rate than White students who do not live with their married birth parents (National Household Education Survey, 2016). All three of these facts suggest that family structure is strongly tied to suspension rates, and the last point suggests that family structure may be a more important variable than race when looking at the discipline gap.

**Family Structure, Self-Control, and Delinquency.** Family structure appears to function as a catalyst variable for several other variables that are frequently used in models to predict delinquency. Several studies show that, relative to two-parent family structures, single-parent families are correlated with a dramatic increase in poverty (Iceland, 2019), less effective parental practices (Beckmeyer & Russell, 2017; Mafumbate & Mkhatjwa, 2020), lower parental attachment (Childs et al., 2020; Ghadampour et al., 2020), lower self-control in children (Hope et al., 2003), and an increase in delinquency (Rathinabalan & Naaraayan, 2017) and criminality (Kroese et al., 2020). Further, students who engage in higher rates of criminal offending are also significantly more likely to have criminal family members, delinquent peer associations, a substance abuse, and/or to live in poor and crime-ridden communities (Morgan, 2018).

Many criminology scholars maintain that self-control is a key factor in delinquency and that family structure (Hirschi, 2002), parental management (Gottfredson, 2017; Pratt & Cullen, 2000; Vazsonyi et al., 2017) and parental attachment (Childs et al., 2020; Ghadampour et al., 2020) significantly influence a child's self-control. These scholars insist that once self-control is

developed, between the ages of five and ten years old, it remains relatively stable over an individual's lifetime (Gottfredson, 2017). Self-control theory is empirically supported in the context of the racial discipline gap with a longitudinal study conducted by Wright et al., (2014). The study found that suspension disparities between Black and White students were fully accounted for by controlling for students' past and present delinquent behaviors. In other words, once the degree of delinquency and prior problem behavior was controlled for, the student's race was no longer a statistically significant predictor of receiving an out-of-school suspension. This and several other studies linking previous delinquent behaviors to future delinquent acts suggest that prior problem behavior may be a key contributor to explaining the discipline gap (Assink et al., 2015; De Vries et al., 2018; Yohros, 2022; Zijlmans et al., 2021).

**Delinquent Peer Association and Influence.** Aside from the significant influence that family structure plays in juvenile delinquency, the role of delinquent peers emerges from the literature as an important variable in explaining delinquency rates between racial groups. A substantive amount of research shows that peer relationships considerably increase in influence and importance during adolescence (Brown & Larson, 2009). Further, studies indicate that, relative to White teens, Black youth have higher rates of nonviolent and violent delinquent peer association (Haggerty et al., 2013; Haynie & Payne, 2006; Yoon et al., 2020). However, concerning the role that delinquent peers play, there is a long-standing debate whether previously delinquent adolescents simply select delinquent peers to associate with, whether have little effect on the further development of delinquent tendencies, or whether the delinquent peer associations significantly influence the rate of delinquency among the peer group members. A recent meta-analysis shows found that both theories of selection and influence have validity, but that the influence model was more strongly supported in the literature (Gallupe et al., 2019).

Regardless of the causal direction, delinquent peer associations are frequently correlated to higher rates of adolescent delinquency (Akers & Jennings, 2019). As previously discussed, self-control strongly predicts future delinquent behavior and the selection of delinquent peers. Recent research (Huijsmans et al., 2019) indicates that self-control may be less fixed and more dynamic than previously thought, and that delinquent peer influence may further lower self-control in delinquent individuals in a type of feedback loop that reinforces, entrenches, and magnifies future delinquent behaviors. Beyond lowering self-control, delinquent peer associations have been linked to an increase in violent behavior (Manzoni & Schwarzenegger, 2018) and a decrease in moral behavior (Chrysoulakis, 2020).

Multiple studies show a strong link between family characteristics, deviant peer associations, and violence. A meta-analysis by Park and Kim (2018) showed that witnessing family violence was the strongest predictor of being a victim of dating violence and that deviant peer associations were the strongest predictor of committing dating violence. Further, studies show that the positive relationship between violent peers and delinquency is strengthened when parental monitoring is low (Henneberger et al., 2012; Walters, 2019). Studies have also indicated that, relative to White teenagers, Black teens engage in more violent behaviors (Baglivio et al., 2021; Forsyth et al., 2015; Haggerty et al., 2013; Reed et al., 2017), and that family structure, low household income, former trauma, and deviant peer associations moderated these behaviors.

**Cultural Influence.** Another factor which attempts to explain differences between Black and White youth delinquency and criminal offending is a form of cultural influence; frequently referred to in the literature as “the code of the street” (Anderson, 2019). This street culture appears to be associated with family structure, poverty, and deviant peer associations and is not simply a reflection of psychological confounds (Burgason et al., 2020). In concert with Black

youth having disproportionately fewer fathers in the home (Hoeve et al., 2009, 2012; Jackson et al., 2019; Simmons et al., 2017) and more deviant peer associations (Haggerty et al., 2013; Haynie & Payne, 2006; Yoon et al., 2020), they are also more frequently raised in poor neighborhoods and inner cities and subject to street culture (Sampson, & Wilson, 2020). Although several factors have historically contributed to this result, recent research (Iceland, 2019) indicates that, as of 2015, the most significant contributor to poverty and inhibitor to affluence within the Black community is family structure, particularly the rate of single-parent households.

Although exposure to violence can vary significantly among Black youth, in aggregate it is significantly higher relative to Whites (Burnside et al., 2018). Fewer fathers, higher poverty rates, and more deviant peer associations appear to be linked to exposure to the “code of the street or street” culture (Anderson, 2019; Sampson, & Wilson, 2020). According to Anderson (2019), the code of the street is characterized by “...a set of informal rules governing interpersonal public behavior, including violence. At the heart of the code is the issue of respect...” (p. 289). Moreover, within this subculture, violence is deemed to be an acceptable means of acquiring respect. A recent meta-analysis (Moule & Fox, 2021) showed moderate effect sizes supporting this theory, where individual belief in the code of the street was positively correlated with an increased risk of criminal offending.

Furthermore, a qualitative study by Bell (2019) showed similar findings in the context of primarily-Black high schools, where Black high school students who had received out-of-school suspensions expressed the belief that physical violence was a proper means of acquiring respect or elevating one's social status. Studies have also documented this in the context of Black girls (Erickson & Burgason, 2020; Waldron, 2010). What is more, studies have shown that the parents



held similar beliefs as their children (Bell, 2019; Solomon et al., 2008). The relationship between predominately Black youth and parental attitudes toward physical violence appears to be positively correlated to youth problem behaviors, fighting, and out-of-school suspension (Solomon et al., 2008). This research suggests that significant differences between Black and White family structure, poverty, and peer relations are related to disparate rates of street culture involvement and associated behavioral patterns; this appears to be an important factor in explaining the racial discipline gap.

**Gender differences.** Finally, when considering the racial disparities connected to exclusionary school discipline, it is noteworthy to point out the gender differences between Black and White students. While nearly every study shows that male students are much more likely to receive an out-of-school suspension relative to females (Welsh & Little, 2018), Black male students are approximately twice as likely to receive exclusionary discipline compared to White males, but Black female students are four-to-five times more likely to receive a suspension than White female students (Allen & Hilliard, 2021; Wallace et al., 2008). This shows that, although males are more likely to be suspended than females, a greater portion of the racial gap can be found in the difference between Black and White females.

Looking at female delinquency through a developmental lens, the literature indicates that the same variables that predict delinquency in males also predict delinquency in females, including previous antisocial behaviors, antisocial attitudes, and antisocial peers; however, family structure and history of physical or sexual abuse are also strong predictors of future delinquency in females (Hubbard & Pratt, 2002; Peterson et al., 2019; Yohros, 2022). Multiple studies have concluded that one of the strongest predictors of non-violent and violent female delinquency is being a victim of child sexual abuse (Constantin & Boyett, 2020; Herrera &

McCloskey, 2003; Hubbard & Pratt, 2002; Kozak et al., 2018; Siegel & Williams, 2003; Yoon et al., 2019). According to the U.S. Children's Bureau (2020) Black children, overwhelmingly females, are victims of sexual abuse at 1.78 times the rate of White children. Moreover, Black children are overrepresented among reports of physical, sexual, emotional, and psychological abuse (Luken et al., 2021). Poverty, the substantially higher rates of single mothers in Black households, and the presence of non-biological cohabitating males in Black households have been shown to increase the odds of child sexual abuse by 40 times (Daly & Wilson, 1985). All these variables are likely contributors to the higher rate of abuse among Black children. The trauma that is inflicted on victims of child abuse, particularly sexual abuse among females, is frequently associated with higher rates of future delinquency (Yohros, 2022).

Black youth are approximately 2.7 times more likely than Whites to be raised in single-parent families. As a result of this considerable racial difference, substantial empirical evidence previously cited in the related literature suggests that, in aggregate and relative to Whites, Black youth experience less effective parental practices, have lower parental attachments, have lower self-control, have more delinquent peer associations, are more frequently exposed to street culture, and experience more traumatizing events. As a result of such developmental factors, large data sets show that Black youth have higher rates of delinquency and criminal offending relative to Whites (NCES, 2019; United States, 2019). Following this evidence, the developmental lens provides an explanatory framework for the racial discipline gap. While the criminological literature predominately informs the developmental framework, the systemic framework is strongly informed by educational literature.

### ***Structural and Systemic Factors***

The terms “structural” and “systemic” are frequently conflated in the literature. For this study, “structural” factors refer to past and present laws, policies, and hierarchical structures within society, organizations, and institutions (Whitmeyer, 1994), whereas “systemic” factors refer to overarching, ubiquitous, and perpetual patterns of attitudes, practices, and behaviors within structures (Bonilla-Silva, 2021). In the case of systemic racism, the literature refers to it as a system that every person contributes to for the purpose of reproducing the “racialized order” (Bonilla-Silva, 2021, p. 513). Here, “racialized order” follows from the CRT tenet of “White supremacy,” where a dominant race will behave in a manner — knowingly or unknowingly — to maintain racial dominance (Bonilla-Silva, 2021). These structural and systemic factors, as they relate to the discipline gap, are covered in the section below.

**Family Structure and SES.** Several studies and census data indicate that there are strong correlations between family structure and socio-economic status (SES). According to U.S. Census Bureau (2020), 4.7% of two-parent households are below the poverty line, compared with 23.4% of single mother householders. This means that households with a female head-of-house are nearly five times more likely to be in poverty relative to two-parent households. A study by Lerman et al., (2018) showed that children who are raised by both biological parents earn significantly higher incomes and are more likely to marry as adults compared to children raised in single-parent families. Other studies (Chetty et al., 2014; Lerman & Wilcox, 2014; Wasserman, 2020) have shown that upward mobility for children is strongly correlated to parent’s income, family stability, and better primary schools (Scherer & Siddiq, 2019). The correlation between stable two-parent families and upward mobility appears to be evident at both the individual level and the state level (Lerman et al., 2018; Wilcox et al., 2016).

The associations between family structure, income, and affluence are so strongly connected that it is difficult to disentangle them. This has led researchers to speculate that SES is downstream of family structure (Conger et al., 2010), and not the converse. However, there is good cause to doubt this assertion. Consider that all races were significantly poorer 100 years ago (Pinker, 2012), a time when the out-of-marriage birth rates and divorce rates were vastly lower than today (Centers for Disease Control and Prevention, 2022). This would indicate that the lack of monetary resources is likely not a significant cause of out-of-marriage births or divorce. Nevertheless, because the correlation between SES and single-mother families is so strong it is likely the case that SES functions as a proxy variable for family structure in many studies (Lut et al., 2021).

Even though SES is commonly used to predict exclusionary discipline (Taylor et al., 2022), there is good reason to believe that family structure is more a relevant variable in predicting delinquent outcomes. This is due to parental resources, aside from money (Korous et al., 2018), that are relevant to delinquency. These would include the lack of a father figure (Hoeve et al., 2009, 2012; Simmons et al., 2017), lower levels of parental monitoring (Hoeve et al., 2009; Marotta & Voisin, 2017), and family stress (Voisin et al., 2018), which are more pronounced in single-parent families relative to two-parent families, and positively correlated with juvenile delinquency (Gomes & Gouveia-Pereira, 2019; Wasserman, 2020). This data indicates that, of all the institutional structures involved in influencing delinquent outcomes, family structure is perhaps the most significant.

**Disciplinary Differences Between Schools.** Apart from the differential involvement and differential selection, there is a third potential explanation that has been suggested as a significant contributor to the racial discipline gap. This explanation posits that a significant

portion of discipline disparities between Black and White students occurs between schools, rather than within them (Anderson & Ritter, 2017; Camacho & Krezmien, 2020; Kinsler, 2011; Owens & McLanahan, 2020; Skiba et al., 2014; Welch & Payne, 2010). These studies show that schools with a greater percentage of Black students are more likely to adopt zero-tolerance policies and more frequently implement punitive disciplinary measures than schools with lower percentages of Black students. While some of these studies (Anderson & Ritter, 2017; Kinsler, 2011) find that Black and White students are treated similarly within schools, other studies (Owens & McLanahan, 2020; Skiba et al., 2014) imply or explicitly state (Welch & Payne, 2010) that racial discrimination by teachers and administration is the driving force for the discipline gaps found between and within schools.

Another structural factor that has been correlated to racial gaps is the percentage of novice teachers (Bettini & Park, 2017) and underqualified teachers (Mason-Williams, 2015) and the high rates of teacher turnover (Ronfeldt et al., 2013), and principal turnover (Beckett, 2018) in high-poverty and high racial minority schools. Although these schools experience higher turnover rates, a meta-analysis by Nguyen et al., (2020) found that teachers do not leave these schools due to student demographics, such as the school's racial or economic composition; rather, it is school-level factors, like higher rates of student disciplinary problems and perceived lower levels of administrative support that increase teacher turnover.

A meta-analysis by Longobardi et al., (2019) found 20 percent to 75 percent of teachers who left a school experienced some form of teacher-directed violence perpetrated by a student within the prior two years. Mounting evidence suggests that schools with higher rates of student discipline and more frequent occurrences of teacher-directed violence experience significantly increased rates of teacher turnover (Bounds & Jenkins, 2018; Curran et al., 2017; Peist et al.,

2020); these incidences appear to be particularly pernicious when coupled with teachers perceiving low levels of administrative support (Moon & McCluskey, 2020). These findings suggest that schools with more delinquent student behaviors, particularly violence directed at teachers, are engaged in a positive feedback loop, where delinquency rates increase teacher turnover which, in turn, increases delinquency due to less effective classroom management by novice teachers and less support by novice school administrators (Nguyen et al., 2020).

**Systemic Racism.** A large body of literature that discusses the discipline gap begins with the tenets of CRT (Annamma et al., 2019; Anyon et al., 2014; Blake et al., 2017; Bryan et al., 2018; Wun, 2016). Many of these studies imply that racial bias or discrimination plays a pivotal role in discipline disparities. Often, these studies tend to be strongly theoretically driven, with little-to-no empirical evidence supporting the corresponding framework (Sablan, 2019). Some of these studies (Annamma et al., 2019; Anyon et al., 2014) imply that the discipline gap is itself prima facie evidence of racial discrimination. However, in the spirit of logical clarity and the avoidance of tautological reasoning and other forms of fallacious thinking, arguments based on this form of reasoning should be approached with a high degree of skepticism.

For all the theorizing that takes place in the studies investigating the discipline gap, framed by CRT, several reports come to the same conclusion as Welsh and Little (2018): that there is a dearth of empirical evidence to support the assertion that discrimination by educators is a significant cause of racial discipline disparities. As instruments like the IAT lack the reliability and validity to empirically determine the role that racial bias may or may not play in the racial discipline gap (Payne & Vuletich, 2017; Rae & Olson, 2018; Schimmack, 2019), it is unreasonable, and perhaps intellectually irresponsible to assert that unconscious motivations can account for such large racial disparities. Further, it is unclear why racial bias is such an

intangible construct to measure. Is it a measuring problem caused by the elusiveness of subconscious motivations, or a lack of understanding as to how subconscious drives are translated into externalized behaviors? Or is it due to a lack of subconscious bias among teachers and administrators? While the scope of the current study does not attempt to answer these questions, it does intend to elucidate a potential explanation for the disparities in discipline between Black and White students: namely, differences in student behavior.

### **The Differential Selection Hypothesis**

Within the literature, the differential selection hypothesis is frequently utilized in several ways. Researchers will point to the differences in the type of disciplinary sanctions given to Black and White students, where Black students are more likely to receive discipline infractions for behaviors that require a higher degree of subjective interpretation (Skiba et al., 2002). These student behaviors include disruptive behavior, disrespect, willful defiance, and threats (Skiba et al., 2002). After the highly cited Skiba et al., (2002) study, several researchers began to measure the difference between objective and subjective-based discipline (Annamma et al., 2019; Martin & Smith, 2017; Morris & Perry, 2017, Wun, 2016). Although frequently anecdotal, disparities in exclusionary discipline between Black and White students are seen as manifestations of cultural mismatch or racial bias that primarily occurs between White teachers and Black students within the classroom environment (Blake et al., 2017; Bryan et al., 2018; Crutchfield et al., 2022; Skiba & Sprague, 2008; Wallace, et al., 2008).

Further, it is common for studies to find that the greater the Black student population at a school the higher the rate of racial disparities in exclusionary discipline (Coles & Powell, 2019; Rocque & Paternoster, 2011); these studies are often framed by “racial threat theory” (Welch & Payne, 2010). According to this theory, this phenomenon is explained by the dominant racial

group imposing sanctions on minority groups to maintain power and control (Feldmeyer & Cochran, 2018). Researchers will point to the correlation between administrative attitudes towards discipline and racial discipline disparities as confirmation of this theory (DeMatthews et al., 2017; Heilbrun et al., 2015; Skiba et al., 2014), where administrative preferences for more rigid, zero-tolerance disciplinary policies appear to widen disciplinary racial gaps. Although similar underlying theories, such as implicit bias theory and critical race theory, are often utilized in the literature to support the differential selection hypothesis, they are rarely supported by empirical evidence (Sablan, 2019), aside from evidence of the disparity itself. As such, among the rigorous studies that control for a multitude of variables related to the exclusionary discipline gap between Black and White students, the differential selection of students is commonly inferred to be a key factor contributing to the discipline gap only after all other potential causal variables have been exhausted (Huang, 2016, 2020; Huang & Cornell, 2017; Rocque, 2010).

Although implicit bias theory, as measured by the IAT, has several validity and reliability issues (Oswald, et al., 2013), the theory appears to have gained a second wind within the construct of “aggregate bias” or the “bias of crowds” theory (Payne et al., 2017). This theory states that aggregated implicit racial bias is a situational social phenomenon rather than an individual phenomenon. Studies have found that aggregated implicit racial bias within entire counties (Chin et al., 2020; Riddle & Sinclair, 2019) and states (Shi & Zhu, 2022) appears to be correlated with higher rates of racial disparities in school suspensions and test scores. Although these findings appear to open a new window to explore the influence of racial bias and its role in disparate racial outcomes, caution is warranted when a concept that is found to be highly inconsistent at predicting behaviors at the individual level is then generalized to appear as if it can be predictive of behaviors at the aggregate level (Connor & Evers, 2020).



One of the more compelling studies regarding differential selection and processing is found in a study by Barrett et al., (2021). Findings indicated that, for students who participated in the same in-school fight, where one student was Black and the other White, Black students received longer suspensions. The finding was a small, but statistically significant, difference in days suspended; results indicated a 0.04 day longer difference between racial groups. Although the study controlled for previous suspensions during the school year, this difference could be accounted for when considering that first-time offenses are likely to receive lesser sanctions than repeat offenses. As data indicates that Black students are 2-to-4 times more likely to be suspended and 2.35 times more likely to be in in-school fights (NCES, 2019), the repeated offense phenomenon could very well account for this small difference in days suspended. Finally, a recent study by Raze and Waddell (2022) found evidence that directly contradicts the conclusions of the Barrett et al., (2021) study.

Overall, when exploring the discipline gap, the literature widely utilizes the differential selection hypothesis. However, the mechanisms that drive this postulate appear to be difficult to identify and measure in a reliable or predictive manner. The “bias of crowds” theory (Payne et al., 2017) suggests that aggregate racial bias is correlated with larger racial gaps, but when tested at the local or individual level, these correlations fail to be useful in predicting behaviors or outcomes. Although many studies use anecdotal evidence to speculate the existence of teacher or administrator bias (Allen & White-Smith, 2014; DeMatthews et al., 2017; Grace & Nelson, 2018; Heilbrun et al., 2015; Williams et al., 2020; Wun, 2016), very few studies attempt to directly measure racial discrimination among educators or demonstrate how this bias relates to the discipline gap, and fewer reliable and valid instruments appear to be available towards this end. Finally, the more rigorous, quantitative studies appear to infer the existence of racial bias as

a causal mechanism only after all other known relevant variables have been accounted for within the study.

### **The Differential Involvement Hypothesis**

Research conducted by the Office of Juvenile Justice and Delinquency Prevention (2019) showed that, except for alcohol-related offenses, Black juveniles consistently engage in much higher rates of all forms of criminal offending relative to their White counterparts (United States, 2019). One of the most significant disparities shown is that Black juveniles commit violent crimes at approximately 4.5 times the rate of White juveniles. Research by Forsyth et al., (2015) in a Louisiana school district parallels the national data, where Black students are cited with behavioral infractions at a higher rate than White students in every category of offense except substance use, and Blacks are suspended for committing violent crimes at 3.5 times the rate of Whites. Further, a study by Felson et al., (2008) found that, even after controlling for demographic variables, like the place of residence, family structure, parent education, SES, and other factors, Black adolescents were substantially more likely to engage in violent crime than Whites. The same study found significant differences between gender categories as well, showing Black males were nearly two times more likely to engage in armed violence compared to White males and that Black females were nearly four times more likely to engage in armed violence compared to White females (Felson et al., 2008). The differences in violent behaviors indicated in these findings strongly parallel the differences in suspension rates (Annamma et al., 2019; Wun, 2016) between Black and White girls which are frequently found to be larger than the gap between Black and White boys.

Other large data sources help to illuminate potential behavioral causes for the discipline gap. According to the National Center for Education Statistics (2019), Black high school

students are more likely than White students to fight or use marijuana when off school property, and are even more likely to engage in these acts when on school property. Moreover, while White high school students are 1.34 times more likely than Black students to use alcohol in general, Black students are reported as using alcohol 1.66 times more frequently when on school property (NCES, 2015). A similar pattern occurs within the NCES (2019) data, where 15% of White high school students reported carrying a weapon anywhere at least one day during the past 30 days, compared to 9.4% of Black students. However, when students were asked if they carried a weapon on school property, 2.1% of Whites and 4.2% of Blacks reported doing so. This consistent pattern implies that Black students engage in delinquent acts more frequently in general, and engage in higher rates of delinquency while on school property, relative to their White counterparts. These differences in delinquency on and off school property may account for a substantive proportion of the discipline gap.

Moreover, not all forms of delinquency are equally likely to result in the issuance of an out-of-school suspension. National data shows that during the 2017-18 school year 32,400 students received an out-of-school suspension for alcohol use, while 667,700 students were suspended for fighting (NCES, 2019). This means that students who fought were suspended 20 times more frequently than students who were using alcohol. This data implies that previous studies (Losen & Skiba, 2010; Owens & McLanahan, 2020) that have investigated the differential involvement hypothesis may not have fully appreciated the predictive power of in-school fights, coupled with the racial difference in this variable, to account for racial discipline discrepancies.

For example, national data shows that approximately 20.8% of White high school students engaged in a physical fight anywhere, including on school grounds, during the past year,

compared to 33.1% of Black students (NCES, 2019). This difference demonstrates that Black students fought 1.59 times more than White students. However, a much more striking disparity emerges from the same data set, showing that approximately 6.3% of White students fought on school grounds, compared to approximately 15.5% of Black students (NCES, 2019). In other words, Black students fought on school property 2.46 times more frequently than White students. The Center for Disease Control and Prevention (2020) shows very similar findings. As fights on school property are considerably more likely to result in out-of-school suspensions than other forms of delinquency, as previously noted and as indicated in previous studies (Huang & Cornell, 2017; Reed et al., 2017), the racial disparity in fights that occur on school property may help to explain a substantial portion of the difference in racial discipline outcomes. It is also worth noting that national data shows that out-of-school suspension rates parallel in-school fight rates for both races. For all these reasons, this study uses in-school fights, in-school drug use, and in-school covert delinquency as predictors for out-of-school suspensions.

Conclusively, data from a wide variety of sources (CDC, 2020; Felson et al., 2008; Huang & Cornell, 2017; Morgan & Wright, 2018; NCES, 2019; Rocque, 2010; United States, 2019; Walt & Jason, 2017; Wright et al., 2014) indicate that, on average, Black youth commit more delinquent acts than White youth. However, only two studies in the literature (Skiba et al., 2014; Wright et al., 2014) have found that the difference in delinquency between racial groups can fully account for the difference in suspensions. Nonetheless, the literature strongly suggests that an investigation of the racial discipline gap cannot be sufficiently conducted without a rigorous account of behavioral differences between racial groups.

## Summary

The discipline gap between Black and White students is a long-standing anomaly that is well documented in the literature. However, much less studied and understood are the explanatory mechanisms for the gap. Teachers, school administrators, parents, and policymakers recognize that the discipline gap greatly contributes to the achievement gap and is correlated to other negative life outcomes, including, increased delinquency criminality, and incarceration. As such, educators have tried for several decades to close the racial discipline gap to diminish these undesirable outcomes. However, after decades of policymakers and educational leaders enacting reform measures to close the discipline gap, these efforts have generated little success, and in some instances, appear to have exacerbated the gap or elicited additional adverse outcomes. One possible explanation for the intractability of this problem may have to do with an incomplete or inaccurate diagnosis of the factors that contribute to the discipline gap.

A review of the literature reveals two primary explanatory hypotheses, each supported by a theoretical framework and corresponding theories. The differential selection hypothesis, buttressed by the systemic framework and supported by CRT and implicit bias theory, conceives of a system of racial oppression that works within institutional structures as a significant contributing factor to the discipline gap. On the other hand, the differential involvement hypothesis, framed by a developmental framework and supported by self-control theory, social learning theory, and attachment theory posits that family structure, parental practices, self-control, peer influence, cultural patterns, and disparate rates of trauma are important factors that significantly contribute to delinquency disparities between racial groups.

Several factors appear to contribute to the gap, including family structure, peer association, school grades, school environment, and others, but several studies suggest that

student behavior plays a pivotal role. Data at the national level (CDC, 2020; Felson et al., 2008; NCES, 2019, United States, 2019) and state level (Forsyth et al., 2015; Huang & Cornell, 2017; Wright et al., 2014) indicate that Black adolescents engage in significantly higher rates of delinquent behaviors, particularly violent behaviors, relative to their White counterparts. However, only two studies in the literature (Skiba et al., 2014; Wright et al., 2014) have found that these differences in behavior fully account for the difference in suspension rates; further, these findings appear to be contentious (Huang, 2020). That said, the literature indicates that accounting for the differences in student behavior between racial groups is essential for explaining, if only in part, disparities in discipline.

Conducting a quantitative, predictive correlational and causal-comparative study to determine if there is a difference in out-of-school suspensions among Black and White high school students when controlling for student-level factors, school-level factors, and delinquency factors will generate informative data concerning the role that behavioral patterns play in explaining the discipline gap between Black and White high school students. The results of this study will help to inform the theoretical framing and variable selection of future studies that investigate the Black/White discipline gap.

## CHAPTER THREE: METHODS

### Overview

This chapter explains the methods used in this study. First, the design of the study is described and justified. Second, the research questions are proposed, and null hypotheses are given. Third, the population and setting are described. Fourth, the instrumentation used in this study is examined, including validity and reliability; this section is followed by the procedures used in the study. Finally, this chapter concludes with data analysis.

### Design

Both correlational and causal-comparative designs are used for this quantitative study. These research design methods are non-experimental in nature, in that there is no intervention by the researcher and no control group (Gall et al., 2007). The correlational design of RQ1 and RQ2 attempts to determine relationships between multiple predictor variables and the criterion. The stronger the correlation, the more likely there is a cause-and-effect relationship between variables (Gall et al., 2007). RQ1 investigates a group of Black high school students and RQ2 consists of White high school students. The predictor variables for both groups are identical and are comprised of the student's general delinquency scores, in-school delinquency scores, and the number of prior out-of-school suspensions. The criterion variable is the number of out-of-school suspensions the student has received during the past 12 months. As this study is interested in investigating the multiple variables that influence the likelihood of receiving an out-of-school suspension, this design is most appropriate. Two groups will be used to determine if correlational relationships are consistent between races.

Several peer-reviewed studies have investigated exclusionary discipline using correlational designs to explore multiple predictor variables and their relationship to the criterion

variable of exclusionary discipline (Butler-Barnes & Inniss-Thompson, 2020; Curran et al., 2017; Rocque, 2010; Skiba et al., 2014; Wright et al., 2014). A common form of measuring exclusionary discipline as a criterion variable is utilizing student infractions, referrals, suspensions, or expulsions; however, predictor variables differ significantly between studies. Many frequently used predictor variables include socioeconomic status (Skiba et al., 2014) race (Anyon et al., 2014; Blake et al., 2017; Bradshaw et al., 2010), teacher bias (Scott et al., 2019), school bonding (Bottiani et al., 2017a), and student behavior (Huang, 2016, Huang & Cornell 2017; Rocque, 2010; Wright et al., 2014).

For this study, the first predictor variable is student delinquency (Pechorro et al., 2019). Delinquency refers to a youth's engagement in criminal activity including selling hard drugs, stealing, destruction of property, and violence, as measured by the Adolescent Health Self-Report Delinquency (AHSRD) (Pechorro et al., 2019). The next predictor variables pertain to in-school delinquency. They include the number of in-school fights, the number of times in-school drug use occurred, and the frequency of in-school covert delinquency during the past 12 months. An "in-school fight" is defined as a physical altercation that occurs on school property (National Center for Education Statistics, 2019). "In-school drug use" is defined as the use of any drugs that are illegal for minors while on school property (National Center for Education Statistics, 2019). "In-school covert delinquency" is defined as a student engaging in carrying weapons, threatening behaviors, and/or property offenses on school grounds. The fifth predictor variable is "prior out-of-school suspension." This variable refers to a student having received one or more out-of-school suspensions at any point during their K-5<sup>th</sup> grade education. The criterion variable is having received an out-of-school suspension within the last 12 months. This variable is defined as the student having been physically removed from the school campus for more than



one-half day, but less than the remainder of the school year (National Center for Education Statistics, 2019).

A causal-comparative design is used to address RQ3 which includes several control variables to isolate the relationship, or lack thereof, between race and out-of-school suspensions. The causal-comparative design is appropriate to determine if a relationship exists between the independent variable, student race, and the dependent variable, the number of out-of-school suspensions. This design has been used in several studies for similar purposes (Rocque, 2010; Huang, 2016, 2020; Huang & Cornell 2017; Skiba et al., 2014; Wright et al., 2014). The covariates that will be used for this design include student factors, school factors, and delinquency factors. Student factors consist of the student's gender, family structure, school grades, and delinquent peer association. The school factors are comprised of the school environment and percent of Black students enrolled. Finally, the delinquency factors that will be controlled for are student delinquency, in-school delinquency, and prior out-of-school suspensions.

Gender and family structure are dichotomously coded. Gender is 0 = female and 1 = male, while family structure is 0 = lives with both biological parents, and 1 = lives with one or no biological parents. School grades are categorical and coded with a seven-point scale where 1 = all A's, 2 = mostly A's, 3 = mostly B's, 4 = mostly C's, 5 = mostly D's, 6 = mostly F's, and 7 = all Fs. Delinquent peer association is measured with The Friend's Delinquent Behavior instrument, with scores ranging from 0 to 28. The school environment is measured with a school climate instrument from the Early Childhood Longitudinal Study (ECLS); scores range from 5 to 25. Percent of Black student enrollment is a categorical variable where 1 = <1% Black students, 2 = 1 to <5% Black students, 3 = 5 to <10% Black students, 4 = 10 to <25% Black students, and

5 = 25% or more Black students in the school. This data is gathered from school archives.

Student general delinquency is measured with the National Longitudinal Study of Adolescent Health (AHSRD), with scores ranging from 0 to 51. In-school delinquency is measured by the number of times a student engages in in-school fights (range 0 to 4), in-school drug use (range 0 to 4), and in-school covert delinquency on the school campus (range 0 to 4). Lastly, prior suspensions are the number of previous out-of-school suspensions a student received during grades kindergarten through fifth; scores range from 0 to 4.

The study's design, and its strategic use of variables, will advance the argument for which factors, and combinations thereof, have significant correlational relationships with out-of-school suspensions, and to what extent these variables explain the racial discipline gap. Despite this, this design has notable limitations. First, since correlational and causal-comparative designs are non-experimental and cannot demonstrate causal relationships, conclusions must be made with caution. Second, although this study will use a sample size large enough to generate sufficient statistical power, the results of the study may not be generalizable beyond the participants in the study. Third, except for the percent of Black enrollment, all data was gathered using student surveys.

### **Research Questions**

**RQ1:** How accurately can the number of out-of-school suspensions be predicted from a linear combination of student delinquency scores, number of in-school fights, number of times in-school drug use occurred, frequency of in-school covert delinquency, and the number of prior out-of-school suspensions for Black high school students?

**RQ2:** How accurately can the number of out-of-school suspensions be predicted from a linear combination of student delinquency scores, number of in-school fights, number of times

in-school drug use occurred, frequency of in-school covert delinquency, and the number of prior out-of-school suspensions for White high school students?

**RQ3:** Is there a difference in the number of out-of-school suspensions between Black and White high school students when controlling for student's gender, family structure, school grades, delinquent peers, school environment, school's percentage of Black student enrollment, delinquency scores, number of in-school fights, number of times in-school drug use occurred, frequency of in-school covert delinquency, and the number of prior out-of-school suspensions?

### **Null Hypotheses**

**Ho1:** There is no significant predictive relationship between the number of out-of-school suspensions and a linear combination of student delinquency scores, number of in-school fights, number of times in-school drug use occurred, frequency of in-school covert delinquency, and the number of prior out-of-school suspensions for Black high school students.

**Ho2:** There is no significant predictive relationship between the number of out-of-school suspensions and a linear combination of student delinquency scores, number of in-school fights, number of times in-school drug use occurred, frequency of in-school covert delinquency, and the number of prior out-of-school suspensions for White high school students.

**Ho3:** There is no difference in the number of out-of-school suspensions between Black and White high school students when controlling for student's gender, family structure, school grades, delinquent peers, school environment, school's percentage of Black student enrollment, delinquency scores, number of in-school fights, number of times in-school drug use occurred, frequency of in-school covert delinquency, and the number of prior out-of-school suspensions.

## **Participants and Setting**

In the following section of this chapter the demographics of the population, the number of participants, and the setting for this study are all described. The sampling method and justifications for minimum sample sizes are given for anticipated alpha levels, statistical power, and effect sizes.

### **Population**

The sampling method for this study will be a convenience sample. The population from which the samples will be drawn is based in central California and composed of a diverse array of ethnic and socioeconomic backgrounds. The demographics of the schools within the district that will be sampled are relatively similar in their ethnic and economic composition, with the exception of one high school that has a significantly larger population of Black students. Student population ethnicities consist of approximately 58.8% Hispanic, 18.9% White, 9.8% Asian, and 7% Black, and approximately 55% of students qualify for free or reduced-cost lunch. The student population of the three high schools is approximately 4,500. The population of White students is approximately 1,350 and the Black student population is approximately 500. Anticipating a participation rate of approximately 30 percent, the two sampled groups will be made up of 400 White high school students and 150 Black high school students respectively. Assuming that out-of-school suspension rates reflect the national average (U.S. Department of Education, Office for Civil Rights, 2018), each sampled group should contain approximately 16 students who have been previously suspended in high school within the past 12 months. Student data will be collected from surveys during the end of the 2022-2023 school year. Surveys will be administered to collect student demographic information, including race, gender, perceived school environment, and a host of delinquency measures. Participants will be approximately 50%

male-to-female in both groups and all will be high school students attending a single school district in central California.

### **Participants**

A total sample size of 240 students was collected, including 120 White students, 120 Black students, 120 males, and 120 females. When conducting multiple linear regression analysis with the use of five predictor variables, a minimum sample size of 92 is required to achieve .80 statistical power at alpha .05 with the assumption of a medium effect size (Gall et al., 2007). For the ANCOVA, using 11 covariates, a minimum sample size of 224, evenly divided between the two groups, is required to attain .7 statistical power at alpha .05 (Gall et al., 2007).

### **Setting**

Participants were drawn from three high schools within a single school district in the central California region. Two groups are identified. Both groups are naturally occurring; one group consists of a convenience sample of White high school students and the other consists of a convenience sample of Black high school students. Both groups will have an approximately equivalent distribution of males and females; however, this variable will be controlled for in the ANCOVA.

### **Instrumentation**

This study will use three primary instruments. Each instrument is listed in the corresponding Appendices below. The first instrument is the Adolescent Health Self-Report Delinquency (AHSRD). This instrument is used to measure an adolescent's self-reported delinquency; see Appendix A for this instrument. The second instrument that is used is taken from the Early Childhood Longitudinal Study (ECLS) and measures perceptions of the school environment; see Appendix B. The third instrument is The Friends' Delinquent Behavior which

measures the number of delinquent friends a student associates with; see Appendix C.

Supplemental survey questions can be viewed in Appendix D. The following is a more detailed description of each instrument that is used in this study.

### **Adolescent Health Self-Report Delinquency (AHSRD).**

The purpose of the AHSRD is to measure the subject's perceived involvement in delinquent behaviors during the past year. This instrument was derived from an earlier version called the Self-Report Delinquency Scale (SRD), which also measures a subject's perceived involvement in delinquent behaviors during the past year. The SRD was developed by Elliott et al., (1985) for the original National Youth Survey. This event was sponsored by the National Institute of Mental Health and was conducted to gain a better understanding of child and adolescent deviant and conventional behaviors. The SRD contains 24 items with a wide range of delinquent behaviors. The 1985 version contains a 9-point ordinal scale, ranging from, 1 = never to 9 = two-to-three times a day. High scores indicate high levels of delinquency, while low scores suggest low occurrences of delinquent behaviors.

In 2019, Pechorro et al. developed a similar survey. This new instrument, referred to as the Adolescent Health Self-Report Delinquency (AHSRD), used many of the same items as the SRD and a survey used in the National Longitudinal Study of Adolescent Health (Add Health). Pechorro et al., (2019) conducted a study to determine if this new version of the Add Health had acceptable validity and reliability. The study, consisting of 412 youths, found "satisfactory psychometric properties, namely in terms of its two-factor structure (violent and nonviolent delinquency), internal consistency, convergent validity, discriminant validity, criterion-related validity, and known-groups validity" (Pechorro et al., 2019, p. 1). Factor analysis determined that the two-factor structure of violent and non-violent fit best, with factor loadings ranging from

.37 to .88. Moreover, total internal consistency is reported as Cronbach's alpha .90 and omega .94, and total convergent and discriminant validity with the SRD is .89. Further, Pechorro et al., (2019) found that the "(AHSRD) is an interculturally valid and reliable measure of violent and nonviolent delinquency among at-risk male and female youths" (p.1). The survey contains 17 questions; 10 items measure non-violent behaviors and 7 items measure violent behaviors. The survey uses a four-point ordinal scale where 0 = never, 1 = one or two times, 2 = three or four times, and 3 = 5 or more times. Scores range from a minimum of 0 to a maximum of 51. Like the SRD, high scores indicate high levels of delinquency, and low scores suggest low occurrences of delinquent behaviors. This survey will be administered via google forms by this researcher and takes approximately five minutes to complete. Permission has been granted to use this instrument. (See Appendix E)

#### **Early Childhood Longitudinal Study (ECLS), school environment instrument.**

The second instrument used is taken from the Early Childhood Longitudinal Study (ECLS). The ECLS is directed by the U.S. Department of Education and the National Center for Education Statistics (NCES) is required by congressional law to collect data for purposes of describing the current state of education and determining educational progress within the United States. The ECLS provides a wide array of educational data, including students' knowledge and development as well as parental and teacher perceptions of their children's and students' educational experiences. One of the instruments used in the 8th-grade study concerns the school environment.

The five survey items ask if a school is perceived to be an overall good school, if the school emphasizes learning, if the school is safe, and if the school has a drug and violence problem. The survey uses a 5-point Likert scale, with 1 = strongly agree, 2 = agree, 3 = neither

agree or disagree, 4 = disagree, and 5 = strongly disagree. The questions concerning drugs and violence are reverse-coded. Scores range from 5 to 20; a higher score indicates that the school is perceived to be poorly functioning and a lower score indicates the school is perceived to be properly functioning. Data used from the ECLS is commonly used in the literature; the instrument is reported to have satisfactory validity (Tourangeau et al., 2009) with Cronbach's alpha coefficient for this instrument reported as .75 (Wright et al., 2014). This instrument is embedded in the student survey and will take approximately one minute to complete. Permission has been granted to use this instrument. (See Appendix F)

### **The Friend's Delinquent Behavior.**

This instrument was developed from the Denver Youth Survey by the Institute of Behavioral Sciences (1987). This survey was initiated in 1986 by the Office of Juvenile Justice and Delinquency Prevention as part of a larger longitudinal study investigating delinquent behaviors among a variety of demographics within high-risk areas in Denver, Colorado (Huizinga, 2016). The instrument is a slightly modified version of the original and contains 7 items that measure the participants' knowledge of how many of their friends have engaged in delinquent behaviors during the past 12 months (Low & Espelage, 2014). The instrument uses a 5-point Likert scale where 0 = none of them, 1 = very few of them, 2 = some of them, 3 = most of them, and 4 = all of them. Scores can range from 0 to 28, and higher scores indicate that the participant has more delinquent friends. This instrument is used in longitudinal data (Browning & Huizinga, 1999) and studies that measure the influence of delinquent peers (Grant et al., 2019; Low & Espelage, 2014; Ingram et al., 2020). The longitudinal data from this instrument is commonly used in the literature. The construct is unidimensional and valid (Polanksy et al., 2008) and Cronbach's alpha coefficient range from .85 to .89 across waves of assessment (Grant



et al., 2019; Ingram et al., 2020). This instrument is embedded in the student survey and will take approximately one minute to complete. Permission has been granted to use this instrument. (See Appendix G)

### **Procedures**

This researcher will contact the research offices and assistant superintendents of each district to receive permission to conduct the study. Upon confirmation, this researcher will contact the principals of the corresponding high schools and ask permission to conduct this study at the school level. Once permission is granted, registrar officers will provide parent and student contact information for Black and White students. Emails will be sent to all high school teachers in participating schools requesting parents, teachers and students who are willing to participate in the study. This email will also communicate that the study is looking for high school students who are interested in sharing their demographic information, behavioral history, and opinion of their school. Contact information will be given. Once parents give passive permission by sharing the survey link with their child/student, follow-up emails will be sent to achieve maximum completion of surveys.

An IRB research project application will be completed, and a consent form will be written; see Appendix H. The IRB application will describe the components of the survey the participants will be asked to complete. The survey that will be used to collect data will be sent with the IRB application, the school district application for research, to all high schools and parents of participating students. The consent form will describe what participants will be asked to do and for how long. It will describe the potential risks to the participants and promise to protect their identities. The document will make clear that participation in the study is purely voluntary and that participants may withdraw from the study at any point without penalty.

Contact information for both the researcher and the IRB chair will be provided to participants for clarification. This researcher will complete an IRB submission form to be reviewed by the chair. (See Appendix I)

After receiving IRB approval and being granted permission by the district and schools, data collection will begin. A mass email to all teachers of all the participating high schools will be sent out requesting them to invite their students to participate in the research study. Contact information will be provided to students who express interest. The students who initiate contact will be prompted to ask for parental permission. If permission is granted, an informed consent letter will be sent to the parent(s) or guardian to read, sign, and email back. Students who have parental consent will be emailed a direct link to complete the survey.

The student survey, which can be found in Appendix D, consists of ten questions that ask student demographic information, school site, and student factors, including school grades and family structure. Further, the survey asks students questions concerning out-of-school suspensions, in-school fights, drug use, and covert delinquency. Following this, the survey asks students to answer five questions from the ECLS, found in Appendix B; seven questions from the Friend's Delinquent Behavior, found in Appendix C; and 17 questions from the AHSRD; found in Appendix A.

No student names will be collected in the survey. Data will be stored on one hard-drive and two external drives. The computer is password-protected and the external hard drives will be stored in a locked file cabinet. Data will be analyzed using SPSS; findings will be presented along with conclusions, limitations, and recommendations. No training of individuals is required for this study.

### **Data Analysis**

Data will be analyzed using descriptive statistics, multiple linear regression, and an ANCOVA. Research questions one and two will run multiple linear regressions and question three will run an ANCOVA. Mean and standard deviation scores will be given for participants' germane student demographic, school, and delinquency variables, including school grades, school environment, percent Black enrolment, general delinquency scores, in-school delinquency scores, and prior out-of-school suspension scores. Scores of all participants will be displayed by group, divided into Black and White high school students.

Further, this study will seek to predict relationships between one continuous criterion variable and five predictor variables. Two multiple regression analyses will be conducted; the first regression will address the first research question and will consist of all Black students. Delinquency scores, the number of in-school fights, in-school drug use, in-school covert delinquency, and prior out-of-school suspension scores will constitute the predictor variables, and the number of out-of-school suspensions received during the past 12 months will be the criterion variable. The second multiple regression will be used to address the second research question and will be run with identical variables using White students' scores. All data sets are screened for missing and inaccurate entries.

Before conducting the multiple linear regressions, several assumption tests will be conducted, beginning with an assumption of bivariate outliers. Using scatter plots, extreme outliers will be identified and, if justified, they will be removed. A note will be made indicating the removal of any extreme outliers. Next, an assumption of multivariate normal distribution will be conducted. Using scatter plots, this researcher will visually determine if there is a linear correlation between each pair of variables in the form of the classic cigar shape (Gall et al.,

2007). Finally, an assumption of non-multicollinearity will be conducted to assure that two or more predictor variables are not too highly correlated with one another. If any Variance Inflation Factor is greater than 10 or the Tolerance is below .1, then the appropriate predictor variable will be removed (Gall et al., 2007). Finally, a multiple regression analysis will be run using an alpha level of .05 for all statistics. Correlation coefficient values and effect sizes will be reported.

Finally, to address the third research question, an ANCOVA will be conducted to determine if the independent variable of student race remains statistically significant after controlling for student factors, school factors, and delinquency factors. The ANCOVA will control for a variety of confounding variables, which the literature suggests influence the relationship between the independent variable of race and the criterion variable of receiving an out-of-school suspension. SPSS allows for a maximum of ten control variables. A total of five student factors, two school factors, and three delinquency factors constitute the ten covariates. The first three student factors include race, gender, and family structure; these variables function as categorical covariates and will be dichotomously coded. The fourth student factor, school grades, will also function as a categorical covariate using a seven-point scale. The fifth student factor is a measure of delinquent peer association and is a continuous covariate, measured by Friend's Delinquent Behavior survey; scores range from 0 to 28. The two school factors include the categorical variable percent of Black student enrollment and the continuous variable of school environment as measured by the Early Childhood Longitudinal Study, with scores ranging from 5 to 20. Lastly, the three delinquency factors include delinquency, in-school delinquency, and prior suspensions. Delinquency scores, as measured by the Adolescent Health Self-Report Delinquency survey, range from 0 to 51. In-school fights are measured at two different time levels. One measures the total number of fights from grades 6 to the present and

the other measures fights during the past 12 months; scores range from 0 to 4. In-school drug use measures the total number of times a student used drugs on school property during the past 12 months; scores range from 0 to 4. In-school delinquency measures the frequency of delinquent acts on school property, including carrying weapons, property crimes, and threats; scores range from 0 to 4. Finally, prior suspension is measured by the number of prior out-of-school suspensions a student received during grades K-5; scores range from 0 to 4.

Several studies (Huang & Cornell 2017; Morgan & Wright, 2018; Rocque, 2010; Wright et al., 2014) indicate that a series of variables related to student and school characteristics are significantly correlated to receiving out-of-school suspensions, but these characteristics are not equally represented among racial groups. Therefore, controlling for a host of relevant student, school, and behavioral factors will aid in isolating the role that race plays in receiving out-of-school suspensions. Box and whisker plots will be used to visually check for outliers. The assumption of normality will be conducted by using Kolmogorov-Smirnov to determine if the significance is greater than .05. Next, an assumption of linearity will be checked using scatter plots for both groups. An assumption of bivariate normal distribution will be checked using scatter plots for both groups, looking for the classic cigar shape. Finally, the assumption of homogeneity of variance will be checked using Levene's test of equality of error variances to determine if the significance is greater than .05.

## CHAPTER FOUR: FINDINGS

### Overview

In this chapter the research questions and nulls are reintroduced. Next, a section that displays descriptive statistics is presented. Finally, data screening, assumption testing, and the results of the statistical models are presented and discussed.

### Research Questions

**RQ1:** How accurately can the number of out-of-school suspensions be predicted from a linear combination of student delinquency scores, number of in-school fights, number of times in-school drug use occurred, frequency of in-school covert delinquency, and the number of prior out-of-school suspensions for Black high school students?

**RQ2:** How accurately can the number of out-of-school suspensions be predicted from a linear combination of student delinquency scores, number of in-school fights, number of times in-school drug use occurred, frequency of in-school covert delinquency, and the number of prior out-of-school suspensions for White high school students?

**RQ3:** Is there a difference in the number of out-of-school suspensions between Black and White high school students when controlling for student's gender, family structure, school grades, delinquent peers, school environment, school's percentage of Black student enrollment, delinquency scores, number of in-school fights, number of times in-school drug use occurred, frequency of in-school covert delinquency, and the number of prior out-of-school suspensions?

### Null Hypotheses

**H01:** There is no significant predictive relationship between the number of out-of-school suspensions and a linear combination of student delinquency scores, number of in-school fights,

number of times in-school drug use occurred, frequency of in-school covert delinquency, and the number of prior out-of-school suspensions for Black high school students.

**Ho2:** There is no significant predictive relationship between the number of out-of-school suspensions and a linear combination of student delinquency scores, number of in-school fights, number of times in-school drug use occurred, frequency of in-school covert delinquency, and the number of prior out-of-school suspensions for White high school students.

**Ho3:** There is no difference in the number of out-of-school suspensions between Black and White high school students when controlling for student's gender, family structure, school grades, delinquent peers, school environment, school's percentage of Black student enrollment, delinquency scores, number of in-school fights, number of times in-school drug use occurred, frequency of in-school covert delinquency, and the number of prior out-of-school suspensions.

### **Descriptive Statistics**

An initial screening of the data showed no missing cases. The sample consisted of 240 high school students evenly split between racial and gender groups. Three high schools participated in the study; these schools will henceforth be referred to as the low-percent Black population school (3% Black students), mid-percent Black population school (5% Black students), and high-percent Black population school (17% Black students). Table 1 displays the means and standard deviations of all relevant variables disaggregated by race and gender.

**Table 1***Descriptive Statistics for Black and White Students*

	White students <i>n</i> =120						Black students <i>n</i> =120					
	Male <i>n</i> =60		Female <i>n</i> =60		Total		Male <i>n</i> =60		Female <i>n</i> =60		Total	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
OSS	.067	.252	.017	.129	.04	.201	.167	.360	.067	.252	.12	.322
K-5 OSS	.37	.802	.13	.724	.245	.770	.78	1.20	.20	.684	.49	.995
In-school Fights	.017	.129	.017	.181	.017	.129	.05	.220	.05	.220	.05	.219
In-school drugs use	.07	.312	.12	.454	.09	.389	.15	.685	.05	.287	.10	.525
In-school delinquency	.22	.555	.03	.181	.13	.421	.28	.613	.10	.303	.19	.213
Delinquency	.57	1.72	.28	1.11	.44	1.53	1.18	3.14	.70	1.67	.94	2.52
Delinquent Friends	2.23	3.11	1.83	3.20	2.06	3.14	2.75	4.17	2.42	3.37	2.61	3.78
Family Structure	.50	.504	.33	.475	.42	.495	.62	.490	.57	.500	.60	.494
Grades	2.77	1.16	2.47	.999	2.62	1.09	3.15	.732	2.53	.853	2.86	.850
School Climate	14.8	3.19	15.5	3.14	15.1	3.17	15.8	2.65	16.0	3.19	16.3	2.93
Percentage Black	.042	.201	.042	.201	.042	.200	.59	.490	.57	.497	.58	.495
OSS 6th- present	.32	.725	.07	.312	.19	.569	.85	1.13	.28	.613	.57	.916
Fights 6th- present	.23	.593	.05	.220	.14	.455	.47	1.02	.22	.555	.34	.825

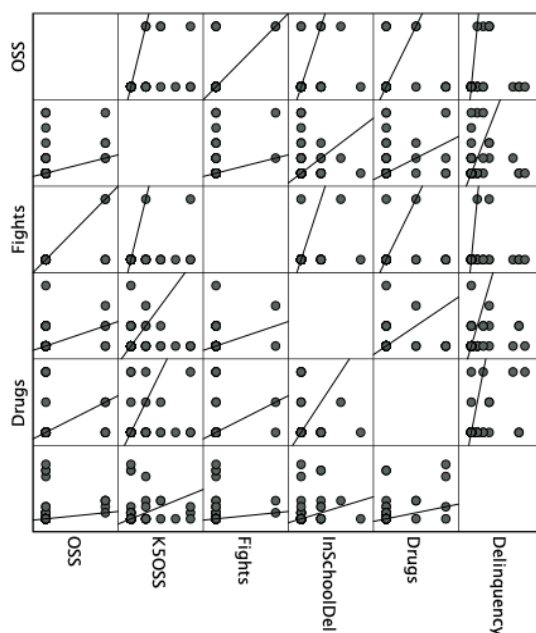


## Hypothesis One Data Screening

Data screening showed 120 samples and no missing data or errors in the data. A scatter plot matrix with reference line was created to identify outliers and determine linearity. Figure 2 shows potential bivariate outliers between predictors and the criterion. To get a more precise understanding, outliers were scanned using Casewise Diagnostics (see Table 2). Results showed that six cases had standardized residuals over three. All six cases were of students who had received an OSS. Data investigation revealed that students who reported receiving an OSS and more than one K-5th OSS, or a combination of in-school delinquency and an in-school fight rose above the traditional threshold limit of three. These cases would traditionally be seen as outliers. However, as the nature of these variables is that they are rare and are typically condensed among a relatively small number of actors, much like a Pareto distribution (Arnold, 2014), this is not unusual, but expected. For this reason, no cases were removed from the data set.

**Figure 2**

*Matrix Scatter Plot with Reference Line for Black Students*



**Table 2***Casewise Diagnostics Statistics*

Case Number	Std. Residual	OSS	Predicted Value	Residual
63	3.304	1	.24	.759
78	3.537	1	.19	.812
86	3.296	1	.24	.757
89	4.085	1	.06	.938
92	4.201	1	.04	.965
116	3.586	1	.18	.823

a. Dependent Variable: Out-of-school suspension

### **Hypothesis One Assumption Testing**

#### **Assumption of Linearity**

The assumption of linearity was checked for all predictor variables in relation to the criterion using scatter plots. Visual inspection indicated that all predictor variables displayed a linear relationship to the criterion variable (Figure 2). As the data that was collected for criterion variable was comprised of only zeros and ones the clustering of data points does not display the classic sign of linearity. As such, within the context of multiple linear regression, the assumption of linearity was not met. However, a Box-Tidwell logit transformation was conducted which showed no significance between any of the continuous predictor variables and the criterion, indicating that the assumption of linearity was met.

#### **Assumption of Independence of Observations**

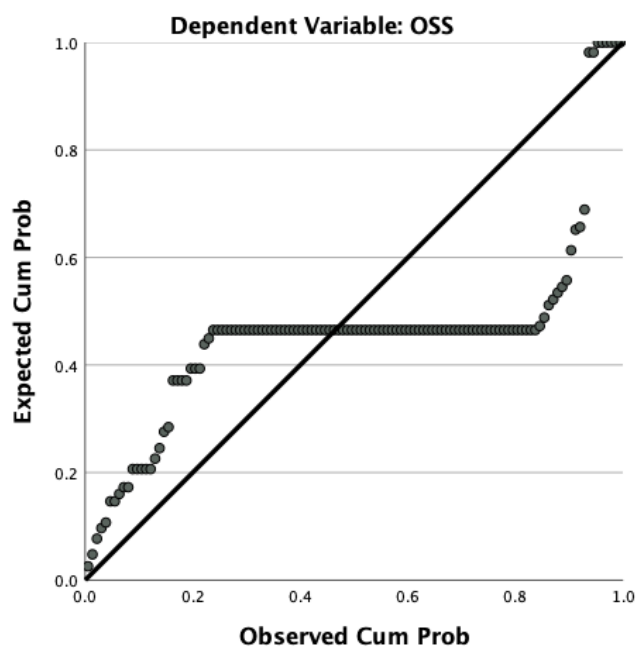
The assumption of independence of observations was tested using the Durbin-Watson statistic. Results of 2.029 showed that there is no substantial correlation between residuals (see Table 4). The assumption of independence of observations was met.

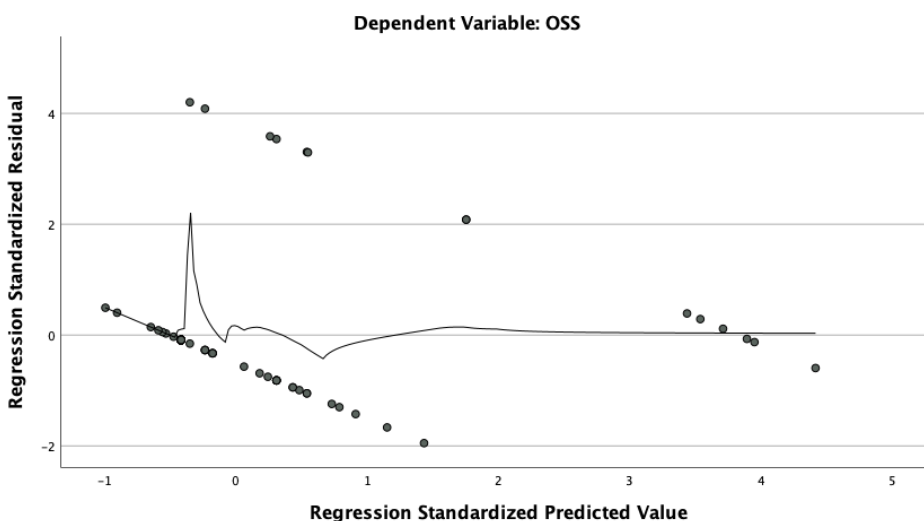
#### **Assumption of Bivariate Normal Distribution**

As all students reported receiving zero or one OSS during the past 12 months the data for the criterion variable essentially represented a dichotomous variable. Although the design of the criterion was continuous, the data that was collected consisted of only ones and zeros; as expected with this data set, the p-p plot showed substantial divergence from the line of fit (see Figure 3) indicating that the assumption of normality was not met; analogously homoscedasticity was also not met (see Figure 4).

### Figure 3

*Normal P-P Plot for Black Students*



**Figure 4***Homoscedasticity Scatterplot for Black Students***Assumption of Multicollinearity**

An assumption of multicollinearity test was conducted. Findings ranged from a Tolerance of .419 to a VIF score of 2.385. Test results indicated that all scores were within acceptable ranges for all predictors and the assumption of non-multicollinearity was met (see Table 3).

**Table 3***Collinearity Statistics for Black Students*

Model	Collinearity Statistics	
	Tolerance	VIF
K-5 OSS	.835	1.198
In-School Fights	.748	1.337
In-School Drug Use	.463	2.160
In-School Delinquency	.707	1.415
Delinquency	.419	2.385

a. Dependent Variable: Out-of-school suspension

### Hypothesis One Results

Using K-5 OSS, in-school fights, in-school drug use, in-school delinquency, and delinquency to predict out-of-school suspensions a multiple regression was conducted. Results rejected the null hypothesis at 95% confidence level where  $F(5, 114) = 24.12, p < .001$  (see Table 3).

**Table 4**

*Regression Model Results for Black Students*

Model		<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Sig.</i>
1	Regression	6.357	5	1.271	24.120	<.001 <sup>b</sup>
	Residual	6.009	114	.053		
	Total	12.367	119			

a. Dependent Variable: Out-of-school suspension

b. Predictors: (Constant), K5OSS, In-school fights, In-school drug use, In-school delinquency, Delinquency

The model's effect size was large ( $R = .717$ ) and resulted in an overall  $R^2$  of .514 ( $p < .001$ ). The predictors in the model accounted for 51.4% of the variance for OSS (see Table 3).

**Table 5**

*Model Summary for Black Students*

Model	<i>R</i>	<i>R</i> <sup>2</sup>	<i>Adjusted R</i> <sup>2</sup>	<i>SE</i>	Durbin-Watson
1	.717 <sup>a</sup>	.514	.493	.230	2.029

a. Predictors: (Constant), K5OSS, In-school fights, In-school drug use, In-school delinquency, Delinquency

b. Dependent Variable: Out-of-school suspension

There is a statistically significant predictive relationship between the number of out-of-school suspensions and a linear combination of student delinquency scores, number of in-school

fights, number of times in-school drug use occurred, frequency of in-school covert delinquency, and the number of prior out-of-school suspensions for Black high school students. Student delinquency and in-school drug use were not significant within the model; however, K-5 OSS, in-school delinquency, and in-school fights were significant predictors of receiving an OSS during the past 12 months, with in-school fights recognized as the most consequential predictor variable ( $\beta = .657, p < .001$ ) (see Table 5).

**Table 6**

*Coefficients for Black Students*

Model		Unstandardized Coefficients		Standardized Coefficients	<i>t</i>	Sig.
		<i>B</i>	<i>SE</i>	$\beta$		
1	(Constant)	.020	.024		.827	.410
	K5OSS	.055	.023	.175	2.452	.016
	Fights	.967	.111	.657	8.697	<.001
	Drugs	.010	.059	.017	.175	.861
	In-School Del.	.168	.051	.255	3.286	.001
	Delinquency	-.013	.013	-.104	-1.030	.305

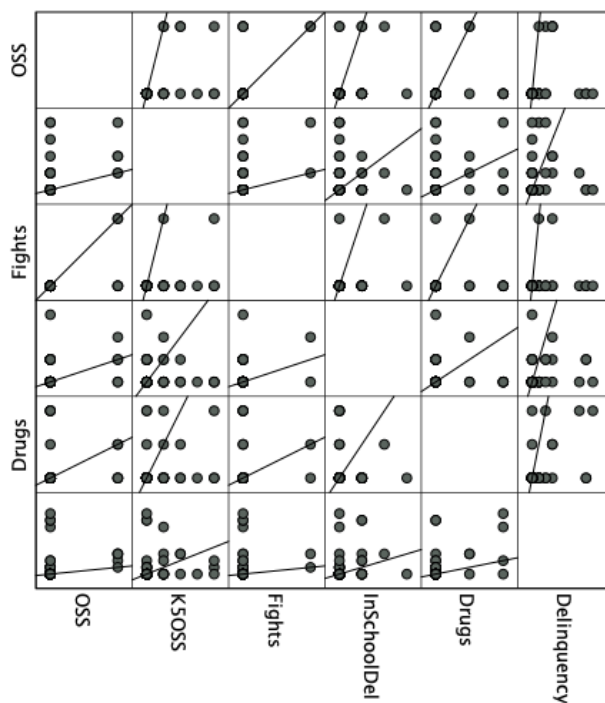
a. Dependent Variable: Out-of-school suspension

### Hypothesis Two Data Screening

Data screening showed 120 samples with no missing data or errors in the data. A scatter plot matrix with reference line was made to identify outliers and determine linearity. Potential bivariate outliers were visually inspected (see Figure 5). As a visual inspection did not provide adequate detail, outliers were checked using Casewise Diagnostics (see Table 6). The results showed three cases with standardized residuals over three. Again, this was expected due to the nature of the variables in question and all cases were left in the data set.

**Figure 5**

*Matrix Scatter Plot with Reference Line for White Students*

**Table 7**

*Casewise Diagnostics for White Students*

Case Number	Std. Residual	OSS	Predicted Value	Residual
6	5.026	1	.27	.725
17	5.673	1	.18	.818
64	5.748	1	.17	.829

a. Dependent Variable: Out-of-school suspension

### Hypothesis Two Assumption Tests

#### Assumption of Linearity

Predictor variables were checked for linearity using scatter plots. As with the first hypothesis, the data that was collected for the criterion consisted only of zeros and ones, therefore the scatter plot does not display the classic clustering of linearity within the context of

multiple linear regression (see Figure 5). However, a Box-Tidwell logit transformation was conducted. Results showed no significance between any of the continuous predictor variables and the criterion, indicating that the assumption of linearity was met.

### **Assumption of Independence of Observations**

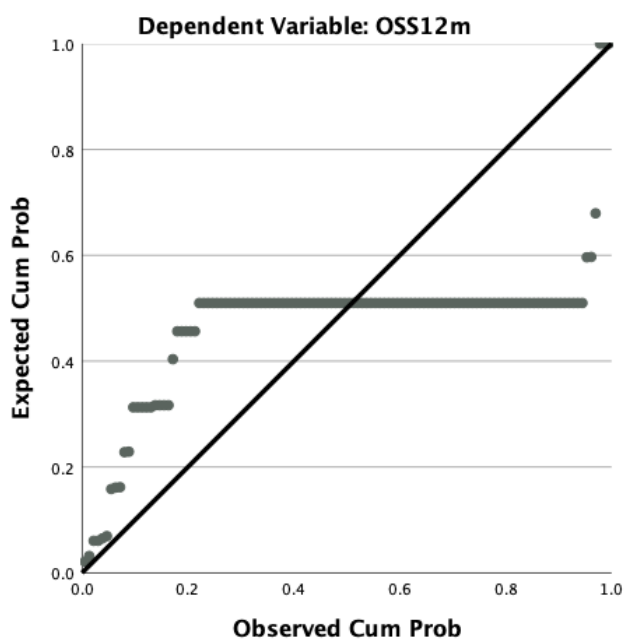
The assumption of independence of observations was tested using the Durbin-Watson statistic. Results of 1.923 showed that there is no substantial correlation between residuals (see Table 8). The assumption of independence of observations was met.

### **Assumption of Bivariate Normal Distribution**

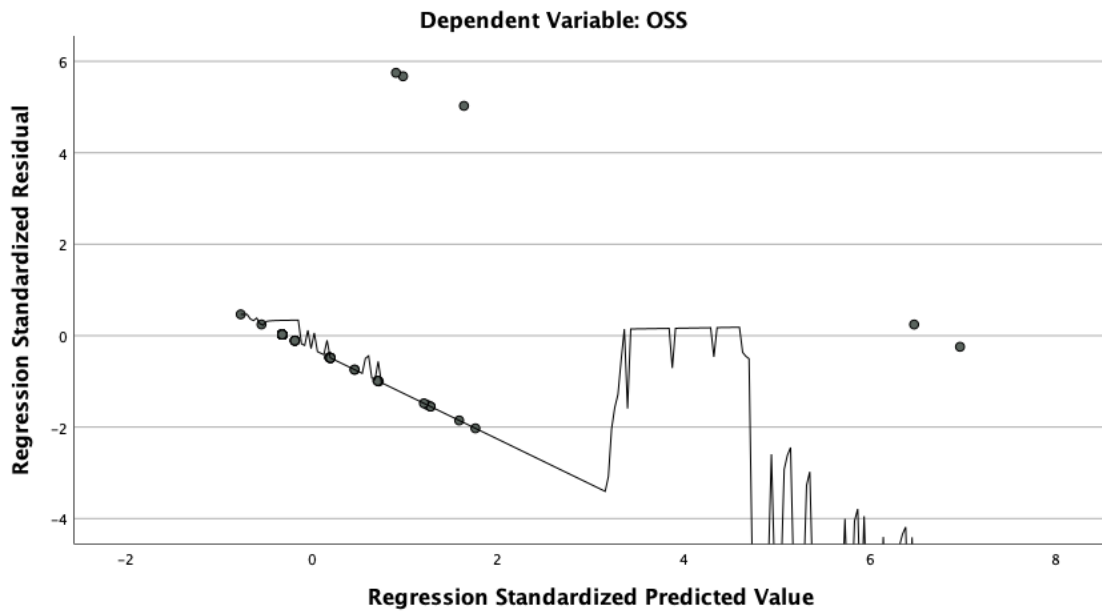
Although designed as a continuous variable, the data for the criterion that was collected consisted of only ones and zeros; as expected, it was not normality distributed (see figure 6) and the assumption of homoscedasticity was not met (see Figure 7).

### **Figure 6**

*Normal P-P Plot for White Students*





**Figure 7***Homoscedasticity Scatterplot for White Students***Assumption of Multicollinearity**

An assumption of multicollinearity test was conducted for the White student group (see Table 8). Scores ranged from a Tolerance of .650 to a VIF of 1.538. It was determined that all variables were within acceptable ranges indicating no substantial multicollinearity existed and the assumption of non-multicollinearity was met.

**Table 8***Collinearity Statistics for White Students*

Model	Collinearity Statistics	
	Tolerance	VIF
K-5 OSS	.795	1.257
In-School Fights	.791	1.265
In-School Drug Use	.666	1.501
In-School Delinquency	.832	1.202
Delinquency	.650	1.538

a. Dependent Variable: Out-of-school suspension

### Hypothesis Two Results

Results of the multiple regression rejected the null hypothesis at a 95% confidence level where  $F(5, 114) = 23.24, p = <.001$ . There is a statistically significant predictive relationship between the number of out-of-school suspensions and a linear combination of student delinquency scores, number of in-school fights, number of times in-school drug use occurred, frequency of in-school covert delinquency, and the number of prior out-of-school suspensions for White high school students (see Table 9).

**Table 9***Regression Model Results for White Students*

Model		SS	df	MS	F	Sig.
1	Regression	6.357	5	1.271	24.120	<.001 <sup>b</sup>
	Residual	6.009	114	.053		
	Total	12.367	119			

a. Dependent Variable: Out-of-school suspension

b. Predictors: (Constant), K5OSS, In-school fights, In-school drug use, In-school delinquency, Delinquency

The model's effect sizes were large ( $R = .710$ ) with an  $R^2 = .505$ . The results were very similar to the Black student model, where over 50% of the variance in OSS was accounted for by the model (see Table 10).

**Table 10**

*Model Summary for White Students*

Model	$R$	$R^2$	Adjusted $R^2$	SE	Durbin-Watson
1	.710 <sup>a</sup>	.505	.483	.144	1.923

a. Predictors: (Constant), K5OSS, In-school fights, In-school drug use, In-school delinquency, Delinquency

b. Dependent Variable: Out-of-school suspension

Results showed that K-5 OSS, in-school fights, and in-school delinquency were significantly predictive of OSS for White students (see table 11); with in-school fights being the most powerful predictor ( $\beta = .463$ ,  $p < .001$ ).

**Table 11**

*Coefficients for White Students*

Model		Unstandardized Coefficients		Standardized Coefficients	$t$	Sig.
		$B$	$SE$	$\beta$		
1	(Constant)	-.004	.015		-.246	.806
	K5OSS	.074	.019	.284	3.841	<.001
	Fights	.723	.116	.463	6.253	<.001
	Drugs	-.032	.042	-.062	-.763	.447
	In-School Del.	.072	.034	.152	2.104	.038
	Delinquency	.019	.011	.148	1.810	.073

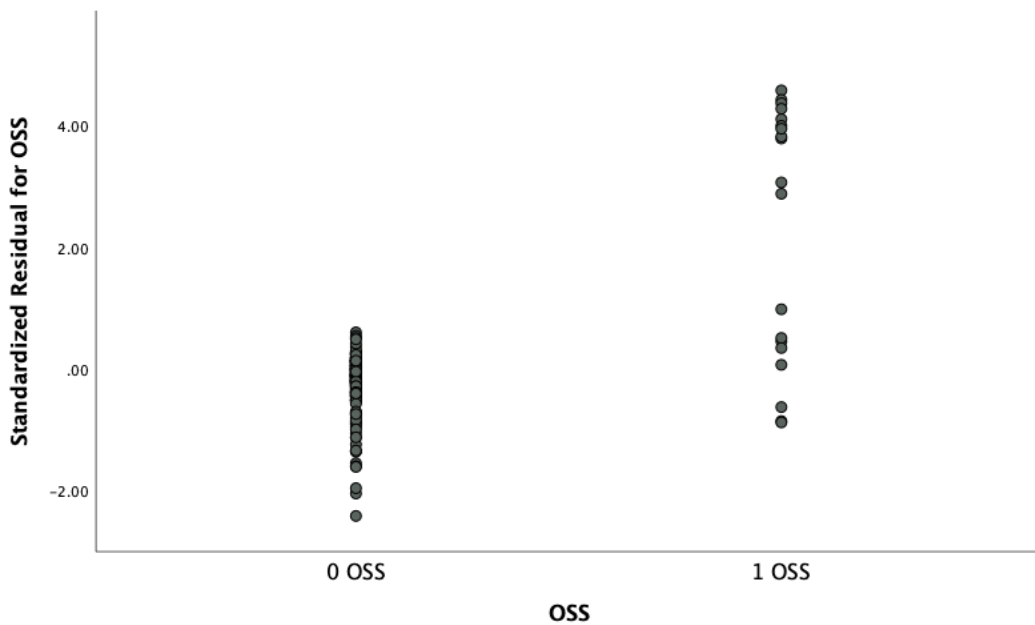
a. Dependent Variable: Out-of-school suspension

### Hypothesis Three Data Screening

Data screening was conducted. No variables displayed errors and no data was missing. Next, the model was checked for outliers using Z residuals; 10 cases showed scores above 3.000 (see Figure 8). No scores fell below -3.000. As with the two former hypotheses, all students that scored above a 3.00 reported receiving an OSS; further, the six scores that rose above 4.00 had received an OSS, had one or more K-5 OSS or reported being in an in-school fight. As this was expected by the theoretical framework of the study (Gottfredson & Hirschi, 1990) all cases were left in the model.

#### Figure 8

*Scatter plot of standardized residuals for OSS by OSS*



### Hypothesis Three Assumption Tests

The third hypothesis uses race as the independent variable, OSS as the criterion, and 11 covariates; these variables include gender, family structure, school grades, delinquent peers, school environment, school's percentage of Black student enrollment, delinquency scores, number of in-school fights, number of times in-school drug use occurred, frequency of in-school covert delinquency, and the number of prior out-of-school suspensions. A series of assumption testing was conducted.

#### Assumption of Normality

A test of normality was conducted using the Kolmogorov-Smirnov test. As with the former research questions, due to participant responses, the data for the criterion variable ended up being either a zero (no OSSs) or a one (one OSS), so was not normally distributed (see Table 12).

**Table 12**

#### *Tests of Normality*

Model	Kolmogorov-Smirnov <sup>a</sup>			
	Race	Statistic	<i>df</i>	Sig.
OSS	White	.541	120	<.001
	Black	.525	120	<.001

a. Lilliefors Significance Correction

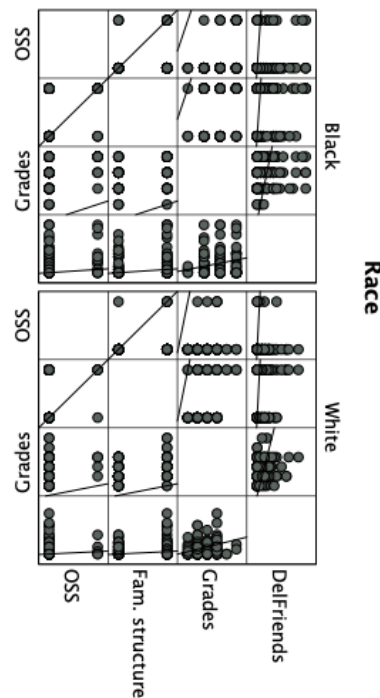
#### Assumption of Linearity

The assumption of linearity was tested by creating three levels of scatter plots for both racial groups. The first shows a matrix of student-level characteristics: family structure, school grades, and delinquent peers in linear relationship to OSS (see Figure 9). The second shows a matrix at the school level: school climate and school's percentage of Black student enrollment in

linear relationship to OSS (Figure 10). The third shows a matrix at the behavioral level: delinquency scores, number of in-school fights, number of times in-school drug use occurred, frequency of in-school delinquency, and number of prior out-of-school suspensions, in linear relationship to OSS (see Figure 11). As with the two previous hypotheses, the appearance of dichotomous criterion data that was collected did not display classic clustering of data points within the scatter plots. However, given the criterion data, a Box-Tidwell logit transformation was conducted. Results showed no significance between any of the continuous predictor variables and the criterion, with the exception of school grades, which was significant at  $p = .028$ . This indicates that the assumption of linearity was met for all predictors but not met for school grades.

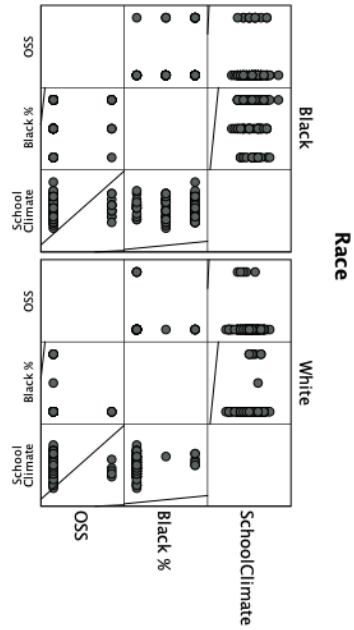
### Figure 9

*Scatter Plot for Student Level by Race with Reference Line.*



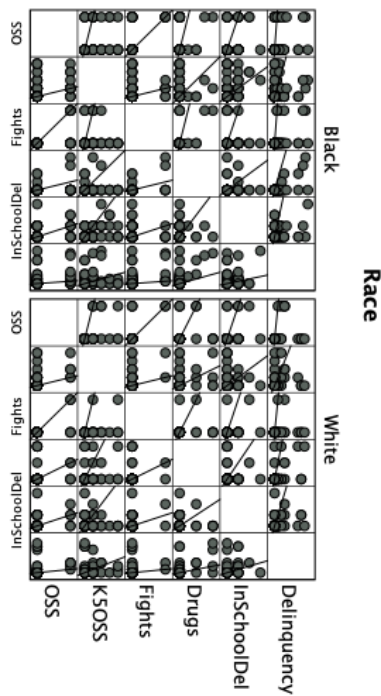
**Figure 10**

*Scatter Plot for School Level by Race with Reference Line.*



**Figure 11**

*Scatter Plot for Behavior Level by Race with Reference Line.*



### Assumption of Homogeneity of Slopes

The assumption of homogeneity of slopes was tested by creating interaction terms with the independent variable and each covariate (see Table 13). Results showed a significant interaction between race and delinquent friends ( $p = .036$ ), K-5 OSS ( $p = .002$ ), in-school fights ( $p < .001$ ), and in-school delinquency ( $p < .001$ ).

**Table 13**

#### *Tests of Between-Subjects Effects*

Dependent Variable: OSS

Source	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	Sig.	$\eta^2$
Corrected Model	9.566 <sup>a</sup>	22	.435	11.899	<.001	.547
Intercept	.008	1	.008	.210	.647	.001
Race * Gender	.035	2	.018	.481	.619	.004
Race * Family Struc.	.023	2	.011	.308	.735	.003
Race * Grades	.018	2	.009	.241	.786	.002
Race * Del. Friends	.246	2	.123	3.365	.036	.030
Race * School Climate	.056	2	.028	.770	.464	.007
Race * Black %	.097	2	.048	1.325	.268	.012
Race * K5OSS	.457	2	.229	6.259	.002	.055
Race * Fights	4.502	2	2.251	61.593	<.001	.362
Race * In-School Del.	.673	2	.337	9.210	<.001	.078
Race * Drugs	.005	2	.003	.073	.930	.001
Race * Delinquency	.125	2	.062	1.708	.184	.016
Error	7.930	217	.037			
Total	19.000	240				
Corrected Total	17.496	239				

a.  $R^2 = .547$  (Adjusted  $R^2 = .501$ )

### Assumption of the Homogeneity of Variance

The final assumption checked was homogeneity of variance. This was checked using Levene's test equality of variances (see Table 14). Due to the fact the data collected for the



criterion variable have the appearance of being binary in nature, results showed that the assumption was not met ( $p = .008$ ).

**Table 14**

*Levene's Test of Equality of Error Variances<sup>a</sup>*

Dependent Variable: OSS

<i>F</i>	<i>df1</i>	<i>df2</i>	Sig.
7.117	1	238	.008

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Gender + Family Struc. + Grades + Del. Friends + School Climate + Black % + K5OSS + Fights + In-School Del. + Drugs + Delinquency + Race

### **Hypothesis Three Results**

Results of the ANCOVA failed to reject the null hypothesis at a 95% confidence level  $F(1, 227) = .303, p = .582, \eta_p^2 = .001$ . Although Black students were three times more likely ( $p = .016$ ) to receive an out-of-school suspension than their White peers, after controlling for a series of behavior, school, and student level variables the likelihood of Black students receiving an OSS substantially diminished. Results showed that high school student's race ( $\eta_p^2 = .001, p = .582$ ) is not a significant predictor of having received an OSS during the past 12 months (see Table 14 and 15).

**Table 15***Tests of Between-Subjects Effects*

Dependent Variable: OSS

Source	SS	df	MS	F	Sig.	$\eta^2$
Corrected Model	9.256 <sup>a</sup>	12	.771	21.251	<.001	.529
Intercept	.015	1	.015	.409	.523	.002
Gender	.030	1	.030	.825	.365	.004
Family Struc.	.015	1	.015	.421	.517	.002
Grades	.013	1	.013	.346	.557	.002
Del. Friends	.202	1	.202	5.552	.019	.024
School Climate	.021	1	.021	.575	.449	.003
Black %	.107	1	.107	2.950	.087	.013
K5OSS	.486	1	.486	13.386	<.001	.056
In-School Fights	4.809	1	4.809	132.500	<.001	.369
In-School Del.	.542	1	.542	14.938	<.001	.062
In-School Drugs	.003	1	.003	.086	.769	.000
Delinquency	.013	1	.013	.368	.545	.002
Race	.011	1	.011	.303	.582	.001
Error	8.240	227	.036			
Total	19.000	240				
Corrected Total	17.496	239				

a.  $R^2 = .529$  (Adjusted  $R^2 = .504$ )**Table 16***Estimated Marginal Means for Race*

Dependent Variable: OSS

Race	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
White	.087 <sup>a</sup>	.022	.044	.131
Black	.071 <sup>a</sup>	.022	.027	.115

a. Covariates appearing in the model are evaluated at the following values: Gender = .50, K5OSS = .37, Fights = .03, In-School Del. = .16, Black % = 2.77.

## CHAPTER FIVE: CONCLUSIONS

### Overview

Chapter five consists of a discussion section where results are interpreted and integrated into the literature. Next, the implications of the study are considered, and policy sanctions are discussed. Finally, the study's limitations are examined and recommendations for future research are offered.

### Discussion

The purpose of this quantitative, correlational study was to determine how accurately out-of-school suspensions can be predicted from a linear combination of general delinquency, in-school delinquency, and prior suspensions for Black and White high school students. Further, a causal-comparative design was used to determine if there was a statistically significant difference in out-of-school suspensions between Black and White high school students when controlling for student level factors, school level factors, and student delinquency factors. The study's results showed what over forty years of the literature has indicated (Welsh & Little, 2018): Black students were suspended at three times the rate of White students. Results of the study showed that not all forms of delinquency are statistically significant predictors of out-of-school suspensions (OSS); some acts of delinquency strongly predicted OSS, while others showed small and insignificant relationships to OSS for both Black and White students. Using a model built from student level factors, school level factors, and student delinquency factors, the results of an ANCOVA diminished the rate of Black students receiving OSS from 3.03 ( $\eta^2 = .02, p = .016$ ) times that of Whites to an insignificant 0.795 ( $\eta^2 = .001, p = .582$ ) times that of Whites. This result has only been produced two other instances within the literature (Wright et al., 2014; Skiba et al., 2014).

The first RQ asked: How accurately can the number of out-of-school suspensions be predicted from a linear combination of student delinquency scores, number of in-school fights, number of times in-school drug use occurred, frequency of in-school covert delinquency, and the number of prior out-of-school suspensions for Black high school students? Results of the study showed that in-school fights, in-school delinquency, and prior out-of-school suspensions (OSS) students received during their kindergarten through fifth grade year of school (K-5 OSS) were all significantly predictive of having received an OSS during the past 12 months. The significance of these predictors are supported in the literature. While this study used K-5 OSS, former studies (Morgan & Wright, 2018; Wright et al., 2014) found that early problem behavior in school was predictive of future OSS and other studies found that in-school delinquency (Rocque, 2010; Wright et al., 2014) and in-school fights (Huang, 2016; Huang & Cornell, 2017) were strong predictors of OSS. However, in-school drug use and general student delinquency did not demonstrate statistical significance in predicting OSS. Although in-school drug use is cited as one of the more common reasons for receiving an OSS (NCES, 2019) its non-significance appears to be explicable by the relatively low number of instances in which students who do drugs on school property get caught. Data from this showed that only 9% of White students and 8% of Blacks who engaged in in-school drug use received an OSS for this behavior.

Although intuition would suggest that a positive predictive relationship exists between general student delinquency and OSS, and although Black students reported significantly higher rates of general delinquency ( $p = .039$ ), no significant relationship was found within the model. General delinquency was significantly correlated to OSS ( $R = .303, p < .001$ ) and strongly correlated to in-school drug use ( $R = .688, p < .001$ ); further, when only general delinquency ( $p = .012$ ) and in-school drug use ( $p = .029$ ) were included in a multiple linear regression model they

were significant; the overall modal  $R^2$  was .151. However, when in-school fights, in-school delinquency, and K-5 OSS were added to the model, general delinquency and in-school drug use became insignificant, but the overall model's  $R^2$  substantially increased to .514. This suggests that, when attempting to predict OSS, the types of delinquent acts that matter most are the ones that are caught taking place on school property. The lack of significance of in-school drug use (Huang & Cornell, 2017) and significance of in-school fights (Huang, 2016; Huang & Cornell, 2017), in-school delinquency (Rocque, 2010; Wright et al., 2014), and previous problem behavior (Morgan & Wright, 2018; Wright et al., 2014) are all supported by the literature.

The second RQ asked the same question as the first, but for White students. The full model revealed that the same three significant predictors of OSS for Black students were also significant for White students. Also, like Black students, in-school drug use and general student delinquency were not significant when all five predictors were added to the model. This effect was also seen in a similar study by Huang and Cornell (2017). For White students, general delinquency was significantly correlated to OSS ( $R = .268, p = .003$ ), yet in-school drug use was not. Similarly, when only general delinquency and in-school drug use were included in a multiple linear regression, general delinquency was predictive of OSS ( $p = .019$ ), but drug use was not, with an  $R^2 = .072$  for the overall model. When all five predictors were included the overall  $R^2$  increased to .505, showing in-school fights and K-5 OSS as the most substantial predictors of OSS. It is noteworthy to point out how similar the individual and overall effects were for both Black and White students within each model. This finding confirms previous studies that have concluded that there is no substantial difference in the predictive ability of these variables between Black and Whites students. (Huang, 2016; Huang & Cornell, 2017; Morgan & Wright, 2018; Rocque, 2010; Wright et al., 2014).

The findings for both models are supported by several former studies. To begin with, in aggregate, Black students engaged in more delinquent acts relative to their White peers (Felson et al., 2008, Morgan & Wright, 2018; Rocque, 2010; Wright et al., 2014; United States, 2019); this is particularly evident for violent acts on school property such as fighting and physical assault (Forsyth et al., 2015; Huang, 2016; Huang & Cornell, 2017; NCES, 2019). The data indicated that Black students were over two times more likely to engage in generally delinquent acts, nearly 1.5 times more likely to be involved in in-school delinquency, and approximately 2.5 times more likely be in a fight on school property. While in-school delinquency had a medium-to-large effect on OSS ( $R = .304, p < .001$ ) in-school fights had, by far, the largest effect ( $R = .633, p < .001$ ) for both Black and White students. Within the White student model, the standardized betas were .463 for in-school fights, .284 for K-5 OSS, and .152 for in-school delinquency, while the Black student model showed standardized betas for in-school fights to be .657, in-school delinquency was .255, and K-5 OSS was .175. Both overall models observed that previous suspensions, in-school fights, and in-school delinquency account for over 50% of the variance in OSS.

Further, as previous studies have indicated (Allen & Hilliard, 2021; Wallace et al., 2008), gender differences play an important role in the discipline gap. While Black male students were suspended approximately 2.5 times more than White males, Black females received 4 times the amount of OSS compared to White females. Correspondingly, relative to White females, Black female students reported 4.4 times the number of in-school fights, over three times the amount of in-school delinquency, and 2.5 times as many generally delinquent acts. These large gender differences shown in the study are strongly supported by previous findings (Allen & Hilliard, 2021; Annamma et al., 2019; Felson et al., 2008; Welsh & Little, 2018; Wun, 2016; Wallace et

al., 2008) and should be recognized as disproportionately contributing to the racial discipline gap.

Next, an important finding that has robust theoretical and empirical support concerns the predictive power of K-5 OSS on future OSS for both Black and White students. Attachment theory (Bowlby, 1958) and self-control theory (Gottfredson & Hirschi, 1990) posit that family structure and parental rearing play important roles in developing a child's ability to control innate impulses. Self-control theory maintains that once a child's level of self-control has been established, around the age of ten, it remains stable throughout one's lifetime (Hirschi, 2002). For both Black and White students, the single-parent family structure showed significant correlations to K-5 OSS ( $R = .236, p < .001$ ) lower school grades ( $R = .272, p < .001$ ), in-school fights ( $R = .230, p < .001$ ) and OSS ( $R = .236, p < .001$ ). Further, K-5 OSS was strongly correlated to in-school fights ( $R = .550, p < .001$ ) and future OSS ( $R = .688, p < .001$ ). A correlational link begins to emerge as the single-parent family structure appears to influence early problem behaviors which remain stable into adolescence, significantly contributing to the likelihood of in-school fights, in-school delinquency, and subsequent OSS. Although this type of path analysis is beyond the scope of this study, it is evident that K-5 OSS are powerful predictors of future OSS, and are likely a reflection of early problematic behaviors that manifest in succeeding years as delinquent behaviors as predicted by attachment theory and self-control theory, and empirically supported by Wright et al., (2014) and Morgan and Wright (2018) in the context of the racial discipline gap.

The third and final RQ statistically tested the difference in OSS between Black and White students controlling for a series of student level factors, school level factors, and behavior factors. Results of the model showed that the initial difference in OSS between Black and White

students, where Black students reported 3.03 times ( $p = .016$ ) the amount of OSS relative to Whites, diminished to an insignificant 0.795 times ( $p = .582$ ) that of White students. Results showed that after controlling for student, school, and behavior factors, race was no longer significantly predictive of receiving an OSS ( $\eta^2 = .001, p = .582$ ). K-5 OSS, in-school fights, in-school delinquency, delinquent friends, and school's percent of Black student enrollment were all shown to be significant factors in controlling for the influence of race on OSS. The most consequential covariate was in-school fights ( $\eta^2 = .369, p < .001$ ). The influence of this variable on OSS is well supported in the literature (Huang, 2016; Huang, & Cornell, 2017, Morgan and Wright, 2018; Rocque, 2010; Skiba et al., 2014; Wright et al., 2014) and, as Blacks reported approximately 3 times the amount of in-school fights — also supported by the literature (CDC, 2020; Felson et al., 2008; Forsyth et al., 2015; NCES, 2019, United States, 2019) — this covariate significantly contributed to reducing the influence of race on OSS. This was also true for K-5 OSS ( $\eta^2 = .056, p < .001$ ) and in-school delinquency ( $\eta^2 = .062, p < .001$ ). Both variables were significantly correlated to OSS and Black students reported significantly higher rates for both relative to their White peers. These findings are also supported by the literature (Morgan and Wright, 2018; Wright et al., 2014) where prior OSS and in-school delinquency were predictive of future OSS (Rocque, 2010; Wright et al., 2014) with Black students reporting significantly higher rates relative to Whites.

Delinquent friend association, and the supporting theoretical construct of social learning theory, appears to play a significant role in the discipline gap. Correlational data indicated that delinquent friends were significantly connected to student delinquency ( $R = .571, p < .001$ ), in-school drug use ( $R = .507, p < .001$ ), and in-school fights ( $R = .355, p < .001$ ). Although, the correlation between delinquent friends and OSS was less substantial ( $R = .141, p = .029$ ), the



ANCOVA showed that delinquent friend association was a significant control in the model ( $\eta^2 = .024, p = .019$ ). According to social learning theory, this suggests that students who associate with delinquent friends mimic the behaviors exhibited by their delinquent peers. This study confirmed the results of former studies (Haggerty et al., 2013; Haynie & Payne, 2006; Yoon et al., 2020) showing that Black youth report higher rates of delinquent friend association relative to their White counterparts, and this appears to be a significant factor in generating delinquent behaviors and subsequent OSS. Finally, the school level factor of percent of Black student enrollment ( $\eta^2 = .013, p = .087$ ) was found to be significant at alpha  $p = .10$ . While traditionally not considered significant, previous findings (Skiba et al., 2014; Wright et al., 2014) indicate that this variable is pivotal in explaining the racial discipline gap between schools.

To this researcher's knowledge, this is one of three studies (Skiba et al., 2014; Wright et al., 2014) that has found a set of control variables that fully accounts for the OSS gap between Black and White students. Wright et al., (2014) highlighted Black and White student differences in parent-reported delinquency ( $OR = 7.08, p < .001$ ) and prior problem behaviors ( $OR = 1.30, p < .001$ ), and Skiba et al., (2014) showed that fighting/battery ( $OR = 6.32, p < .01$ ) and a school's percent of Black student enrollment ( $OR = 5.98, p < .05$ ) have considerably large effects and, along with a small number of other covariates, fully account for the racial differences in OSS. This study has synthesized these previous findings, generated analogous results, and added the influence of delinquent peer associations as a contributing factor in explaining the discipline gap.

Results of this study contradict the differential selection hypothesis and the central tenets of critical race theory and implicit bias theory. These findings call into question the validity of such explanations. Conversely, the study provided substantial support for the differential

involvement hypothesis. Findings showed that prior K-5 OSS, in school fights, in-school delinquency, delinquent friends, and school's percent of Black student enrollment were significant covariates fully accounting for the racial discrepancy in OSS. This suggests that school officials select students for OSS primarily based upon their externalized delinquent behaviors, not as a consequence of their race.

### **Implications**

According to copious amounts of literature (CDC, 2020; Felson et al., 2008; Huang & Cornell, 2017; Morgan & Wright, 2018; NCES, 2019; Rocque, 2010; United States, 2019; Walt & Jason, 2017; Wright et al., 2014) and the findings of this study Black students engage in higher rates of in-school delinquency. As to the knowledge of this researcher, this disparity has decreased the significance and effect size of race predicting OSS in every peer-reviewed study that has controlled for student behavior — some to a moderate degree (Huang, 2016; Owens & McLanahan, 2020), others more substantially (Huang, & Cornell, 2017, Rocque, 2010), and some completely (Skiba et al., 2014; Wright et al., 2014). The central finding of this study was that a set of control variables dramatically diminished the effect size and significance of race as a predictor of OSS ( $\eta^2 = .001, p = .582$ ).

This main finding of this study and others (Morgan & Wright, 2018; Wright et al., 2014) is substantially supported by self-control theory and contradicts the central tenets of critical race theory (CRT) and implicit bias theory. These findings call into question largely unsubstantiated claims (Sablan, 2019) that systemic racism is the primary cause for unequal outcomes in suspension rates between White and Black students. To the contrary, the framework of self-control theory and evidentiary findings correlating single-parent family structures to early OSS — which strongly predict future in-school delinquency and OSS — suggest a set of opposing

concepts, which future researchers may consider referring to as “structural family breakdown” (CDC, 2022; U.S. Census Bureau, 2020) and “systemic delinquency” (CDC, 2020; Felson et al., 2008; Morgan & Wright, 2018; NCES, 2019; United States, 2019; Walt & Jason, 2017; Wright et al., 2014).

Finally, with regards to banning the use of OSS in schools, if systemic bias is not a significant source of disparate discipline, as the findings of this study suggest, then policy makers would do well to consider the substantial and well-documented (Blank & Shavit, 2016; Burns et al., 2021; Lacoë & Steinberg, 2018; Pope & Zuo, 2020; Zarecki, 2019) spillover effects that occur when misbehaving students are not removed from the classroom. This is especially salient because research indicates that special needs and minority students are among the most adversely affected (Hwang & Domina, 2021). Policy makers, school leaders, and researchers who support the elimination of OSS should ask themselves if maintaining their benevolent aversion toward punishing unruly students justifies punishing compliant children.

### **Limitations**

Some limitations should be considered when interpreting the findings of this study. Both research designs contain the same limitations. First, student self-report was the primary mechanism for gathering data. Although this method has its limitations (Thornberry & Krohn, 2000), as students may not be forthcoming when reporting their delinquent acts, it was preferred over teacher reports of students behavior, which have the charge of bias attached them, or parental reports, which would almost certainly be biased, as parents are not likely to have a total account of their child’s delinquent activities. Further, it is unlikely that one racial group of students would be more or less truthful in their responses than the other.

Second, the generalizability of the study should be made with caution. This sample was drawn from a single school district within in one state. However, the sample size ( $N=240$ ) did produce sufficient levels of statistical power and on several accounts the sample data was checked against the actual population within the school district showing that it was representative. This was confirmed by checking the demographic composition of the participating school's population sizes, OSS rates by race for each school, and overall OSS rates by race within the district. All these characteristics within the sample population were shown to be highly representative of the general population from which it was drawn.

Third, given that the criterion variable of OSS consisted of only zeros and ones, making the data that was collected functionally binary, several statistical assumptions were violated for the three hypotheses. However, studies have indicated (Gorilla, 2021; Hellenic, 2009) that linear regression is robust to assumption violation.

Lastly, the predictor variable K-5 OSS carries the charge of labeling a student as a problem child (Bernburg, 2019), particularly in the case of minority students. However, K-5 OSS appeared to be just as statistically significant a predictor for Whites students as for Blacks. Further, while self-labeling by the student appears to be impossible to control for, labeling a student as problematic by officials during primary school would seem to have little purchase during high school, when students are attending different schools and have a completely different set of teachers. There is the remote possibility that distant student records from primary school influence the decisions of high school administrators issuing OSSs, but this seems unlikely compared to the immediate externalized behaviors of students.

### **Recommendations for Future Research**

There are four recommendations suggested by findings of this study which should be considered by future researchers interested in investigating the discipline gap.

1. School districts and individual schools were very reluctant to participate in this study. This resulted in attaining a smaller sample size than was desired. The criterion variable —number of OSSs received during the past 12 months— was designed as a continuous variable with a larger sample size in mind, where students who received more than one OSS during the past 12 months could indicate so. However, as the participation was lower than expected, the anticipated sample size shrunk to 240 students where no students indicated they had received more than one OSS during the past 12 months. This rendered the criterion variable —designed to be continuous— as a functionally binary variable. Unless a very large sample size is achieved, future studies should design the dependent of OSS as binary: either the student has received a least one OSS, or they have not.
2. As there are only two other studies in the literature that have used a group of control variables to fully account for the racial differences in OSS, future studies should attempt to replicate this study in other geographic areas using a set of similar controls to reproduce the findings of this study. At a minimum, the set of controls should include: a school achievement measure, a behavior measure of the recent past, a measurement of early problem behavior, and the school's percent of Black student enrollment. Although, in this study, the school achievement measure—in this case, school grades—was not found to be significant within the model, other studies indicate a measurement of school achievement does constitute a meaningful control.

- An essential control is externalized delinquent behaviors that take place on school property. Although this study showed that general delinquency was significantly predictive of OSS, once in-school fights and in-school delinquency were added to the model general delinquency failed to be significant; this shows the importance of behaviors that take place of school grounds. A form of early problem behaviors should be used as it is theoretically sound (Gottfredson & Hirschi, 1990) and empirically supported to have significant effects on future OSS as shown in this and prior studies (Morgan & Wright, 2018; Wright et al., 2014). Finally, a school's percent of Black student enrollment is a necessary control variable to account for the racial discipline gap; one which an early study (Rocque, 2010) investigating this topic neglected to include, and one which subsequent studies (Huang, 2016; Huang & Cornell, 2017) that failed to fully explain the racial OSS gap should have known to include after the findings of Skiba et al., (2014) and Wright et al., (2014).
3. As this and former studies (Allen & Hilliard, 2021; Annamma et al., 2019; Felson et al., 2008; Welsh & Little, 2018; Wun, 2016; Wallace et al., 2008) have shown, relative to White female students, Black females disproportionately contribute to the discipline gap. Using a quantitative causal-comparative design and pathway analysis, future studies should explore the differences between Black and White youth environments and behaviors, as well as causal explanations for this well-documented phenomenon, as they will likely generate further insights into the nature of the discipline gap. It is likely that a significant portion of differences in behavior can be traced to differences in environmental and living conditions between Black and White females (Luken et al., 2021; Yohros, 2022).

4. Findings revealed, just as previous studies have shown (Anderson & Ritter, 2017; Kinsler, 2011, Skiba et al., 2014), that Black students who attend high-percent Black schools (HPBS) disproportionately widen the racial discipline gap relative to Black students who attend low-to-mid-percent Black schools (L/MPBSs). What is more, data from this study suggests that within HPBSs the single-parent family structure is significantly connected to early suspensions that occur during a child's K-5 years ( $R = .314, p = .008$ ), which are then correlated to lower school grades ( $R = .333, p = .005$ ), in-school delinquency ( $R = .356, p = .003$ ), participation in in-school fights ( $R = .776, p < .001$ ), and future OSS ( $R = .822, p < .001$ ). This potential causal pathway should be investigated by future studies using structural equation modeling to test the validity of this hypothesis. Although economic status is often used in studies investigating the discipline gap, it is likely that family structure is a more meaningful variable to predict early problem behaviors and K-5 OSS, which appears to be highly predictive of future OSS. Clearly, the single-parent family structure was positively correlated to K-5 OSS for both racial groups; future studies should further look for moderating variables of family structure that specify more precisely the conditions that predict early problem behaviors and OSS. Two likely candidates for moderators are the child's mother's educational attainment and the nature/health of the relationship between child and parents, most notably the parent they do not live with.

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**APPENDIX A****Adolescent Health Self-Report Delinquency (AHSRD)**

In the Past 12 Months How Often Did You...

- 0- Never
- 1- 1 or 2 times
- 2- 3 or 4 times
- 3- 5 or more times

**Nonviolent**

1. Paint graffiti or signs on someone else's property or in a public place?
2. Deliberately damage property that didn't belong to you?
3. Take something from a store without paying for it?
4. Drive a car without its owner's permission?
5. Steal something worth more than \$50?
6. Go into a house or building to steal something?
7. Sell marijuana or other drugs?
8. Steal something worth less than \$50?
9. Buy, sell, or hold stolen property?
10. Use someone else's credit or bank card without their permission or knowledge?

**Violent**

11. Get into a serious physical fight?
12. Hurt someone badly enough to need bandages or care from a doctor or nurse?
13. Use or threaten to use a weapon to get something from someone?
14. Take part in a fight where a group of your friends was against another group?

15. Pull a knife or a gun on someone?

16. Shot or stabbed someone?

17. Use a weapon in a fight?

## APPENDIX B

### Early Childhood Longitudinal Study (ECLS), (school environment)

Answer the 5 questions below with:

1= Strongly agree, 2= Agree, 3= Neither agree or disagree, 4= Disagree 5= Strongly disagree

How much do you agree or disagree with each of the following statements about your school?

- |  |   |   |   |   |   |
|--|---|---|---|---|---|
| 1. My school places a high priority on learning. | 1 | 2 | 3 | 4 | 5 |
| 2. My school is a safe place.                    | 1 | 2 | 3 | 4 | 5 |
| 3. My school is a good school.                   | 1 | 2 | 3 | 4 | 5 |
| 4. Violence is a problem at my school.           | 1 | 2 | 3 | 4 | 5 |
| 5. Drinking or drugs is a problem at my school.  | 1 | 2 | 3 | 4 | 5 |

4 and 5 are reverse coded.

**APPENDIX C****The Friend's Delinquent Behavior.**

During the last 12 months, how many of your friends have...

0 = none of them, 1 = very few of them, 2 = some of them, 3 = most of them, 4 = all of them

1. Purposefully damaged or destroyed property that did not belong to them?
2. Hit or threatened to hit someone?
3. Used drugs?
4. Sold drugs?
5. Carried a knife or a gun?
6. Got into a physical fight?
7. Been hurt in a fight?

## APPENDIX D

1. School Site:
2. Gender:  
Male    Female
3. Race:  
White    Black    Other (Latino, Asian, etc.)
4. Do you live with:  
Two biological parents    One or no biological parents
5. What grades have you earned in the last 12 months?  
All A's    Mostly A's    Mostly B's    Mostly C's    Mostly D's    Mostly F's    All F's
6. How many out-of-school suspensions did you get in total during grades Kindergarten-7th?  
0 suspensions  
1 suspension  
2-3 suspensions  
4-6 suspensions  
7 or more suspensions
7. During the past 12 months, how many out-of-school suspensions did you get?  
0 suspensions  
1 suspension  
2 suspensions  
3 suspensions  
4 or more suspensions
8. During the past 12 months, how many serious physical fights have you been in that happened on school property?  
0 fights  
1 fight  
2 fights  
3 fights  
4 fights or more
9. During the past 12 months, how many times have you used drugs (vaping, marijuana, alcohol, etc.) on school property?  
0 times  
1-2 times  
3-10 times  
11-39 times  
40 times or more

10. Not including in-school fights and in-school drug use, how often do you do things on school grounds that would get you suspended if you were caught? (including, carry weapons, threaten someone, steal, destroy, or vandalize other's property)

Never

Rarely

Sometimes

Often

Very Often

## APPENDIX E

### Instrument request for National Longitudinal Study of Adolescent Health

#### *Initial Email*

Davidson, Steven C [REDACTED] > escreveu no dia domingo, 12/06/2022 à(s) 22:44:

Hello Dr. Pechorro,

My Name is Steven Davidson. I am currently attending Liberty University and in the dissertation phase of attaining my PhD. in educational leadership. I am studying the discipline gap and, among other variables, I am interested in examining the correlation between student delinquency and student suspensions. I wanted to ask permission for use of your 2019 condensed version of the National Longitudinal Study of Adolescent Health survey for my study.

If you require more information regarding my study or anything else, please let me know.

thank you for your time,

Steven Davidson

#### *Response Email*

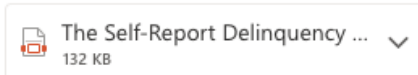


Pedro Pechorro [REDACTED]  

To: Davidson, Steven C



Mon 6/13/2022 1:29 AM



[ EXTERNAL EMAIL: Do not click any links or open attachments unless you know the sender and trust the content. ]

Dear Steven Davidson

You can use the instrument in your research.

The paper is attached.

best regards  
Pedro Pechorro

## APPENDIX F

## Instrument request for ECLS

**Initial Email**

[External] FW: permission for Instrument use



Davidson, Steven C



To: [REDACTED]

Mon 8/1/2022 10:29 AM

Hello,

I am conducting a study for my dissertation and would like to ask permission to use 4 questions from the "Eighth Grade Year -Spring Parent Interview"

I would like to know who to contact to request permission.

thank you.

Steven Davidson

**Response Email**

[REDACTED]



To: Davidson, Steven C

Mon 8/1/2022 12:13 PM

Cc: [REDACTED]; IES NCES ECLS &lt;ECLS@ed.gov&gt;

You don't often get email from jill.mccarroll@ed.gov. [Learn why this is important](#)

[ EXTERNAL EMAIL: Do not click any links or open attachments unless you know the sender and trust the content. ]

Hi Steven,

Thank you for your interest in the ECLS-K parent interview items. Items from the ECLS that are posted on our website (<https://nces.ed.gov/ecls/kinderinstruments.asp>), such as those in the ECLS-K 8<sup>th</sup>-grade parent interview, are in the public domain. They may be used in studies without additional permission from us, and there is no fee to do so. We would ask that you cite the ECLS as the source.

Take care,  
Jill

Jill Carlivati McCarroll, PhD  
Study Director, Early Childhood Longitudinal Studies  
National Center for Education Statistics

[REDACTED]  
[REDACTED]





## APPENDIX G

### Instrument request for Friends Delinquent Survey

#### *Initial Email*



Davidson, Steven C

To: [REDACTED]



Mon 8/1/2022 10:32 AM

Hello,

I am a Liberty University student conducting research for my dissertation. I would like to ask permission to use the "Friends Delinquent Survey" that was developed by the Denver Youth Survey by the Institute of Behavioral Sciences (1987).

Please let me know if I can provide more information.

thank you for your time,

Steven Davidson

#### *Response Email*



Dorothy Watson <[REDACTED]>

To: Davidson, Steven C



Fri 8/5/2022 10:24 AM

You don't often get email from [REDACTED] [Learn why this is important](#)

[ EXTERNAL EMAIL: Do not click any links or open attachments unless you know the sender and trust the content. ]

Hi David,

I have forwarded your email on to someone who might be able to assist with your request.

Thanks,  
Dorothy





David H Huizinga <[REDACTED]>



To: Davidson, Steven C

Sat 8/6/2022 2:32 PM

Cc: Amanda C. Ladika <[REDACTED]>

You don't often get email from [REDACTED] [Learn why this is important](#)

[ EXTERNAL EMAIL: Do not click any links or open attachments unless you know the sender and trust the content. ]

Steven,

Your message was finally sent to me. The Denver Youth Survey (DYS) measures are considered to be in the public domain for research purposes. Thus, you are free to use the Peer Delinquency Measure in your research. But thanks for checking. I presume you have a copy of the measure.

I wish you the best in your research!

Cordially,

David Huizinga

Principal Investigator

Denver Youth Survey

## APPENDIX H

### Document of Informed Consent

Title of the Project: Steven Davidson Dissertation

Principle Investigator: Steven Davidson, Ph.D. candidate, Liberty University

Your child/student is invited to participate in a research study. To participate they must attend a public high school in ---. Taking part in the research project is voluntary. Please take time to read this entire form and ask questions before deciding whether to allow your child/student to take part in this research project.

The purpose of the study is to investigate potential causes for the differences in school disciplinary actions between racial groups of high school students. If you agree to allow your child/student to be in the study I will ask them to take an online survey consisting of 39 questions. The survey takes approximately 10 minutes to complete. Participants should not expect to receive a direct benefit from taking part in this study.

The expected risks from participating in this study are minimal, which means they are equal to the risks your child/student would encounter in everyday life. The records of this study will be kept private and participant responses are anonymous.

The researcher serves as a teacher at ----. To limit potential or perceived conflicts, data collection will be conducted anonymously. This disclosure is made so that you can decide if this relationship will affect your willingness to allow your child/student to participate in this study. No action will be taken against an individual based on their decision to allow their child/student to participate in this study. See email for a list of teachers who have chosen to give equal access to extra credit for all participating in the survey.

Participation in this study is voluntary. Your decision whether to allow your child/student to participate will not affect your or their current or future relations with Liberty University. If you decide to allow your child/student to participate, they are free to not answer any question or withdraw at any time.

If you choose to withdraw your child/student from the study or your child/student chooses to withdraw, please have them exit the survey and close their internet browser. Your child's/student's responses will not be recorded or included in the study.

The researcher conducting this study is Steven Davidson. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact him at [REDACTED] or [REDACTED]. You may also contact the researcher's faculty sponsor, Richard Jensen, at [REDACTED].

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the IRB. Our physical address is Institutional Review Board, 1971 University Blvd., Green Hall Ste. 2845, Lynchburg, VA, 24515; our phone number is [REDACTED] and our email address is [REDACTED].

*Disclaimer: The Institutional Review Board (IRB) is tasked with ensuring that human subjects research will be conducted in an ethical manner as defined and required by federal regulations. The topics covered and viewpoints expressed or alluded to by student and faculty researchers are those of the researchers and do not necessarily reflect the official policies or positions of Liberty University.*

## APPENDIX I

### IRB Request and Approval

# LIBERTY UNIVERSITY

INSTITUTIONAL REVIEW BOARD

May 26, 2023

Steven Davidson

Rich Jensen

Re: IRB Approval - IRB-FY22-23-940 DIFFERENCES IN OUT-OF-SCHOOL SUSPENSIONS BETWEEN BLACK AND WHITE HIGH SCHOOL STUDENTS WHEN CONTROLLING FOR STUDENT FACTORS, SCHOOL FACTORS, AND DELINQUENCY

Dear Steven Davidson, Rich Jensen,

We are pleased to inform you that your study has been approved by the Liberty University Institutional Review Board (IRB). This approval is extended to you for one year from the following date: May 26, 2023. If you need to make changes to the methodology as it pertains to human subjects, you must submit a modification to the IRB. Modifications can be completed through your Cayuse IRB account.

Your study falls under the expedited review category (45 CFR 46.110), which is applicable to specific, minimal risk studies and minor changes to approved studies for the following reason(s):

7. Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies. (NOTE: Some research in this category may be exempt from the HHS regulations for the protection of human subjects. [45 CFR 46.101\(b\)\(2\)](#) and (b)(3). This listing refers only to research that is not exempt.)

Your stamped consent form(s) and final versions of your study documents can be found under the Attachments tab within the Submission Details section of your study on Cayuse IRB. Your stamped consent form(s) should be copied and used to gain the consent of your research participants. If you plan to provide your consent information electronically, the contents of the attached consent document(s) should be made available without alteration.

Thank you for your cooperation with the IRB, and we wish you well with your research project.

Sincerely,

**G. Michele Baker, PhD, CIP**  
*Administrative Chair*  
**Research Ethics Office**