

further assess the nuances of this relationship based on the timing and dosage of one's system involvement and different specifications of my educational outcomes. I find that justice system involvement is associated with worse educational outcomes and that the impact of involvement varies by school district, one's level of system involvement, and their demographic characteristics. I also find that school absence may impact this relationship. Overall, this study builds upon prior research of the consequences of justice system involvement, particularly on one's education, by exploring the nuances of this relationship based on one's demographic characteristics, educational context, and factors related to their system involvement. The results of this study suggest that perhaps the School-to-Prison Pipeline may be best conceptualized as a School-to-Prison *Cycle* that could impact adolescents long after their system involvement.

EXPLORING THE NUANCES OF THE SCHOOL-TO-PRISON CYCLE

by

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DEDICATION

This dissertation is dedicated to all those who never felt talented, smart, or wise enough to achieve their dreams. You are and you will.

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Chapter 1: Introduction

Justice system contact has become an integral part of many adolescents' lives. Up to a quarter of youth in the United States are estimated to be arrested before the age of 18 (Brame, Turner, Paternoster, & Bushway, 2012), and thousands of youth are held in juvenile justice facilities each year (Sickmund, Sladky, Puzzanchera, & Kang, 2022) with even more experiencing lower levels of justice system contact (Puzzanchera, 2009). This justice system contact may induce negative consequences for an adolescent's future. The current study focuses on one of these consequences: obstacles to educational attainment.

The education system provides structure, supervision, and access to prosocial opportunities such as postsecondary education and employment, which assists in the successful transition to adulthood. Successful educational attainment is associated with a decrease in the likelihood of experiencing negative outcomes such as future justice system involvement (Western & Pettit, 2000). Experiencing justice system contact in adolescence can impact the transition to adulthood through detrimental impacts to one's education. Prior research suggests that involvement in the early stages of the justice system (e.g., arrest) may impact one's likelihood of staying in school (e.g., Sweeten, 2006), graduating high school (e.g., Kirk & Sampson, 2013), enrolling in postsecondary education (e.g., Widdowson, Siennick, & Hay, 2016), and obtaining future employment (e.g., Lee, Kim, Carlson, Ellis, Johnson, & Pretz, 2022).

While these prior studies provide evidence of the negative impact of justice system involvement on one's educational outcomes, I expand on this work by exploring some of the potential nuances of this relationship. I explore how the impact of justice system involvement on educational outcomes may vary between youth in different school districts, which could represent how differences in educational resources may shape these outcomes. I investigate how

the extent of one's system involvement, from arrest through adjudication and incarceration, could shape the impact of system involvement on educational outcomes. I also delve into the possible moderating impact that school absence may have on the relationship between justice system involvement and educational outcomes, which is important because justice-involved youth may be more likely to be absent from school than their peers (Mark, Geller, & Engberg, 2022). Justice system involvement may induce emotional distress, deteriorate prosocial relationships, and increase the likelihood of exclusionary discipline, all of which may make the impact of school absence more potent for justice-involved youth compared to their peers. I also explore how justice system involvement may impact the relationship between absence and educational outcomes. Lastly, I also investigate the possible heterogeneous effects of the relationship between system involvement and educational outcomes on youth of different racial identities and sexes. Given the persistent disparities in juvenile justice system involvement by race (e.g., Sickmund et al., 2022) and sex (OJJDP, 2020), parsing out the differential impacts of justice system involvement on educational outcomes is an essential component of this study.

This study contributes to our preexisting knowledge on the School-to-Prison Pipeline (S2PP) by focusing on an understudied aspect of this relationship: how justice system involvement is related to educational outcomes. Public discussions of the S2PP typically focus on how educational factors such as suspension, the presence of school police, or limited resources in schools could increase the likelihood of an adolescent experiencing justice system contact (American Civil Liberties Union). The S2PP continues to be a topic of wide discussion as the connection between the education and justice systems grows (e.g., Kim, Losen, & Hewitt, 2010; Wald & Losen, 2003). The S2PP can operate in multiple ways. The presence of school resource officers and metal detectors place the surveillance of the justice system directly into

schools, which not only is associated with an increase in the likelihood that an adolescent becomes involved in the legal system (Wolf, 2014) but also visually represents the proximity that schools have to the justice system. Behavioral problems that used to be resolved within schools, such as truancy, can now be handled by the juvenile justice system (Bazemore, Stinchcomb, & Leip, 2004). I refer to this as the “direct” path of the S2PP. Other phenomena comprise what I call the “indirect” path of the S2PP, examples of which include the threat of calling the police on students, the use of school records in juvenile court decisions (Funk, 1999), and exclusionary discipline (e.g., Skiba & Knesting, 2002; Wolf & Kupchik, 2017). Exclusionary discipline in particular is associated with involvement with the juvenile justice system (e.g., Mowen & Brent, 2016). These connections between the education and judicial systems have made the S2PP a point of interest among both researchers and policymakers.

What is often missing from these discussions is a concept I call the “reverse” S2PP, which refers to the pathway that youth encounter as they move from the justice system back into the education system. Thus, it may be best to interpret S2PP as a cycle more so than a linear pathway. Completing one’s education is an ideal outcome for all youth who enter the juvenile justice system, and many youth aspire to return to school after justice system contact. However, experiencing justice system contact may bar youth from successful completion of their education (Federal Interagency Reentry Council, 2012) and place them in the cycle of the S2PP. Thus, this study contributes to the labeling literature by demonstrating how youth may enter a cycle of cumulative disadvantage (Sampson & Laub, 1997) through the impact of their early interactions with the justice system on their education. I predict that the impacts of justice system involvement on educational outcomes may vary based on one’s personal characteristics,

educational context, and level of justice system involvement, and thus, I do not believe that all youth will experience the cycle of cumulative advantage to the same extent.

This background leads into my research questions, which all investigate how justice system involvement in adolescence impacts later educational outcomes:

1. Are justice involved youth less likely to graduate on time and enroll in postsecondary education and more likely to be suspended than their peers?
2. How does school absence moderate the relationship between justice system involvement and educational outcomes, and does justice system involvement moderate the relationship between absence and educational outcomes?
3. Does the impact of justice involvement on educational outcomes differ by an adolescent's race and sex?

This study uses administrative data for all youth who attended Maryland public schools starting in 2013. The data allow me to explore this relationship deeper by including information that may be missing from self-reported information (e.g., exact dates of system involvement and accurate measures of academic achievement). I explore some of the potential nuances of this relationship by including more context about the individual and their educational environments in the analyses. This study contributes to the literature on the S2PP by exploring how different levels of justice system contact impact educational outcomes, how the impact of justice system could vary based on one's educational environment (school district), how this relationship may change based on one's race or sex, and how school absence may moderate this relationship. I also explore how justice system involvement may impact multiple educational outcomes, including suspension, which is understudied in the current literature. This study could also inform policymakers by emphasizing the need to support justice-involved youth in their

transitions back to school and encouraging them to reflect on the potential harms of bringing youth into the system.

Chapter 2: Literature Review

2.1 Overview of the Juvenile Justice System

The American juvenile justice system has different processes and goals than the adult justice system. One goal of the juvenile justice system is to promote positive outcomes such as educational attainment and workforce participation (e.g., Dept. of Juvenile Services, “Re-entry”) in addition to reducing further delinquency. Diversion and rehabilitation are emphasized more in the juvenile than adult system, which primarily emphasizes retribution and incapacitation, because of the belief that youth are more amenable to changing their behavior than adults (Fagan & Zimring, 2000, pg. xii). Accordingly, the structure of the juvenile justice system is designed with multiple exit points so that incarceration is used a last resort, though tens of thousands of youth are still detained in the system each year (Sickmund et al., 2022).

Youth are referred to the juvenile justice system in the US through “complaints,” which can be made through either an arrest or referrals by community members such as teachers, business owners, or parents. During the intake process, youth may be diverted to other services such as foster care, transferred to adult court, or moved further into the system. Youth who continue in the juvenile system may be placed in detention facilities (analogous to pretrial incarceration for adults). Youth who are not diverted during the intake stage attend an adjudication hearing in which they are either adjudicated delinquent or not delinquent. Following the adjudication hearing is the disposition phase in which adolescents may be assigned to probation, residential placement, ordered to pay restitution, or receive another form of punishment. Probation for juveniles is similar to the adult system in which youth must follow assigned conditions and meet with a probation officer regularly (Annie E. Casey Foundation, 2023).

Youth who are removed from their home can be placed into what I refer to as residential and non-residential placements, which I differentiate based on the source of their education for the purposes of this study. Non-residential placements are places in which adolescents remain in community (e.g., public) schools but are removed from their primary residence. Examples include foster homes, group homes, and halfway houses. Residential placements comprise juvenile justice facilities and detention centers in which youth receive educational services within the facility (i.e., they do not attend school in the community). Youth can be residentially placed either prior to adjudication or as a result of their disposition. All youth in Maryland receive educational services when they are in a justice facility in accordance with federal requirements for education access for all youth (Dept. of Juvenile Services, “Detention”). The current study investigates the impact of justice system contact on future educational outcomes.

2.2 Overview of the School-to-Prison Pipeline

The prevalence of juvenile justice system involvement and the disparities within it have led to increased discussions of the factors that induce justice system involvement among adolescents, including the education system. The education and justice systems are interconnected forms of social control in which youth are involved. Elements of one’s educational experience, such as inadequate resources and the criminalization of negative behavior in school, are associated with an increase in the likelihood that an adolescent becomes involved in the justice system (American Civil Liberties Union). This phenomenon is often referred to as the School-to-Prison Pipeline (S2PP). Youth move back and forth between these systems, which means that the S2PP has implications for both education and justice-related outcomes. Conversations about the S2PP can often overlook the importance of the inverse

relationship, however. In this study, I investigate a phenomenon I refer to as the “reverse” S2PP which focuses on how adolescents’ academic trajectories are impacted by their justice system involvement and ultimately lead to a School-to-Prison “Cycle.”

2.2.1 The Origins of the School to Prison Pipeline The origin of the S2PP can be traced back to political rhetoric regarding delinquency and crime. The fear of crime committed by juveniles increased significantly in the 1990’s, which led to an increase in the number of youth involved in the juvenile justice system (Zimring, 1998). While juvenile arrest rates have since declined (Office of Juvenile Justice, 2020), many adolescents still experience this justice system contact each year. Much of this contact can be attributed to the relationships between the education and judicial systems, which contributes to the S2PP. For example, justice system and educational staff are in communication with one another to facilitate adolescents’ transitions back to school by sharing information and records between the agencies. The presence of school resource officers also places legal system actors directly into schools, which could lead to an adolescent being arrested for an infraction that may have previously been resolved by school officials (Hirschfield, 2008).

The S2PP, then, refers to the ways in which the education and justice systems are connected, which may facilitate an adolescent moving into the juvenile justice system. This connection was fostered by the rise in the criminalization of youth that occurred in the late 20th century, which was exemplified by the fear of the Super-Predator. The term “Super-Predator” stemmed from an opinion piece by John DiLulio Jr. espousing a supposed wave of unrelenting, unremorseful teenage criminals (1995). The article implied, though never directly stated, that these Super-Predators were predicted to be primarily Black boys. Although this wave of Super-Predators never came to fruition, it has been attributed to possibly influencing a significant

amount of legislation regarding the policing of youth (e.g., H.R.3355 Violent Crime Control and Law Enforcement Act, 1994) that increased sanctions for youth who were involved in the juvenile justice system. Zero tolerance policies in schools that increased the presence of school resource officers and sanctions for school-based violence (Pigott, Stearns, & Khey, 2018) were implemented in more schools during this era. The Super-Predator myth thus may have contributed to the S2PP through its lasting impact on juvenile justice policy.

The tough-on-crime era, combined with the myth of the Super-Predator, is associated with an increased fear of school-based violence. Zero-tolerance policies in schools rose in tandem with the deterrence-focused era of discipline and punishment that began in the 1960's (Heitzeg, 2009). These policies created harsh sanctions for delinquency such as weapon carrying and fighting within schools. Despite the majority of mass causality gun violence occurring primarily at majority-white schools (Livingston, Rossheim, & Hall, 2019), these policies were shown to have been directed often at majority-minority, poor schools. The gun violence at majority-minority schools has been observed to involve fewer victims (e.g., gang-related violence) but often garners less media attention than the rarer mass gun violence that occurs at majority-white schools because violence there may be viewed as more unusual (Hilaire et al., 2022). While weapon-based violence can thus occur at any school, schools with majority-minority youth could experience more criminalization of these behaviors. One could tie this phenomenon back to the concept of the Super-Predator in that criminalization of gun violence may occur more in schools comprised of youth who are deemed as threats to public safety.

Examples of policies from this era that criminalized school-based violence include the Gun Free Schools Act of 1994 that mandated severe punishments such as expulsion or arrest for youth who brought weapons or drugs to school (Cerrone, 1999), which was five years prior to

the Columbine High School shooting that many credit with the start of the panic surrounding gun violence in schools. These policies are also associated with an increase in the use of mandatory exclusionary discipline in response to other negative behavior (Curran, 2019). These policies could push youth out of school and, in some cases, into the juvenile justice system. The policies that resulted from a fear of violence within schools could be associated with the creation of the modern S2PP in two ways, which I refer to as the “direct” and “indirect” pathways. In sum, the direct School-to-Prison Pipeline refers to how justice system actors directly communicate with school officials to move youth from the education to the justice systems. The indirect pathway speaks to the series of events that can lead someone to involvement in the justice system through exclusion from prosocial institutions following negative educational experiences.

2.2.2 The “Direct” School to Prison Pipeline The “direct” S2PP describes the movement of youth directly from their schools into the justice system, which can occur from an arrest on school grounds or through referral to the juvenile justice system by school officials. Over 290,000 students were referred to law enforcement or arrested while at school during the 2015-16 school year (Civil Rights Data Collection, 2018). The rise in students being arrested at school followed the expansion of the implementation of school resource officers (SROs) during the 1990’s and beyond (Counts, Randall, Ryan, & Katsiyannis, 2018). The percent of all public schools that employed school resource officers rose from 42% in 2005 to 61% in 2017 (U.S. Dept. of Education, 2019), and there are around 25,000 sworn school resource officers in the US (Davis, 2022). During the 2016-17 school year, Maryland had over 300 sworn School Resource Officers working in its schools (Maryland Association of School Resource Officers). There have been mixed results from studies regarding SRO’s within schools. Some students and teachers report feeling safer in the presence of SRO’s (Theriot & Orme, 2016). SRO’s also can intervene

in crime that happens at the school, such as selling drugs near the school (Owens, 2017). Some have noted the drawbacks of having police officers in school, however. Youth who commit behavioral infractions could now be referred to the justice system through arrest or referrals by school administrators rather than being disciplined within the school (Hirschfield, 2008; Na & Gottfredson, 2013). The presence of SROs may not make all youth feel safer (Theriot & Orme, 2016) and is associated with overall lower graduation and higher exclusionary discipline rates (Weisburst, 2019), however. While previous instances of weapon and drug use at schools may have been considered serious school infractions that resulted in suspension or expulsion, schools could refer students who commit serious infractions to the criminal justice system. Schools may even be forced to refer students to the justice system for certain offenses because certain policies mandate arrest for students for certain infractions such as bringing a weapon to school (Theriot, 2009).

Lack of adequate funding may make it more feasible to rely on justice system actors to handle negative behavior if schools cannot afford guidance counselors or training for restorative justice practices (Ramey, 2015). Schools that have a high population of students of color may be more likely to have SROs or security guards than majority-white schools (Diliberti, Jackson, Correa, & Padgett, 2019). Employing school resource officers may be more feasible for schools than hiring other staff (e.g., social workers or psychologists) because the burden of cost is usually on local police departments, not the school district (Davis, 2022). Some schools even receive additional funding to hire police officers (Gottfredson et al., 2020). As a natural consequence, schools who have received funding for SROs through federal grants see a subsequent increase in arrests (Owens, 2017). SROs may take on a counseling role in some

schools (Devlin & Gottfredson, 2018), which further entrenches the legal system in the lives of students.

2.2.3 The “Indirect” School to Prison Pipeline The indirect pathway of the S2PP describes how factors related to a student’s education can increase the likelihood of crime and delinquency and involvement with the justice system outside of an arrest or a direct referral. Low graduation rates are related to factors such as poor school funding (Murnane, 2007) and individual factors like poverty or ineffective attention to one’s specific educational needs (Hernandez, 2011). For example, not earning a high school diploma may increase the likelihood of future justice system contact through barriers to prosocial economic opportunities and subsequent criminal behavior (Lochner, 2004). This could partially explain why those without high school diplomas are overrepresented in the justice system (Western & Pettit, 2010).

Suspension and expulsion can also lead to an increased likelihood of justice system contact. Youth may be more likely to be arrested when they are suspended because being outside of school during school hours makes them more visible to police (Monahan, VanDerhei, Bechtold, & Cauffman, 2014), especially if they are engaged in unstructured socializing. Unstructured socializing refers to socialization with peers that is unsupervised and unstructured (Osgood, Wilson, O’malley, Bachman, & Johnston, 1996). Osgood and colleagues do not refer to suspension as a catalyst for unstructured socializing explicitly, but removing adolescents from school during the school day may give the opportunity for interacting with peers without supervision or structured activities. Second, youth who are removed from school may miss a significant number of days in class, leading to lower academic achievement (Chu & Ready, 2018). Exclusionary discipline has been associated with efforts to push out underperforming students to maintain the test score requirements of No Child Left Behind (2001) (Carroll, 2007).

Students may then be pushed out of the school system, putting them at greater risk of future justice system involvement. In fact, prior research suggests that youth who are suspended or expelled may be at greater risk for incarceration as adults (Hemez, Brent, & Mowen, 2019).

The concern over zero-tolerance policies and their contribution to the S2PP has led to a push to reduce the use of these policies, which has shown some success in reducing exclusionary discipline and racial disparities in some districts (e.g., Fronius, Darling-Hammond, Persson, Guckenberger, Hurley, & Petrosino, 2019; Lacoë & Steinberg, 2018). However, these reforms are not a panacea for the S2PP. Reforms designed to reduce suspensions may not be as impactful in majority-minority schools because they may not take cultural awareness and racial bias into account in their design (Welsh & Little, 2018), the exclusion of which may ultimately increase racial disparities in punishment. Thus, the impact of the indirect S2PP may be reduced overall due to reforms but mostly for youth who are the least impacted by it.

2.2.4 The Reverse School to Prison Pipeline Conversations regarding the S2PP often focus on the unidirectional impact of one's education on justice system contact, but I suggest that this relationship may be cyclical. Agencies encourage youth to return to school after justice system involvement by providing education and transition services, but these adolescents may be subjected to stigma, further punishment, and barriers to academic success, which could put them back into either the direct or indirect S2PP pathways. If an adolescent was arrested at school or referred to the juvenile justice system by school officials, they may be targeted more by school resource officers for arrest due to stigma, which speaks to the S2PP. Justice-involved students may also avoid school (Geller & Mark, 2022), which is detrimental to academic success, thus inducing the indirect S2PP. The reverse S2PP, then, is the process by which some justice-involved youth will return to school only to be placed back into the S2PP. Thus, we can think of

the S2PP as more of a cyclical process than a straightforward path. The “reverse” aspect describes the way in which going into the justice system impacts educational attainment and induce a cycle of education and justice system involvement.

Youth involved in the juvenile justice system may face suspension and expulsion, academic difficulties, and stigmatization after they return to school. An adolescent who is already struggling in school and involved in the justice system may fall further behind, thus lowering potential academic achievement and subsequently increasing the likelihood of future justice system involvement. This may especially be true for youth living in disenfranchised areas in which non-justice-involved youth already exhibit more difficulties in academic achievement than students in wealthier areas (Weisburst, 2019). Justice system actors and educators try to reduce these negative impacts by facilitating the transition from the justice system back to school. However, it is possible that justice system involvement does not adequately address these prior concerns and cannot repair the negative relationships one already has with the education system.

Being caught in the cycle of the S2PP can have long-lasting negative consequences for youth. If justice-involved youth do successfully complete their education, they may still not be able to overcome the stigma of justice system involvement. For example, in Pager’s (2003) audit study on the stigma of criminal justice contact, individuals were still negatively impacted by their criminal records on job applications even if they had college degrees. This outcome is concerning given the focus of the juvenile justice system on overcoming the impacts of system contact through educational attainment. The stigma of justice system involvement also impacts access to necessities such as affordable housing (Carey, 2004; Leasure & Martin, 2017), which may force some individuals to continue criminal activity to survive. Thus, it is important to know

how the School-to-Prison Cycle may impact justice-involved youth even if they ultimately return to school.

2.3 Education in Justice Facilities and Transitions Back to School

This study focuses on educational outcomes for students who return to school after system involvement. The prior research often assesses outcomes for students with lower levels of justice system contact (e.g., arrest; Kirk & Sampson, 2013) or with small-scale studies of incarcerated youth (e.g., Kubek, Tindall-Biggins, Reed, Carr, & Fenning, 2020). One contribution of this study is that I can compare students across levels (i.e., intensity) of their justice system contact. Students who are not incarcerated may have short interruptions to their education and return to school quickly (e.g., a student may miss school solely for court appearances or for an arrest), but students who are incarcerated may be removed for weeks or months from their community schools. Success for these students may rely on successful education and transition programming for justice-involved youth, particularly if they are incarcerated. The majority of what we know about transitions back to school for justice-involved youth concerns incarcerated youth, but it is possible that moving from the justice system back into school may be deleterious regardless of the extent to which one is involved in the system. I summarize the literature on educational transitions for incarcerated youth here, but the principle of ensuring youth have adequate resources upon returning to school is important regardless of the extent of an adolescent's exposure to the system.

2.3.1 Education for Incarcerated Youth Policymakers in the US anticipated that missing school would be deleterious for incarcerated youth, so they required justice facilities to provide youth with educational programming. Incarcerated youth are required to receive the same quality

of education as their peers because of the same compulsory education laws that established educational rights for youth with disabilities (Leone & Wruble, 2015). The Every Student Succeeds Act of 2015, which replaced No Child Left Behind, provided an opportunity to increase the quality of educational programming for incarcerated youth (Council of State Governments, 2018). Legislation guaranteeing a comparable education for incarcerated youth may still not mitigate the problems that arise from absence from one's home schools, however. The curriculum youth receive while in a justice facility may not match what they need to graduate or the grade level they are in because it is difficult to give work that is on their skill level and satisfies the credits that they need to graduate (Koyama, 2012), especially since many incarcerated youth tend to be already behind in the academic skills necessary for their grade level (Foley, 2001).

The goal of giving youth educational services within the justice system is to facilitate successful transition back to the community and their home schools (Blomberg, Bales, Mann, Piquero, & Berk, 2011). Educational programs in detention centers or justice facilities can be conducted online, in a traditional classroom setting, or through private tutors, which may allow for some youth to receive an individualized education. The type of programming offered varies from facility to facility based on security level. Youth in high security facilities may not have access to the Internet or private tutors, which may restrict the ability for them to receive a personalized education (Koyama, 2012).

2.3.2 Transitions Back to School Reintegrating youth back into the education system or ensuring that they continue their education is of concern regardless of whether an adolescent is arrested, adjudicated, or incarcerated. However, much of the intensive transition planning, and the research in this area, focuses on incarcerated youth. Planning for the transition back to the

community begins during an adolescent's intake into a justice facility and continues after their release. One of the primary goals of Maryland's Department of Juvenile Services is to connect youth back to school after they leave their care (Dept. of Juvenile Services, 2015). Earning high school credits is a significant part of the transition back to one's home school, so one of the most important parts of the intake is assessing an adolescent's educational needs, which involves communicating with one's home school. School administrators and transition officers within facilities share educational information about students involved in the system (Cole & Cohen, 2013; Hirschfield, 2014). This data sharing is used to design educational programming for youth while in the facility and report academic gains made while incarcerated. Prior research suggests that collaboration between these agencies is important for creating as little disruption to one's educational attainment as possible and ensuring that youth can move back into their home schools after incarceration (Mathur & Clark, 2014). Studies on transition planning highlight how ineffective communication between these two entities could ultimately hinder a youth's transition back to school (e.g., Kubek et al., 2020; Platt, Bohac, & Wade, 2015). Youth whose facilities and schools do not adequately communicate may not earn the credits they need to properly transition back to their home schools upon release. Youth who are involved in the juvenile justice system may then be more likely to experience course failure or grade retention (Cavendish, 2014). Students who are failing may still be pushed through to the next grade, particularly in under-resourced schools (Anagnostopoulos, 2006). Thus, students who are in a certain grade may not have the academic skill level expected for that grade, so relying on only an adolescent's transcript alone may not accurately represent which courses they need to complete while incarcerated. Individualized education programs may be more beneficial for these students, but the ability to provide this may be difficult based on the resources of the facility (Koyama, 2012).

Successful transitions back to one's home school are important because they may help reduce recidivism (Clark, Mathur, & Holding, 2011) in addition to increasing the motivation to stay in school (Keeley, 2006). The success of one's transition back to school can depend on the types of transition services that youth receive within a residential facility. One important component of transition planning is the number of credits one attains during their time in placement in addition to whether they receive any educational services (Blomberg et al., 2011). Youth who earn more credits or develop trade skills while in placement may have a smoother transition back to their schools and may be more motivated to graduate or enroll in postsecondary education.

Another important factor in the transition back to school is increasing an adolescent's engagement with school, which can be aided by mental health and career services (Bullis & Yavonoff, 2002). Community and family engagement in the transition process is also important as reported by some transition staff (Clark, Mathur, Brock, O'Cummings, & Milligan, 2016). Thus, successful transition planning is an ongoing process that starts during adolescent's intake into a facility and lasts through their return to school. Ineffective transitions between a facility and schools may lead to youth going back and forth between the justice and education systems (Cole & Cohen, 2013) or dropping out of school (Kubek, 2019). These prior studies provide insight into the difficulties of these transitions, and the current study shows the potential negative impacts of failing to properly transition youth back into school. Failure of the transition process may ultimately place youth back into the S2PP cycle by inhibiting their academic success.

Successful transition planning is particularly important for youth with disabilities because they require more services and may have a more difficult time in the transition back to school than other youth (Wood, Wood, & Mullins, 2008). Assisting justice-involved youth with

disabilities may involve going above and beyond what is outlined in the Individuals with Disabilities Education Act (IDEA), which may be difficult for some facilities to implement due to limited resources (Clark, Mathur, & Holding, 2011). Disabled youth who return to their home schools from a justice facility may face further difficulties if their schools do not implement the plans correctly (Jolivette, Swoszowski, McDaniel, & Duchaine, 2016).

One challenge that youth may face in transitioning back to school is that their stays in residential facilities generally do not last for a whole academic year or even a whole semester, so they may reenter their community schools in the middle of a semester (Stephens & Arnette, 2000). In Maryland, for example, the average length of stay in a detention center ranged between fourteen to twenty-eight days, and the average length of stay for a committed placement ranged from 169 to 238 days (Dept. of Juvenile Services, 2022a). Youth may not have time to complete an entire course or gain significant progress in their high school courses while incarcerated, which means they would not effectively earn high school credits. For example, if an adolescent is in a facility from February through April, they would miss a significant portion of the spring semester at their home school. Thus, integrating back into the same class in one's home school may be difficult. These difficulties mean that they could receive educational services while incarcerated without necessarily progressing further in their education. Another important element to consider is that school districts across the state of Maryland differ in the economic resources they have, so transition planning may be more difficult in some districts compared to others. The willingness of different teachers, principals, and school staff to support their justice-involved students may also explain why some youth may experience smoother transitions back to school than other justice-involved youth.

Stigma from teachers may also hurt the transition process (Walton et al., 2021). Prior studies suggest that some people may have negative expectations of formally incarcerated individuals' intelligence and likeability (Brew, Alani, Li, & Wildeman, 2022). Prior evidence suggests that this could extend to the teacher-student relationship in a different way - teachers of children of incarcerated adults may anticipate more negative behavior from these youth than their peers (Wildeman, Scardamalia, Walsh, O'Brien, & Brew, 2017). In a similar way, teachers may have low expectations of youth who return from justice facilities (Sinclair, Unruh, Griller Clark, & Waintrup, 2017), which could decrease the amount of time and attention they are willing to give those students. This stigma could interact with existing biases such as racism and ableism that can already make school difficult for marginalized students (Kubek, 2019). For example, students struggling with mental illness, who are overrepresented in the juvenile justice system (Wood et al., 2008), may exhibit certain behaviors in the classroom that may make teachers less sympathetic towards them. Facing stigma from teachers may complicate what is already a difficult transition process, especially for youth in under-resourced schools. Successful transitions back to school are important for mitigating the possible negative effects of incarceration on an adolescent's education, but structural and interpersonal barriers may make these transitions difficult.

A successful transition plan may reduce the likelihood that a student goes into the S2PP cycle. However, difficulties in this transition may impact key educational outcomes. Youth who face difficulty in the transition may be more likely to drop out of school (e.g., Cavendish, 2014; Cole & Cohen, 2013; Hirschfield, 2009; Hjalmarsson, 2008). Justice-involved youth who do graduate may also be less likely to enroll in postsecondary education because they have faced previous academic difficulties or feel as though they would not be successful (Widdowson et al.,

2016). Prior justice system involvement may also bar one from admission into undergraduate programs (Stewart & Uggen, 2020). Youth who already have experienced justice system involvement may also be more likely to be suspended through monitoring by teachers and other staff for negative behavior (e.g., see Ferguson, 2000 on stereotyping), which may increase the likelihood of future justice system involvement (Mowen & Brent, 2016) via the indirect S2PP. Ineffective school transitions may also be related to an increase in the likelihood of recidivism because higher educational attainment is negatively correlated with justice system involvement (Pettit & Western, 2010; Wakefield & Uggen, 2010). Accordingly, youth who do not return to school after incarceration may be more likely to become reinvolved with the juvenile justice system (Blomberg et al., 2011).

One important limitation of this research on transition planning, however, is that it focuses on youth who have been incarcerated. Youth who are involved in the justice system but not incarcerated may also experience difficulties in continuing the remainder of the school year after their system involvement, but the extent of this potential relationship is not as well known. The prior studies on school completion for non-incarcerated youth (e.g., Kirk & Sampson, 2013; Sweeten, 2006) often focus on youth who have been arrested. I expand upon this research in the current study by comparing educational outcomes between youth who experience different levels of justice system contact. Experiencing lower levels of justice system contact such as arrest is most likely less disruptive than adjudication or incarceration, but any justice system involvement could still be disruptive to one's education because of the potential negative labeling and stigma that could occur after any level of involvement in the system.

2.4 Labeling Processes in the Return to School after Justice Involvement

The theoretical development of labeling within criminology stems from a conflict (versus consensus) framework in exploring deviant behavior. Conflict theories focus on the role of power and social institutions in the criminalization of certain behaviors. The conflict framework posits that when groups of people are in conflict regarding social norms, those with more power establish policies or institutions, such as the criminal legal system, to maintain that power (Quinney, 1970). Thus, theories under this framework focus on criminalization and responses to deviant behavior as much as or more than the behavior itself, which makes it unique from other theories of crime and delinquency. This study focuses on the consequences of involvement in the juvenile justice system and not delinquency itself, so it aligns with a conflict framework.

2.4.1 Labeling and Internalization The current study focuses on how justice system contact negatively impacts future behavior and involvement in prosocial institutions, which aligns with the tenets of labeling theory. The origins of labeling theory explored secondary deviance, or deviance that one commits after punishment due to the internalization of a deviant label. When an adolescent is punished, they are labeled as deviant by the authority figures in their lives. The individual internalizes this label, which leads them to commit more deviant acts (Lemert, 1951). Fulfilling this label aligns with the concept of symbolic interactionism in which individuals act according to how they believe others perceive them (Blumer, 1969). In that way, adolescents who have been justice involved may believe that others view them as deviant, which could make youth internalize the label and act accordingly. Contemporary researchers have expanded the scope of labeling to include other consequences of formal punishment (Paternoster & Iovanni, 1989). Being labeled as a criminal or deviant may impact recidivism (e.g., Bernburg, Krohn, & Rivera, 2006; Chiricos, Barrick, Bales, & Bontrager, 2007), participation in prosocial

institutions (e.g., Brayne, 2014), and association with others engaged in deviance (Wiley, Slocum, & Esbensen, 2013). Youth returning to school after justice system contact may have an internalized belief that they cannot succeed academically, which could be worsened by the institutional barriers they face upon return their return to school (Goldkind, 2011). They may not put as much effort into their education because they may view themselves as having already failed by becoming involved in the justice system, which could reinforce school administrators' negative views towards them (Cole & Cohen, 2013). Internalizing these labels may lead to a weakening of one's bonds to school, which could impact educational attainment (Kirk & Sampson, 2013).

2.4.2 Labeling and the Reverse S2PP The impacts of stigmatization and labeling may impact the educational outcomes of justice-involved youth above and beyond the logistic troubles of the transition after their system involvement. Labeling theory can also elucidate how justice system involvement could weaken one's bonds to school through institutional barriers. Bonds to social institutions is theorized to prevent an individual from engaging in delinquency (Hirschi, 1969), but justice system contact may weaken that bond. Thus, the reverse S2PP is detrimental because justice system involvement hurts one's bonds to school and may induce further justice system contact. For example, prior research suggests that youth who have been arrested are less likely to graduate high school than students who have not been arrested (Kirk & Sampson, 2013; Sweeten, 2006).

Some of the impact of justice system involvement on one's educational outcomes may be related to one's attachment to their education. Prior research within the School-to-Prison Pipeline literature suggests that prior to their justice involvement, justice-involved youth tend to struggle academically compared to their peers (e.g., Foley, 2001). Thus, it is possible that the attachment

that justice-involved youth have to their education is already weaker than their peers' attachment. Justice system involvement could either weaken these bonds further or simply fail to alleviate one's already weakened bonds to school. One's bond to school may be weakened by the stigma that these youth face from their teachers and other students. As mentioned above, some teachers have reported having low expectations of justice-involved students, which may impact the amount of assistance they are willing to give them to succeed (Cole & Cohen, 2013; Sinclair et al., 2017). Justice system involvement is also associated with weakened social ties to one's peers (Jacobsen, Ragan, Yang, Nadel, & Feinburg, 2022; Jacobsen & Tinney, 2023), which could be important for continued participation in prosocial institutions (Paternoster & Iovanni, 1989). These youth could also be barred from postsecondary education because admissions officers may have negative perceptions of youth with juvenile records (Stewart & Uggen, 2020). The justice system can also create structural barriers to academic success through extended school absences. Prior research suggests that justice-involved youth are more likely to be absent from school than their peers (Geller & Mark, 2022), perhaps in an attempt to avoid further contact with the justice system. This may be considered a form of system avoidance (Brayne, 2014) in which youth skip school to avoid punishment from teachers and school resource officers. Thus, the impacts of justice system involvement on educational outcomes could be interpreted through a labeling lens by showing how justice system contact could create structural or mental barriers that impact one's bonds to the education system. These labeling impacts may also differ based on the extent to which one is involved in the justice system. Stigma may be stronger for youth who move farther into the system because that deeper involvement may be associated with more deviant behaviors. For example, an adolescent who is arrested for a minor offense but is immediately

diverted from the system may be stigmatized less than an adolescent whose case moves forward to adjudication because their behavior may be viewed as more severe.

Another aspect of labeling theory that is relevant for this study is the concept of cumulative disadvantage. This framework explains how contact with the justice system inhibits one's opportunities within prosocial institutions, the negative consequences of which snowball into one another, further increasing the likelihood of future justice system contact (Sampson & Laub, 1997). Cumulative disadvantage consequently could erode one's commitment to these prosocial institutions (e.g., schools or the workforce), increasing the likelihood of delinquency and future justice system involvement (Hirschi, 1969; Katsiyannis, Ryan, Zhang, & Spann, 2008). The resulting delinquency and justice system involvement may further disrupt one's bonds with school and increase the likelihood of adult justice system involvement (e.g., Bernburg & Krohn, 2003). Being justice-involved in high school is associated with a decrease in the likelihood of completing high school (Sweeten, 2006). Those without high school diplomas are also overrepresented in the adult justice system (Western & Pettit, 2010). Justice system involvement in high school may then begin a path of cumulative disadvantage that increases the likelihood of future justice system involvement, in part through barriers to academic achievement (Makarios, Cullen, & Piquero, 2017). This cycle can affect individuals throughout their lives. For example, one study suggests that incarcerated adults who were involved in the juvenile justice system are less likely to earn a GED than other incarcerated adults (Harding & Harris, 2020, pg. 55), so juvenile justice system contact may be detrimental to one's educational attainment in adulthood as well. This cumulative disadvantage is predicted to occur at all levels of system contact (arrest, adjudication, and placement), but may be worse for those who move further into the system. For example, barriers to educational attainment may be greater for

incarcerated youth because they usually would spend the longest amount of time away from school. One could then predict that moving farther in the justice system would be associated with more severe consequences due to increased stigmatization or more time away from one's school.

The extent to which justice system involvement brings someone into a cycle of cumulative disadvantage may differ between youth. Youth may differ in the strength of their bonds to school prior to entering the justice system, so they may be differentially impacted by their system involvement. The impact of one's system involvement may also vary based on one's school district. Youth who are in underfunded school districts may already be more likely to experience barriers to their education compared to youth in more affluent districts because their school may have fewer resources with which to help struggling students. Personnel in different districts may also have different policies regarding enrollment and support for justice-involved youth, which could lead to differences in how these youth are treated once they return to school and explain any potential disparities between youth within different school districts. This cycle of cumulative disadvantage may also be worse for Black and Latinx youth as they experience higher likelihoods of justice system involvement (Rodriguez, 2010) and lower education attainment (National Center for Education Statistics, 2021) on average than their peers. Thus, the concept of cumulative disadvantage not only explains how adolescent justice system involvement impacts future justice system involvement but also how context may shape this relationship.

2.5 The Role of School Absence

The second research question of this study assesses the potential impact of school absence on the relationship between justice system involvement and educational outcomes. Prior

studies suggest that justice-involved youth tend to miss more school than their peers (Geller & Mark, 2022; Mark et al., 2022). Adolescents necessarily miss school while incarcerated, but youth may also miss school for court appearances or pre-adjudication detention. Youth may be absent for different numbers of school days based on their level of involvement, the impacts of which I investigate in this study. While absences for court appearances or incarceration would be considered as excused, they can still be detrimental to one's education. Prior studies suggest that youth who miss school frequently are less likely to graduate (Weitzman, Klerman, Lamb, Menary, & Alpert, 1982; Tash, 2018) and therefore would be less likely to enroll in postsecondary education, which could contribute to the cumulative disadvantage that justice-involved youth may face in early adulthood (Makarios et al., 2017). Thus, absence may impact the relationship between justice system involvement and educational outcomes. A labeling perspective could explain how absence may play a role in this relationship. Justice system involvement can create barriers to participation in prosocial institutions (Paternoster & Iovanni, 1989), such as the education system, which then could induce further justice system involvement. One of these barriers to positive educational outcomes is absence from school.

Absence may be related to the relationship between justice system involvement and educational outcomes because justice system involvement may induce further absences. These absences could occur because one selects out of attending school (e.g., system avoidance) or through the consequences of system involvement (e.g., deterioration of physical or mental health). Youth may be nervous about going back to school because of the presence of SRO's, some of whom may have even been the ones to arrest them, so they may skip school to avoid feeling unfairly targeted by them (Granot, Tyler, Durkin, 2021). This could be considered a form of system avoidance that youth use to avoid further contact with the legal system (Brayne, 2014;

Lageson, 2016). Justice-involved youth may also be ambivalent to focusing on important areas in their lives such as educational attainment after incarceration (Abrams, 2006), so they may skip school out of apathy. Given the negative impact of school absence on educational outcomes (Finn, 1989) including from forced absenteeism after suspension (Peng & Takai, 1983), I focus on the potential impact of absence on the relationship between justice system involvement and educational outcomes. School absence following juvenile justice system contact could contribute to justice-involved youth dropping out of high school, which prior research suggests they may do more than their peers (Allensworth & Easton, 2001; Sweeten, 2006). Missing a significant number of school days due to justice system involvement may disincentivize students from completing high school. Students are told to stay in school to avoid contact with the legal system, so incarcerated youth may believe that attending school no longer matters (Hirschfield, 2009). This belief could be a result of internalizing negative views about oneself after system involvement, which reflects the potential relationship between absence and the labeling processes following system involvement. I now highlight three areas in which justice system involvement could induce further absence from school: impacts to physical and emotional health, loss of positive relationships, and exclusionary discipline. These impacts to future school attendance may provide insight into how absence may impact the relationship between justice system involvement and future outcomes. The amount of school an adolescent will miss from justice system involvement will depend on the level of involvement they experience. Youth who are arrested may only miss a few hours of school or none at all. Youth who have court appearances may miss a few days of school. Youth who are incarcerated will be absent for the longest amount of time from their home school. Missing more days of school due to justice system involvement may strengthen the relationship between justice system involvement and

these educational outcomes because extended absences may worsen the consequences of labeling following that system involvement.

2.5.1 Physical and Emotional Health Justice system involvement can lead to emotional distress and subsequent absences from school. Youth who experience emotional disturbances due to trauma or mental illness may already be more likely to be involved with the justice system than their peers (Cauffman, Scholle, Mulvey, & Kelleher, 2005), and incarcerating these youth together in one area for an extended period may amplify their distress (Ford & Blaustein, 2013). Completing schoolwork may also be difficult in a justice facility because of the high stress experienced by these youth while incarcerated (Desai, 2019), which may inhibit the progress they make while incarcerated and make the transition back to school more difficult. Some youth who are in juvenile justice facilities have reported experiencing high rates of PTSD and complex trauma (Ford, Chapman, Connor, & Cruise, 2012; Quinn & Shera, 2009), which may increase the likelihood of exhibiting trauma-based negative behaviors in school. For example, youth may fear victimization from other youth or staff and may subsequently distrust teachers when they return to school (i.e., hypervigilance). Youth who are hypervigilant may exhibit negative behavior in response to perceived slights from other students or teachers, which could put them at risk of suspension or expulsion. One study of justice-involved youth reports that the youth link their own externalizing behaviors back to trauma from their involvement in the court system (West, Day, Somers, & Baroni, 2014). Justice-involved youth also may not be able to maintain focus in the classroom or sit still for long periods of time, or they may engage in other externalizing behavior that would put them at risk of discipline and impact academic achievement (Smithgall, Cusick, & Griffin, 2013; Thompson & Massat, 2005). In Maryland, for example, youth can be suspended for cases of classroom disruption or insubordination (Maryland

State Department of Education, 2023a). Thus, youth who experience emotional distress may be pushed out of the classroom for their behavior, be unable to complete their coursework, or skip school altogether, all of which could impede their academic progress.

Youth in the justice system could also experience detriments to their physical health, which could also induce absences. It is important to keep in mind that some of this relationship may be spurious as youth who are involved in the justice system are more likely to have preexisting health conditions than their peers (Barnert, Perry, & Morris, 2016; Barnert, Sun, Abrams, & Chung, 2019; Borschmann et al., 2020). For many youth, being incarcerated was their first consistent contact with the healthcare system (Golzari, Hunt, & Anoshiravani, 2006), but time in the justice system could exacerbate these health conditions. For example, prior work shows that adolescents may become more immunocompromised upon leaving facilities, which could be due to stress causing physical illness symptoms or the rates of disease that can travel through facilities, including from Covid-19 (Barnert, 2020).

Lower levels of justice system involvement may also cause distress for adolescents. Youth, particularly those in communities that are heavily policed, have reported experiencing trauma from police interactions (Gearhart, Bender, Barnhart, & Berg, 2022), in part due to the history of negative interactions and police-involved violence within these communities (Braga, Brunson, & Drakulich, 2019). Going through the court process may further amplify this impact as youth interact with more justice officials and relive traumatic experiences (Ryan, Bashant, & Brooks, 2006). While impacts to physical illness would most likely occur among youth who are incarcerated, the stress of going through lower levels of the justice system may induce negative physical symptoms as well. I do not measure the emotional and physical impacts of justice system involvement directly, but changes in school attendance due to one's physical or mental

health are a reason why absence may impact the relationship between justice system involvement and educational outcomes.

2.5.2 Loss of Positive Relationships Positive peer relationships are important for one's education, but justice system involvement may interrupt these friendships and make the transition back to school more difficult. Adolescents spend a considerable amount of time at school, which means that many of them will have their closest friendships with their classmates. Delinquent behavior may be seen as a desirable trait among adolescents (Osgood, Ragan, Wallace, Gest, Feinberg, & Moody, 2013), but punishment for this behavior may lead to a loss of one's friendships. Youth who face formal punishment may both withdraw from and be rejected by their prosocial peers (Jacobsen et al., 2022), perhaps to avoid incurring guilt by association (Tinney, 2023). These two prior studies investigated the association between arrest and friendships, so there is evidence of potential consequences of even lower levels of justice system involvement on relationships. However, the loss of relationships may be more potent for incarcerated youth as they are physically separated from their friends and family.

Prior studies also suggest that the separation from incarceration impacts interpersonal relationships, specifically marriages (Massoglia, Remster, & King, 2011), and a similar phenomenon may happen with friendships among adolescents. Separation from school due to justice system involvement leads to less quality time spent with one's friends, which may lead to the weakening of those friendship ties. This would especially be the case for youth who are incarcerated as they may miss weeks or months of school. Normative relationships may be difficult for many youth to form while incarcerated (Reid, 2017), so the friendships they lose from incarceration are not necessarily replaced. Thus, justice-involved youth may lose

connections with prosocial peers when they come back to school because of separation or stigma.

Losing one's friendships after justice system contact may be consequential because positive peer relationships are important for academic success. Positive peer relationships are associated with benefits to one's mental health, which could help an adolescent persevere in their educational pursuits (Reisman, 1985). Additionally, feeling as though one is positively accepted by peers is associated with higher academic achievement (Gallardo, Barrasa, & Guevara-Viejo, 2016), and having more friends in one's school is associated with having a higher GPA (Witkow & Fuligni, 2010). Prosocial peers could also provide a positive behavioral influence (Gremmen, Van der Berg, Steglich, Veenstra, & Dijkstra, 2018; McGloin, 2009), which may lower the likelihood that an adolescent behaves in a way that leads to suspension and expulsion. Being around prosocial peers may also make teachers view youth in a more favorable light (e.g., Steglich & Knecht, 2014), which may contrast any negative perception that teachers have of justice-involved youth. Having more prosocial friends may also reinforce a positive image of oneself (Bishop & Inderbitzen, 1995), which could be beneficial for one's educational outcomes (Rosenberg, Schooler, Schoenbach, & Rosenberg, 1995) and provide social control through positive behavioral influences (Cook, Buehler, & Henson, 2009).

Students who are justice-involved may also not receive necessary support from adults at school. School counselors may be more hesitant to work with justice-involved because of negative stereotypes they may attribute to them (Kubek et al., 2020). This could be in addition to the stigmatization some youth may face from their classroom teachers (Walton et al., 2021). Not having positive adult relationships could be detrimental as justice-involved youth may not receive support for the challenges they experience in the transition back to school. While this

study does not directly measure relationships that students have with adults at their school, it is a possible way in which justice-involved youth experience stigma and labeling upon their return to school. The amount of time one misses school because of justice system involvement may impact the relationship between system involvement and educational outcomes due in part to the loss of these positive relationships.

2.5.3 Exclusionary Discipline Justice-involved youth may also be at an increased risk of exclusionary discipline, which would induce further absences. Schools that do not have enough resources for guidance counselors or social workers may be more likely to use exclusionary discipline than other forms of behavior management if they do not have the resources to address negative behavior in the classroom (Skiba & Peterson, 2000). Disparities in suspensions and expulsions have raised concerns about “pushing” students out of school through unfair punishment practices (Rooks, 2017). While charter schools have been noted to have high levels of disparities in suspension compared to traditional public schools that may be partially driven by pushing out underperforming students (Losen, Keith, Hodson, & Martinez, 2016), public schools may also feel pressured to push out students because they can be evaluated based on student test scores and performance (McNeil, Coppola, Radigan, & Heilig, 2008; Podgursky & Springer, 2007). As mentioned above, emotional distress from an adolescent’s time in the justice system may increase negative behavior at school, and teachers who do not have the resources to handle this externalizing behavior may feel as they have no choice but to force them to leave the classroom. Justice-involved students may also simply be more likely to experience exclusionary discipline than other youth who engage in similar behavior. A student’s justice system involvement may lead teachers to label them as someone who is likely to misbehave, so teachers could subsequently monitor them for negative behavior (Kubek, 2019). This increased

surveillance could make justice-involved youth more likely to experience discipline than their peers who commit the same infractions. Teachers may also be more likely to escalate punishment for justice-involved youth because their behavior is viewed as worse than the same behavior from other students. Prior research has studied this phenomenon in the context of racial bias in which teachers are more likely to monitor Black students than White students for misbehavior and interpret Black students' misbehavior as an indication of an ongoing pattern versus White students' misbehavior as isolated occurrences that do not reflect on their character (Downey & Pribesh, 2004; Gilliam, Maupin, Reyes, Accavitti, & Shic, 2016 (surveillance of black students); Kunesh & Noltemeyer, 2019 (pattern of behavior)). This may relate to stigmatization following justice system involvement because teachers may believe that justice-involved adolescents' negative behavior is inevitable, so they should be monitored accordingly. Justice-involved youth may then be more susceptible to being removed from school because of stigmatization. While the prior studies took place in multiple places in the U.S., this pushout could contribute to the reverse S2PP in Maryland because being suspended is a violation of juvenile probation conditions (see *In Re SF* (2021)), which means suspension would automatically move these youth back into the justice system.

The impact of justice system involvement on the likelihood of future suspensions may also interact with one's race. Black boys may be perceived as more likely to become reinvolved in the justice system than their peers, which is partially driven by the belief that Black boys' misbehavior is inevitable (Ferguson, 2000). Thus, negative labels that are already placed upon marginalized youth may be made worse by their justice system involvement because stereotypes regarding their behavior are seemingly confirmed. This may compound the disparities that already occur with exclusionary discipline. Strong discipline practices have been associated with

majority-minority schools rather than majority-White schools (Kupchik & Ward, 2014). Black and Indigenous youth tend to have the highest exclusionary discipline rates followed by Hispanic, multiracial, and Pacific Islander youth. White and Asian youth generally have the lowest suspension rates (National Center for Education Statistics, 2019).

Adolescents in the juvenile justice system who are already stereotyped to be involved in the justice system (e.g., Black boys) may be impacted from the confirmation of biases against them. Teachers may feel justified in monitoring these students for negative behavior (Ferguson, 2000); thus, they are more likely to be caught for similar behavior to their peers. Youth who are not stereotyped as likely to go into the justice system may be given more grace by teachers and administrators because their involvement may be seen as a one-time incident or a product of trauma. They may be given more support by teachers to prevent them from going back into the justice system. Additionally, marginalized youth are more likely to go to under resourced schools that may rely on exclusionary discipline to handle problematic behavior (Carey, 2002; Ramey, 2015). Thus, justice-involved youth at schools with fewer resources may be pushed out through exclusionary discipline more than their peers at schools with more resources. Unlike bonds with others or illness, the level of justice system involvement may not be as impactful in this relationship because stigmatization can occur at any level of system involvement.

I predict that the length of time an adolescent misses school due to justice system involvement could potentially impact the relationship between system involvement and educational outcomes by worsening the negative impacts of labeling and stigma. For example, longer absences from school due to justice system involvement could weaken one's dedication to school or ties to prosocial others at their school. The impact of absence on the relationship between justice system involvement and one's educational outcomes may differ between youth

who experience different levels of system involvement. Youth miss varying numbers of school days based on the intensity of their system involvement (e.g., incarcerated youth will be separated from their home school longer than those who only miss school for an adjudication hearing). The impacts to health and one's relationships may also be stronger following incarceration compared to arrest or being adjudicated. Additionally, the stigmatization, loss of personal relationships, and impacts to physical and emotional health that could follow justice system involvement may mean that system involvement could impact the relationship between any school absence and educational outcomes. That is, justice-involved youth may experience stronger impacts of school absence on educational outcomes than their peers because they also contend with the additional repercussions of the system involvement itself, including the negative consequences of labeling and stigma.

2.6 Disparate and Heterogenous Effects of the School to Prison Pipeline

The third research question of this study pertains to the possible heterogenous effects of the reverse S2PP by race and sex. Racial disparities in justice system contact during adolescence are a well-known phenomenon, particularly between Black and White youth. Black youth are more likely to become involved with the justice system than White youth (Leiber & Peck, 2015; Office of Juvenile Justice, 2022) and may experience worse outcomes within it, particularly during police encounters (e.g., Stewart, Baumer, Brunson, & Simons, 2009) and at the initial stages of processing (Bishop & Frazier, 1988; Rodriguez, 2010). These disparities also occur within Maryland, the setting of this study (Dept. of Juvenile Services, 2022a). Studies that include youth of other racial and ethnic groups show that Black and Indigenous youth generally have the highest justice system involvement rates while White and Asian students usually have

the lowest (with Hispanic, Pacific Islander, and other youth in the middle of these distributions), though the relative rates between groups differ by study (Freiburger & Burke, 2011; Leiber, Johnson, Fox, & Lacks, 2007). Prior research suggests these disparities are the greatest for involving lower-level offenses or during key decision points (Fagan, Slaughter, & Hartstone, 1987).

Black youth are reported to be more likely to interact with police than White youth, particularly when they are perceived as being “out of place” (Tapia, 2010). Once in the system, Black youth are reported to be more likely to have their cases formally processed (versus being dismissed), be adjudicated delinquent, and receive harsher dispositions than White youth, with the largest disparities occurring at the initial stages of the process according to prior research (Leiber & Jamieson, 1995). The disparities in these early decision points have negative consequences for these youth as they move through the system. For example, youth of color have been reported to be more likely to be detained pre-adjudication, which may lead to them receiving harsher dispositions by judges (Rodriguez, 2010). These early disparities in detention may be due in part to the perception that disadvantaged youth need the services provided through the juvenile justice system (i.e., removal from the home), so they may be more likely to move through the system than more advantaged youth (Bishop, Leiber, & Johnson, 2010). Thus, youth of color, particularly Black and Hispanic youth, may be more likely to experience some of the negative impacts of system involvement on educational outcomes if moving farther into the justice system is associated with worse outcomes.

An adolescent's sex or gender identity also plays an important role in their experience of the juvenile justice system. Boys are consistently more likely to be involved in the justice system than girls (Office of Juvenile Justice, 2020). Boys do tend to report higher levels of participation

in delinquent behavior than girls, but their behavior may also be criminalized more than girls' behavior (Rios, 2006). However, girls may receive worse treatment than boys once they are in the justice system, particularly for status offenses (Freiburger & Burke, 2011; MacDonald & Chesney-Lind, 2001). Women and girls who are involved in the justice system could be treated worse than boys in the justice system because they do not conform to expectations for proper behavior based on their sex (Sealock & Simpson, 1998). This may especially be true for gender-nonconforming youth who may be more likely to be targeted by the police and mistreated once they are in the juvenile justice system than their peers (Hunt & Moodie-Mills, 2012). In a similar way, justice-involved youth of different sex or gender identities may experience differential treatment from school officials because of disparate expectations for proper behavior. Racial identity also plays an important but complicated role in this relationship as the heterogeneity in judicial outcomes between Black boys and girls and White boys and girls differs by study (e.g., Guevara, Herz, & Spohn, 2006; Leiber, Brubaker, & Fox, 2009). For example, Black girls are reported to be hypersexualized compared to White girls (Morris, 2016), so their actions may be viewed as more deviant.

Much of the discussion above concerned access to resources at one's school. School districts vary in the resources that can provide for their youth. Districts receive funding through the state and local funding sources including levies, which are collected through taxes and the amount of which is voted on by the members of that community. Schools in neighborhoods of lower socioeconomic status may receive less funding through these levies since their community members would have less money to give in taxes, which means they would have fewer resources per student (Kenyon, Paquin, & Munteanu, 2022). These resources include additional staff such as more teachers and school counselors, learning resources such as science labs or updated

textbooks, or changes to the physical environment such as ensuring that the heating and air conditioning work. These resources may also impact how schools are able to assist justice-involved youth. For example, school counselors could support justice-involved youth as they return to school. More teachers on staff means that students can receive more individualized attention, which may help youth succeed in the transition back to school. Varying access to resources may explain some racial disparities as Black and Hispanic students are more likely to attend schools that have fewer financial resources (Welch, 1973). Thus, the district that a student is in is an important consideration for this study, which I account for in the analyses.

2.6.1 Theoretical Explanations of Disparities in the S2PP The prior section discussed how differences in experiencing the reverse S2PP because of one's demographic characteristics could occur because of differential involvement. Differential involvement means that youth who are more likely to be involved in the justice system will be more likely to experience the deleterious impacts of the S2PP. This does not necessarily argue that the magnitude of that impact will differ between youth of different racial identities and sexes, simply that some youth will be more likely to experience these effects than others. However, there could be differential impacts of justice system involvement on educational outcomes between youth of different racial identities and sexes. It is known that marginalized youth disproportionately are involved in the legal system, but there are reasons to believe that the magnitude of the impact of that legal system involvement may differ between youth as well.

When investigating the potential differential impacts of justice system involvement on an individual's educational outcomes between youth of different racial identities, there are two potential opposing hypotheses. The first is that youth of color will experience greater detrimental impacts of legal system involvement on their educational outcomes. Critical theories of

criminology are frameworks that center the influence of social structures on punishment and behavior. For example, a critical view of the disparities between youth of different racial identities would suggest that Black youth are more likely to interact with the justice system because groups who have political power use the criminal legal system to prevent disenfranchised communities from gaining sociopolitical power (Blalock, 1960; Blalock, 1967; Eitle, D'Alessio, and Stolzenberg, 2002). This theory is supported by the persistent racial disparities in justice system involvement with Black men experiencing the greatest disproportionate involvement (Pettit & Western, 2004), which usually cannot be explained solely through differences in offending prevalence across groups (Huizinga & Elliott, 1987). Black youth are also more likely to be involved in the criminal justice system than White youth. One theory of this disparity is that Black youth are policed differently than their White counterparts both in majority-Black and majority-White neighborhoods (Andersen, 2015; Stewart et al., 2009). Black youth may also be stigmatized more than White youth upon returning to their home schools after incarceration because of negative stereotypes about their behavior as explored above (Chin, Quinn, Dhaliwal, & Lovison, 2020), which may in turn inhibit their academic performance (Gershenson & Papageorge, 2018).

Prior evidence suggests that these disparate policing practices may explain some of the disparities in educational outcomes as well (Legewie & Cricco, 2022). The opposing hypothesis is that the impacts of legal system involvement on educational outcomes will be the same as or even less impactful for youth of color. This could be explained by the relationship between marginalization and labeling. In Hirschfield's (2008) qualitative work on the subject, he finds that perceived labeling and stigma may be lesser for those in communities that are impacted by mass incarceration. One could suggest, then, that among those for whom justice system contact

is normalized or more likely to occur, the labeling impacts are lessened. Thus, marginalized youth who go through the justice system may not experience greater impacts to their education than youth who are less likely to go through the system because their involvement reflects less on the student as an individual. Additionally, they could already be facing stigmatization and other barriers to their education that justice system involvement does not worsen. This notion is further supported by prior research suggesting that labeling impacts may be strongest for those least likely to experience them (Chiricos et al., 2007).

Feminist theories of criminology would explain disparities in the relationship between justice system involvement and educational outcomes based on how adolescents are treated differently within the juvenile justice system based on their sex or gender. For example, paternalism may make justice system actors act more favorably towards girls who are brought into the system because they view girls as needing protection from their own negative behavior or negative influences (MacDonald & Chesney-Lind, 2001). Conversely, the evil woman hypothesis states that girls in the justice system will be treated more harshly than boys because they are violating gender norms (Chesney-Lind, 1989). Violating one's typescripts--socially acceptable behaviors based on an individual's characteristics--can lead to punishment as some actions can be seen as more deviant than the same behavior from someone who is expected to perform them. It is viewed as more acceptable for boys to commit delinquent acts, so girls in the justice system may be punished for acting outside of their assigned gender role (Sealock and Simpson, 1998). Both theories suggest that the goal of the juvenile justice system is to correct wayward girls' behavior, which may explain why girls are brought in more frequently for status offenses such as running away or incorrigibility than boys (Chesney-Lind, 1989). When female students return to school after justice system contact, they may be furthered surveilled by their

teachers because they do not adhere to typical gender norms for girls. Since justice system involvement could be considered more normative for boys than girls, they may experience less stigmatization around it (Jacobsen & Tinney, 2024). Conversely, boys could be viewed as more likely to become reinvolved with the justice system, which may make their behavior more stigmatized than girls' behavior, which would align more with the paternalism argument.

These theories predict different outcomes in terms of the treatment of youth based on sex within the justice system, but they also suggest that there could be disparities in how the justice system impacts educational outcomes between girls and boys. Being a girl may be an alleviating or an aggravating factor in the relationship between justice system involvement and educational outcomes. In accordance with the results from Chiricos and colleagues' (2007) work on labeling, girls, because they are less likely to be justice-involved, may be more susceptible to labeling effects from justice system involvement. Girls may also be provided less leniency if they violate their typescripts. There will most likely be a noticeable difference due to differential involvement (i.e., boys will experience more impacts from justice-system involvement because they are most likely to be involved), but I predict that there will be differential impacts of justice system involvement between girls and boys.

How one's experience of the S2PP is impacted by their racial identity or sex/gender cannot be assessed in isolation. The concept of intersectionality was named by Kimberlé Crenshaw (1989) and purports that the impacts of having multiple marginalized identities differ depending on the context. For example, a Black woman may be more marginalized for her gender in some spaces and for her race in others. I believe that the impacts of justice system contact on education will differ not only between youth of different racial identities and sexes but also at the intersection of those identities. Accordingly, stigma within demographic groups may

differ based on the members' other demographic characteristics. Black and White boys will experience the gendered effects of justice system contact differently, and Black boys and girls will experience the racialized effects differently. Studies show that while boys are consistently more likely to be arrested than girls, Black girls may have worse outcomes than White boys once in the judicial system (Freiburger & Burke, 2011). Thus, I will assess the heterogeneity of the effects of justice system involvement on educational outcomes at the intersection of one's race and sex. I predict that there will be differential impacts between youth of the same race or sex. For example, it is possible that Black youth overall will experience greater detrimental effects from justice-system involvement than other youth, but Black boys may have worse impacts compared to Black girls. Boys overall may have worse impacts than girls, but Asian and White boys may have lower impacts compared to Black or Hispanic boys. Thus, I predict that the magnitude of the relationship for each race-sex group will differ from their individual race and sex components' estimates.

2.7 Current Study

I focus on three primary research questions to assess the relationship between justice system involvement and educational outcomes.

RQ1: Do justice-involved youth differ in key educational outcomes from their peers?

H1: Youth who are justice-involved will be less likely to graduate on time, more likely to be suspended and expelled, and less likely to enroll in postsecondary education than youth who are not justice-involved.

For this question, I will be assessing the impact of justice system involvement on three different outcomes: graduation, suspension and expulsion, and postsecondary enrollment. I

believe that justice-system involvement will be associated with a lower likelihood of graduating from high school and enrolling in postsecondary education and a higher likelihood of being suspended in the 12th grade. I also assess how the magnitude of the impact on these three outcomes could differ between youth in different school districts and levels of involvement in the justice system.

RQ2: How does school absence moderate the relationship between justice system involvement and educational outcomes, and does justice system involvement moderate the relationship between absence and educational outcomes?

H2: This research question ascertains one possible way in which the relationship between justice involvement and educational outcomes may vary between youth. This hypothesis is twofold. First is that the relationship between justice system involvement and educational outcomes will be impacted by the number of days in which youth miss school because of their system involvement. Second is that justice system involvement will moderate the relationship between school absence and these educational outcomes in that youth who are justice-involved will experience greater impacts of school absence on their educational outcomes.

RQ3: Does the relationship between justice system involvement and educational outcomes vary for individuals of different racial identities and sexes?

H3: I predict that the impact of justice system involvement on educational outcomes will vary by race, sex, and the intersection of one's race and sex. In the discussion of differential involvement versus differential impact above, I outline how there are competing explanations for how justice system involvement could differentially impact youth of different racial identities and sexes. Thus, I do not predict a specific direction for the hypotheses for these questions;

rather, I merely predict that there will be differential impacts by one's demographic characteristics.

2.8 Contributions

The current research builds off of these prior studies by exploring several nuances in the relationship between justice system involvement and educational attainment. I expand upon prior research by studying multiple educational outcomes, including suspension, which has not been adequately explored in the prior literature. I compare youth across multiple points of contact with the justice system (i.e., no contact, arrest, adjudication, non-residential (within the community), and residential placement (out of the community)), across school district, and across demographic characteristics, which is important because these differences between youth may change how system involvement could impact one's education. I also investigate the potential moderating impacts of absence in this relationship and how system involvement could impact the relationship between absence and educational outcomes.

Prior research suggests that adolescents who are in the justice system are less likely to graduate from high school (Sweeten, 2006) and less likely to enroll in postsecondary education (Kirk & Sampson, 2013; Widdowson et al., 2016) than their peers. Youth returning from the justice system also may be more likely to be suspended or expelled than their peers, particularly if they have been incarcerated for long periods of time (Novak & Fagan, 2022). These studies provide initial insight onto the relationship between justice system involvement and educational outcomes but often focus on low-level contact with the justice system, such as arrest or adjudication (e.g., Kirk & Sampson, 2013, Sweeten, 2006). Therefore, it is important to expand

upon these prior studies by including youth who experience a range of involvement with the justice system.

These studies generally find that youth face many barriers to receiving adequate educational services within residential facilities. Staff at these facilities may find it difficult to communicate with a child's home school, particularly if they attend an under-resourced school (Mazzotti & Higgins, 2006), which would make it difficult for them to know which classes and services a student needs. This can be especially problematic because many incarcerated youth have been reported to require additional academic help compared to their peers (Cavendish, 2014). Heterogeneity in the quality of services youth receive in facilities may depend on security level, resources, and relationships with local schools. The policies and resources available within one's home (community) school district may play an important role in this transition, so I study the potential differences in the impact of justice system involvement on educational outcomes between school districts. Additionally, one barrier to education for these youth is the short-term nature of their stays, which can make planning a sufficient education within the facility difficult (Koyama, 2012). Providing adequate education and transitional services may be the difference between an adolescent earning a GED or a high school diploma and not completing high school (Cavendish, 2014). Knowing the potential impacts of justice system involvement on educational outcomes is important so that policymakers prioritize creating effective transition programming for youth as they return to school. The prior studies on education for justice-involved youth and their transitions back to school often rely on small-scale evaluations of specific programs for incarcerated youth (Kubek et al., 2020), however.

My data and methods provide an advantageous context through which to study these research questions. First, I have a very large sample of over 57,000 total students (over four

thousand of whom are justice-involved) from Maryland public schools. Maryland is a diverse state containing school districts that vary in their resources and demographic compositions, so I can compare youth who differ in the potential institutional barriers they face in transitioning back to school after justice system contact. Using detailed administrative data from across an entire state also gives me sufficient statistical power to allow for some degree of causal approximation with matching techniques. These data allow me to reduce concerns regarding attrition or recall errors from participants that are present in some self-reported studies (Brame & Piquero, 2003). While these research questions focus on the impacts of justice system involvement between individuals, the longitudinal structure of the data allow me to establish proper temporal ordering for this relationship. This study will allow me to examine the impact of justice system involvement on educational outcomes more thoroughly than prior studies, so it will represent a contribution to the both the S2PP and labeling literatures.

This study has the potential to inform both research and policy regarding the S2PP. Justice-involved youth are required to receive an education while incarcerated, and educational attainment is one predictor of desistance (Natsuaki, Ge, & Wenk, 2008; Sampson & Laub, 1997). However, justice system involvement may still negatively impact educational outcomes even though these youth receive educational services or may not miss a lot of school due to their system involvement (i.e., from arrest or adjudication). Demonstrating a negative relationship between justice system involvement and educational attainment may encourage policymakers to reconsider how and when they bring youth into the system and how to effectively transition justice-involved youth back to their home schools. Additionally, this study aims to unpack some of the potential nuances of the relationship by exploring how an individual's characteristics and

educational context may inform how justice system involvement impacts their educational outcomes.

Chapter 3: Data and Methods

3.1 Maryland Context

3.1.1 The Juvenile Justice System Youth may be referred to the Maryland Department of Juvenile Services (DJS) through any one of multiple sources including the police (i.e., arrest), teachers, parents, or community members. Thus, youth can become involved in the juvenile justice system without having been arrested, which is unique from the adult justice system. Approximately 19,000 complaints were brought to the Department of Juvenile Services in 2019, of which about 39% led to a petition (similar to filing charges in the adult system) and 11% led to any type of commitment (similar to incarceration in the adult system) (Dept. of Juvenile Services, 2020). For the purposes of this study, incarceration refers to both detention and commitment. Detention generally occurs prior to the adjudication hearing or before the disposition hearing (similar to being held in jail prior to one's trial in the adult system). Commitment is generally the result of a disposition decision (similar to incarceration after sentencing for adults). For the purposes of this study, detention and commitment are both considered to be forms of residential placement as youth receive educational services while incarcerated for any reason.

The number of youth involved in the justice system in the state has decreased over the past couple of decades as the Department of Juvenile Services has increased the use of diversion programs and community supervision in lieu of commitment (Department of Juvenile Services, 2022a). Complaints referred to DJS dropped by almost 6,000 from 2012 to 2013 and continued to decline steadily, due in part to the overall decline of juvenile delinquency that has occurred in the past couple of decades (Baumer, Cundiff, & Luo, 2020). In 2020, there was an over 50% drop in complaints, perhaps due to fewer opportunities for delinquency being available during

the Covid-19 pandemic lockdown. The number of youth on probation and committed to justice facilities has also declined in prior years from over 4,000 and 2,000 youth, respectively, to under 1,000 each in 2021 (Dept. of Juvenile Services, 2022c).

This decline in commitments may be due to the state's commitment to diverting youth when possible in addition to the decline in complaints. Youth may be diverted to other services, including family counseling or psychological services, that are outside of the juvenile justice system. Figure 1 shows the pathway of the Maryland juvenile justice system, which shows an example of the ways in which diversion could impact an adolescent's journey through the justice system. Many youth have the option of being diverted from the system right at the beginning (as shown in the circled boxes on Figure 1). Evaluating an adolescent's needs, which include academic progress and educational difficulties, is a key consideration at certain inflection points in the system and in the transition back to school. These instances are shown in Figure 1 through the multiple points in which risk assessments are conducted involved in the juvenile justice system in Maryland (the starburst shapes in Figure 1).

For the purposes of this study, detainment and commitment (i.e., incarceration) refer to instances in which youth are held in a detention center or juvenile justice facility pre- or post-adjudication. Youth who are detained or committed receive educational services, which may vary depending on the facility in which one is housed. Educational programming for incarcerated youth was coordinated through the Department of Education until July of 2022 when DJS took over this role. Students who receive educational services from DJS are entitled to the same free appropriate education as youth in the community, and they are given opportunities for vocational training after they turn fourteen years old. Facilities must provide accommodations that align with a student's individualized education plan (IEP). The coursework that youth receive while detained or committed is designed to align with the progress they have already made in their educations and the course readiness standards set by the state (Dept. of Juvenile Services, 2022d). Youth not under residential placement but still under DJS supervision (i.e., probation) usually continue their education in the community.

3.1.2 Disparities in DJS Racial and gender disparities are present in Maryland's DJS as in many juvenile justice systems across the country (e.g., Fader, Kurlychek, & Morgan, 2014; Hanes & Hanes, 2012; Piquero, 2008). Over the past decade, complaints have generally declined, though male and Black youth continue to represent most of these complaints. Approximately 31% of Maryland's population identifies as Black (Census Bureau, 2022), but Black youth represented 62% of cases referred to DJS in 2022. Despite complaints declining steadily in the past decade, Black youth continue to represent around 60% of DJS cases (based on the estimates for 2013, 2017, and 2022). Youth who are not Black nor White consistently experience fewer complaints than Black and White youth. Male youth tend to represent around 75% of juvenile complaints irrespective of the declines in complaints overall (Dept. of Juvenile Services, 2022a).

These same trends can be seen with placement decisions as well. Black youth are overrepresented among youth who are detained as 75% of detained youth are Black and roughly 15% of detained youth are White. Boys are much more likely to be detained than girls. For example, 85% of the youth detained in 2021 were male. Most committed youth were between the ages of 15 and 17 (Dept. of Juvenile Services, 2022a).

3.1.3 A Note on Record Sealing and Expungement The number of youth who are involved in the juvenile justice system and the disparities within it point to the potentially large impact of juvenile justice system involvement on the wellbeing of adolescents in the state. This study argues that juvenile justice system involvement is detrimental for adolescents, but one could make the argument that it should not significantly impact one's life because their records are suppressed after one turns the age of majority. While it is true that most states have some sort of provision regarding public accessibility to juvenile records after one turns eighteen, this generally does not apply to justice system actors (Radice, 2017). Juvenile records are generally sealed and kept separate from one's adult records but can be accessed by court officials, victims, or school administrators (Md. Code, Cts. & Jud. Proc. § 3-8A-27), which may then subject these youth to stigmatization by their administrators or teachers (e.g., Weissman, 2015). Youth can have their records expunged in Maryland, but it is a difficult process with several restrictions (i.e., they cannot have been convicted of any offense as an adult, cannot have been adjudicated for a violent offense as an adolescent, and cannot have been adjudicated delinquent more than once) (Md. R. Juv. Causes 11-506). Thus, juvenile records can still be stigmatizing and impact an adolescent's educational attainment even if they are kept more private than adult court records.

According to Maryland Law, if a student is arrested or charges are brought against them, the superintendent of their school district, the principal, and any school security or resource

officers are notified within 24 hours. The purpose of this law is to inform educational programming for the justice-involved student and ensure the safety of other students and staff. The law states that only those who need to know this information should be informed, but the law does not specify who those individuals are beyond the superintendent, principal, and security staff (Md. Code, Education Section 7-303). It is then possible that school leadership will tell a student's individual teachers if they feel it is necessary. This information could also spread through unofficial communication (i.e., gossip) (e.g., Ferguson, 2000), so an adolescent's teacher may know about their justice system involvement even if the law does not specify that they need to know this information.

3.1.4 The Maryland Education System

Racial Composition The state of Maryland is racially diverse, though individual school districts are homogenous. All school districts, except for Baltimore City, represent one county. Because of this, some districts such as Prince George's, Howard, and Baltimore City have schools that have a majority Black student population, and some (e.g., Frederick and Garrett) tend to have student populations that are majority White, though there are some counties that are more racially heterogenous (e.g., Montgomery County) (Census Bureau, 2021).

Graduation Rates Eighty-seven percent of high school students in Maryland graduate within four years (Maryland State Department of Education, 2022), which is close to the national average of 86% (National Center for Education Statistics, 2021). The high school dropout rate in Maryland has decreased over the past decade to just over 7%, compared to the national dropout rate of 5% (National Center for Education Statistics, 2021). White, Asian, and Indigenous students have the highest graduation rates, while Hispanic and Black students have the lowest

graduation rates. Female students are more likely to graduate than male students. Students of low socioeconomic status, students with disabilities, and English language learners are less likely to graduate on time than their peers.

Most demographic groups are close to this overall 87% average four-year graduation rate, though there are notable differences for students with disabilities, Hispanic and Black youth, and English language learners, all of whom fell below the average graduation rate for 2020 and 2021. In 2021, 76% of Hispanic students graduated on time along with 68% of students with disabilities and 61% of English language learners. Multiracial and Indigenous youth are close to the 87% average, while Black youth are slightly below. White and Asian youth have graduation rates of over 93% (Maryland State Board of Education, 2022). These youth being the least likely to graduate on time suggests that perhaps barriers to receiving adequate disability or language services may be particularly detrimental to academic achievement.

Postsecondary Enrollment Sixty percent of Maryland high school students enroll in postsecondary education within one year of graduating high school and around 70% enroll within two years. Postsecondary enrollment declined in 2020, likely due to the Covid-19 pandemic. Hispanic students are the least likely to enroll in postsecondary education, and Asian students are the most likely. Female students are more likely to enroll in postsecondary education than male students. Students of low socioeconomic status, disabled students (SWD), and English language learners are all less likely to enroll in postsecondary education than their peers (Maryland State Board of Education, 2022).

Suspensions Approximately five percent of Maryland high school students are suspended each year with Black students comprising a disproportionate number of total suspensions. Black students and students with disabilities are overrepresented in the likelihood of suspension

compared to their enrollment, whereas White, Asian, and Hispanic students are underrepresented in suspensions. Black youth comprise about 35% of total enrolled students but represent 60% of out-of-school suspensions. Students with disabilities represent about 13% of total enrolled students but over 25% of out-of-school suspensions (Sunderman & Croniger, 2018). Behaviors that can get students suspended or expelled include serious infractions that would be defined as crimes (e.g., substance use, assault, or theft) but also violations of school rules such as bullying, classroom disruption, insubordination, or dress code violations. Students have not been able to be suspended or expelled solely for attendance-related reasons since 2009 (Maryland State Department of Education, 2023a).

An important consideration for, and advantage of, this study is the demographic heterogeneity of Maryland across counties and compared to other states. Maryland contains both the wealthiest majority-minority counties in the country (Charles and Prince George's) and counties with areas with disadvantaged Black and White communities (e.g., Baltimore City and Somerset) (Census Bureau, 2021). Maryland also has a large immigrant population (American Immigration Council, 2020), which may increase the cultural and language diversity of Maryland schools. The unique characteristics of Maryland allow me to compare youth across a wide variety of experiences within one state but may not allow me to generalize these results to youth in other states.

3.2 Data

3.2.1 Maryland Longitudinal Data System The Maryland Longitudinal Data System (MLDS) is comprised of information reported by several state agencies, including the Department of Education (K-12 education), the Higher Education Commission (postsecondary

education), and the Department of Juvenile Services (juvenile justice) among others. These departments regularly provide updated information on the individuals involved in their systems. An independent research team at the MLDS center assigns each individual a unique ID that is connected to their personal identifying information. This gives each person a unique identifier that can be used to link the person's information across the separate datasets. The K-12 education data include information on academic performance, graduation, discipline, attendance, and demographic characteristics for youth enrolled in Maryland public schools. The Department of Education began reporting data during the 2007-08 school year and continues to update the database regularly. Youth enter and exit the database based on when they are enrolled in a public school in Maryland, and the dataset includes information on the reason why a student enters or leaves the system (e.g., transferring to a private school or graduating). The Department of Higher Education reports information on degrees sought, program enrollment, and graduation information for anyone enrolled in a college or university in Maryland. These data include any students at a college or university in Maryland, not just those who attended public K-12 schools in the state. The data from the Department of Higher Education also include postsecondary enrollment information for those who attended a Maryland public K-12 school and attended a postsecondary institution in another state. Information on enrollment for students outside of the state is extracted from the National Student Clearinghouse, which houses enrollment and degree information for all individuals enrolled in colleges or universities in the United States. Thus, the Department of Higher Education can access postsecondary education information for Maryland public school students who leave the state. The data from the Department of Juvenile Services provides information on arrests and referrals, adjudications, dispositions, and confinement for youth involved in the Maryland juvenile justice system.

3.2.2 Analytic Sample Data for each subject are linked across datasets by a unique identifier, so I can merge information from various agencies for each student. I selected the 2013 ninth-grade cohort because these students recently attended high school and had six years to graduate before the start of the Covid-19 pandemic, which I wanted to avoid because of the complications in secondary and postsecondary school attendance (e.g., Bulman & Fairlie, 2022) as a result of the school shutdowns. The 2013 cohort consisted of 70,104 students. I first removed students who ever transferred out of the MLDS system (8,354 students) and students who passed away while in high school (82 students). I excluded these students because I would no longer have some data points (i.e., grades and discipline) for these youth. If youth move out of the state, I will not have graduation information for them. Removing youth who transfer ensures that the youth who do not graduate in my sample include only those who did not graduate high school and not those for whom I am missing graduation data. This left me with 61,673 students. A total of 3,897 students were missing information for their standardized test scores, so they were removed from the primary analysis. Students are in school for an average of 3.98 years. These sample restrictions leave me with 57,776 total students.

3.3 Variables

3.3.1 Dependent Variables I focus on three outcomes for these analyses. First is *graduation*, which is a binary variable defined as graduating within four years of entering the ninth grade. Students can either earn a high school diploma or a certificate of completion if they have a certain individualized education plan (IEP). *Graduation* is a binary variable in which 1 indicates that a student earned a high school diploma or certificate of completion. Ninety-two percent of non-justice-involved youth graduate compared to sixty-four percent of justice-

involved youth. *Delayed graduation* is a binary variable in which 1 refers to students who graduated high school after four years. Two percent of non-justice-involved and ten percent of justice-involved youth experience a delayed graduation. General Educational Development certificates (GEDs) are not considered as equivalent to timely high school graduation for the purposes of this study because they are generally earned by individuals who experience some barrier to completing high school in the typical time frame, so I will evaluate them separately from those who earn a high school diploma. Those who earn GEDs tend to be more likely to enroll in any postsecondary education than those who drop out of high school and do not complete a GED but are generally equivalent to those who drop out of high school in labor market outcomes and may be less likely to complete their postsecondary education than traditional diploma holders (Heckman, Humphries, & Mader, 2011).

The second dependent variable is a measure of whether youth experience exclusionary discipline during high school. Exclusionary discipline is defined as either an out-of-school suspension or expulsion in which an adolescent is removed from the school. This does not include in-school suspensions in which the student is removed from the classroom but not the school. An example of an in-school suspension is being sent to a separate classroom to complete independent work for the remainder of the school day. An out-of-school suspension in Maryland can last for up to ten days unless the superintendent of the school district permits the suspension to be lengthened. Expulsions are a longer form of an out-of-school suspension in which the adolescent is removed from the school for at least 45 days. Expulsions are authorized when a student is deemed as a threat to other students or staff of the school (Code of MD Regulations 13A.08.01.11). *Exclusionary discipline* is a binary variable in which 1 indicates that an adolescent experienced at least one suspension or expulsion within a school year. Around 13% of

non-justice-involved and 66% of justice-involved students were ever suspended in high school. *Days removed* is a count variable measuring the total number of days that a student was removed across all suspensions, which approximates the severity of one's suspensions. Youth who are not justice-involved are suspended for 2.6 days on average, and justice-involved youth are suspended on average for eight days. One limitation to note for this measurement is that the data only accounts for incidents that led to a suspension, so this is only a measure of punishment and not negative behavior. Because of this, I cannot assess whether differences in suspension risk are due to differences in negative behavior between justice-involved and non-justice-involved youth or due to differences in how their behavior is punished.

The final dependent variable is *postsecondary enrollment*, which is a binary variable in which 1 indicates that the student enrolled in some form of postsecondary education in any degree-seeking program including Associate and Bachelor's degrees and trade certification programs. Around 79% of non-justice-involved youth who graduated enrolled in postsecondary education, and around 54% of justice-involved youth who graduated enrolled in postsecondary education. *Degree sought* is an ordinal variable ranging from 0-3. The degree sought indicates in which type of degree-seeking program an individual is enrolled during the first academic year of their enrollment. A value of 0 indicates that a student is undeclared in their degree or in a non-degree seeking program. A value of 1 indicates that the student is working toward a form of certification. A value of 2 indicates enrollment in an Associate's degree program, and a value of 3 indicates enrollment in a Bachelor's degree program. Justice-involved youth are more likely to enroll in associate's and certification programs, while non-justice-involved youth are more likely to enroll in Bachelor's programs.

3.3.2 Independent Variable The primary independent variable for this study indicates whether one was involved with the justice system during high school. *Justice-involved* is a binary variable in which 1 indicates that an adolescent was involved in the justice system during high school. Involvement in the justice system occurs when an adolescent has any type of record with the Department of Juvenile Services. The Department of Juvenile Services reports which entity refers a student to the agency, which is usually the police. Youth are brought in through referrals, which include arrests and referrals to the agency from other entities, such as school or community members. Only two districts (Baltimore City and Prince George's County) separate referrals from school resource officers from other police agencies or the school district. About eight percent of youth in my sample are considered justice-involved.

3.3.3 Control Variables and Matching Covariates

Demographic Characteristics The following variables represent several demographic characteristics that could confound or moderate the relationship between justice system involvement and educational outcomes. The first is *race*, which is represented by a series of binary variables indicating a student's racial identity (consisting of White, Hispanic, Black, Indigenous, Asian or Pacific Islander, and Multiracial). In this MLDS data, Hispanic as an ethnicity is coded separately from a student's race. Thus, a student could be Hispanic in addition to their reported race category. Students in this study are coded as Hispanic if they indicated their racial identity as White and their ethnicity as Hispanic, so that Hispanic is mutually exclusive from the other racial identities. Because my theoretical framework centers on labeling and stigma, I focus on racial and ethnic identifiers that someone may be perceived as because those impact the stereotypes that would be projected on them. For example, a student who is White and Hispanic would most likely be viewed as Hispanic, whereas a Black and Hispanic youth may be

more likely to be perceived as Black than Hispanic. Comparing non-Hispanic White, non-Hispanic Black, and Hispanic individuals as separate racial and ethnic groups has been used in prior labeling work (e.g., Jacobsen, Pace, & Ramirez, 2019). Additionally, separating Hispanic youth from other youth of color allows the binary race variables to be mutually exclusive, which is important as conflating Hispanic youth of different racial identities may obfuscate important differences between them (Lehmann & Meldrum, 2023). *Sex* is represented by a binary variable in which 1 indicates that the student is male. Some schools began allowing individuals to self-report their gender identity in 2020, but the gender/sex variable for this study represents what was reported to schools at the time of enrollment, which is most likely a student's sex assigned at birth. Thus, a limitation of this study is that it is not known for sure whether this value indicates sex assigned at birth for all students. This variable also does not capture gender expression or sexuality, which may impact one's experience of the reverse S2PP given that students who identify as part of the LGBTQ+ community tend to face high rates of victimization (Button & Worthen, 2017), higher rates of exclusionary discipline than their peers (e.g., Mittleman, 2018; Snapp, Day, & Russell, 2022), and severe sanctioning by the juvenile justice system (Hunt & Moodie-Mills, 2012). *Free or reduced lunch (FRL)* is a binary variable in which 1 indicates that the student received free or reduced lunch at school, which is an indicator of low socioeconomic status. A student is eligible for free or reduced-price lunch if their family's income falls below a certain threshold based on the federal poverty guidelines (Maryland State Dept. of Education, 2021).

Educational I include several education-related variables that impact graduation, exclusionary discipline, and postsecondary enrollment. The first is one's *school district*, which is represented by a series of binary variables for each district. This variable is important to include

because the resources available to students vary by a school district's available financial resources (Greenwald, Hedges, & Laine, 1996), which may impact a student's educational attainment. *Special education* is a binary variable in which 1 indicates that an adolescent receives any type of special education services, such as an IEP or 504 services. 504 services refer to accommodations that are not generally covered under the IDEA Act (e.g., taking tests in a separate room). *ELL* is a binary variable in which 1 indicates that a student was classified as an English language learner within a given academic year. Students are placed in ELL programs if their family communicates in another language besides English in the home or the student communicates in another language and their proficiency in English falls below a certain threshold (Maryland State Dept. of Education, 2023b). *Test scores* is another measure of academic achievement and represents an individual's highest score on their required graduation exams. Maryland public schools changed the required graduation test after 2015, which changed the possible range of scores of the exam. The variable of *test scores* is thus a z-score that shows the position of a student's highest test scores to the average score among youth who took the same exam in the same year. Lastly, *total days absent* is a count variable indicating the total number of days a student was absent in high school as reported by the student's school. The K-12 education data include the total number of days a student is lawfully (excused) and unlawfully (unexcused or truant) absent from school per school year. I added the total number of days absent each year to create a total high school absence variable.

Justice System These variables account for factors of an adolescent's justice system involvement that may impact the relationship between system involvement and the three educational outcomes. *Level of involvement* is an ordinal variable based on five levels of justice system contact: no involvement, arrest, adjudication, non-residential placement, and residential

placement. A student is considered to have had no involvement with the justice system if they did not have contact with the justice system in high school, which is indicated by the absence of a record for that student with DJS during that time period. Arrest indicates that the individual was arrested or referred to DJS but was diverted out of the system prior to adjudication (e.g., they were enrolled in a diversion program or the prosecutor's office decided not to move forward to adjudication). Adjudication denotes that an adolescent had an adjudication hearing but did not receive any form of commitment as a disposition. Youth's highest level of involvement would be adjudication if, for example, they were deemed not adjudicated at the hearing or if they receive a disposition of community service or fines, which would not impact their educational status. Non-residential placement or in-community placement indicates that a student is placed somewhere outside of their own home (e.g., foster or group homes) that allows them to attend school within the community or were given probation. Finally, residential placement or out-of-community placement refers to commitment within a residential facility (pre- or post-adjudication) in which a student received educational services within the facility. This includes juvenile detention centers, wilderness camps, and other out-of-home placements. The assignment of residential (in-community) and non-residential (out-of-community) placement are based on the definitions from DJS shown in Figure 2. Level 1 indicates non-residential placements, and levels 2 and 3 indicate residential placements.

Figure 2: DJS Placement Levels

<p>Level I - Community Residential</p>	<ul style="list-style-type: none"> • Traditional Foster Care, Treatment Foster Care • Group Home, Therapeutic Group Home • Alternative Living Unit • Independent Living
<p>Level II - Staff Secure Residential</p>	<ul style="list-style-type: none"> • Group Home, Therapeutic Group Home with on-grounds School • Intermediate Care Facility for Addictions • Residential Treatment Center (Medicaid) • Non-Medicaid Residential Treatment Facility • Behavioral Program (e.g., Youth Center)
<p>Level III - Hardware Secure Residential</p>	<ul style="list-style-type: none"> • Residential Treatment Facility (Medicaid) • Non-Medicaid Residential Treatment Facility • Hardware Secure Behavioral Programs

Note: Source is the Department of Juvenile Services (2022a). Level 1 represents “nonresidential placement” in which youth receive their educational services within their home school environment or another school in the community. Levels 2 and 3 are “residential placement” options in which youth receive their educational services within the facilities either through the Department of Juvenile Services or through their home schools (i.e., their schools send work to the students to complete independently).

Days missed due to justice involvement is a count variable indicating the number of estimated days from school that a student missed due to an arrest, intake, adjudication hearing, or placement. I removed arrest, intake, adjudication, or placement dates that occurred between June 15th and August 25th, between December 24th and January 1st, and on Saturdays or Sundays. For placement dates spanning multiple weeks, I estimated the number of weekends that youth were in that placement and subtracted the number of days accordingly (e.g., 28 days of placement would include approximately 8 weekend days, so the total number of days absent due to placement would be 20). This variable allows me to estimate the amount of time an adolescent

misses time at their school due to their justice system involvement, which is a separate variable from the total school absence variable. *Number of semesters justice-involved* and *Number of years justice-involved* are two count variables that measure how many semesters and how many years an adolescent experienced justice-system involvement in high school, specifically the number of semesters or years in which youth had an arrest, adjudication date, or a new or continuing placement. If youth are arrested once, for example, they have one semester of justice system involvement and one year of justice system involvement. Youth are justice-involved for an average of 1.6 semesters. *Last semester justice-involved* and *Last semester justice-involved* is a count variable that measures the last semester and last year in which an adolescent was justice-involved in high school, respectively. Around 68% of justice-involved youth experience their last instance of justice system involvement in their second or third year of high school.

3.4 Methods

Sample selection bias is a concern in investigating these research questions because there are many factors that could influence one's academic achievement, involvement with the juvenile justice system, and the relationship between the two that cannot be measured with the data described above (e.g., stigmatization and motivation to complete school). Thus, I attempt to reduce this sampling bias through the use of propensity score matching and the inclusion of key covariates to estimate the impact of justice system involvement on one's education.

3.4.1 Descriptive I first present descriptive statistics that show the overall patterns of how justice system contact is related to educational outcomes and set the stage for the inferential analyses introduced below. I show Pearson's R correlation matrices and summary statistics tables

of the distributions of justice system contact, educational outcomes, and school absences for youth in my sample by geographic region, race, sex, and race-sex.

3.4.2 First Research Question The first research question asks whether justice-involved youth are less likely to graduate high school and enroll in postsecondary education and more likely to be suspended in the 12th grade than their peers. The first research question is answered through the estimation of the average treatment effect on the treated (i.e., the percentage point difference in the likelihood of experiencing the outcome between treated and untreated individuals) following propensity score matching. Propensity scores estimate the likelihood of experiencing the treatment condition (i.e., justice system involvement) based on an individual's other characteristics. Treated (justice-involved) and control (non-justice-involved) subjects are then matched based on their propensity scores to create pairs of treated and untreated individuals who have a similar likelihood of being under the treated condition. This allows me to approximate the counterfactual condition of having the same individual in both the treatment and control groups. Due to the relatively rare nature of justice system involvement in my sample, I will be using nearest neighbor matching with replacement of control cases so that control cases can be used more than once in the matching process. I will also estimate the models without replacement of control cases as a sensitivity analysis to ensure my results are robust to the changes in standard errors that occurs when estimating propensity scores using replacement. Equation 1 shows the propensity score calculation (based on Rosenbaum & Rubin, 1984). I use the Mahalanobis distance equation to make my matches (Equation 2).

$$\pi_i = \pi(x^1 \dots x^n) = E[T_i | x_i^1 \dots x_i^n] \quad (1)$$

$$dist(i, j) = \sqrt{(\mathbf{X}_i - \mathbf{X}_j)' \widehat{\Sigma}_X^{-1} (\mathbf{X}_i - \mathbf{X}_j)} \quad (2)$$

π_i is the expected value of the probability that an individual experiences the treatment condition (justice system involvement) given the values they have for a series of covariates $x_i^1 \dots x_i^n$. Treated and untreated individuals are matched based on their distance from the average values of the covariates for the sample, including demographic characteristics such as race, sex, and free or reduced lunch status and education covariates such as special education status, designation as an English Language Learner, test scores, whether or not a student was suspended in high school, and school district. The Mahalanobis distance calculation measures how far an individual's average value of the covariates is from the average of the sample's distribution of the covariates. For a vector of covariates (\mathbf{X}), each individual (i) exists at a certain distance from the sample mean (j). $\widehat{\Sigma_X^{-1}}$ represents the covariance matrix for the sample (Amusa, Zewotir, & North, 2019). Individuals are then matched with nearest-neighbor matching, which means that a justice-involved individual and a non-justice-involved individual with the closest scores will be paired. I use 1:1 nearest neighbor matching, which selects the best match for an individual based on their calculated Mahalanobis distance. For those treated individuals who do not have a match to one control subject, the observed values for up to three control subjects are averaged to create one match for that treated individual. Thus, every treatment value does receive a match, but most control cases are not used in the models because only about eight percent of youth are justice-involved in my sample. This does introduce the possibility of some sample selection bias because only those control cases that are most similar to the treatment group are included in the model, who may, on average, have characteristics that are associated with worse educational outcomes. This could reduce my external validity because my sample most likely does not perfectly match the population of all youth in Maryland schools.

I run the first three models with all youth to estimate the average treatment effect on the treated for the outcomes of graduation, suspension, and postsecondary enrollment. The model that estimates the treatment effect on the likelihood of graduation includes all youth in the sample ($N = 57,776$). The model that tests the treatment effect on the likelihood of suspension excludes those who experienced justice system involvement in the 12th grade to preserve temporal order ($N = 55,893$). The model that tests the treatment effect on the likelihood of postsecondary enrollment excludes youth who did not graduate from high school ($N = 54,172$). I estimate the average treatment effect on the treated because I am interested in the treatment effect of justice system involvement for justice-involved youth. Each individual receives an imputed potential, or expected, outcome based on the average value of the outcome variables for the individuals who are matched to them. The average treatment effect on the treated is estimated by calculating the average difference between the observed outcome and the imputed outcome for each treated individual. A significant result ($p < 0.05$) indicates that I can be 95% confident that there is a difference in the likelihood of experiencing the outcomes between justice-involved and non-justice-involved youth who are otherwise very similar. I thus test the first hypothesis by comparing the average value of the outcomes between justice-involved and non-justice-involved youth who are similar in the observed values of their covariates.

I then run the models within each school district so that the propensity scores and average treatment effect on the treated (ATET) coefficients are estimated within each district separately. The first hypothesis here is tested within each individual school district to show descriptively whether the impact of justice system involvement may vary for youth in different school districts. Thus, these models do not directly compare the estimates between school districts. I do this for two reasons. The primary reason is that one's school district, as explained above, is an

important predictor of academic success, and youth will differ in their outcomes from peers in another district. Districts may also differ in their procedures for handling students who have justice system involvement, which could predict more success for some students than others. Thus, the standard errors of my analyses may cluster by school district, which I account for by stratifying the analyses by district. Second, this also is a way to test whether using the entire sample is overpowered by reducing the sample size among each group. I separate students by their school district and estimate the average treatment effect within each school district separately. I show these separate treatment effect estimates to provide a descriptive overview of how the impacts of justice system involvement may vary between school districts. Some school districts may have more than one public high school within them, but I stratify these models solely on the district level. Since less than ten percent of all youth in the district were justice-involved, stratifying the results by school may make the models underpowered because some schools may have very few or no youth who are justice-involved.

I also test the first hypothesis by showing whether the impact of justice system involvement may depend on the highest level of system contact that an adolescent experiences. I rerun the initial propensity score matching analyses in four iterations based on an adolescent's highest level of justice involvement: arrest, adjudication, nonresidential (in-community) placement, and residential (out-of-community) placement. The treatment group will consist of youth who experience a certain level of justice-system involvement, and the control group will be non-justice-involved youth. For example, iteration one compares arrested youth to non-justice-involved youth. Iteration two compares adjudicated youth to non-justice-involved youth. Isolating youth by their level of justice system involvement gives a sense of how the extent of one's system involvement may matter in assessing the relationship between justice system

involvement and educational outcomes. I predict that the impacts of system involvement will be more detrimental as youth move farther into the justice system. These models also do not compare the ATET estimates between the models; rather, these results compare justice-involved youth at a certain level of justice system involvement to similar non-justice-involved youth.

I test for balance by assessing whether the standardized differences in the matching variables in the matched pairs are close to zero with variances of one. I estimate the standardized bias for each covariate used in the matching process. When the absolute value of the standardized difference between the two groups after matching is less than 0.2, the groups are said to be balanced for that particular covariate. While the balance of the covariates varies from model to model, in general, total days absent tends to have the highest bias. For example, in the first model that estimates the average treatment effect on the treated for the graduation outcome, the standardized bias for days absent is 0.099, which is still below the 0.2 threshold for considering the model to be balanced. The standardized difference is calculated as (Equation 3 is modified from Apel & Sweeten, 2010)

$$SD = \frac{\bar{x}_i - \bar{x}_{i,j}}{\sqrt{(s_i^2 + s_j^2)/2}} \quad (3)$$

in which $\bar{x}_i - \bar{x}_{i,j}$ indicates the differences in the mean of the covariate between the treated individual and the matched untreated individual. The denominator includes the variance of the covariate for all treated individuals (s_i^2) and all untreated individuals (s_j^2), even if the untreated individuals were not matched (Apel & Sweeten, 2010). The balance tables are shown in Appendix B. Each balance table shows the difference in the means and variances for the covariates before the matching process (raw) and after the matching process (matched) for one model. The models that estimate the average treatment effect on the treated for the whole sample

and by the level of one's involvement for the outcomes of graduation, suspension, and postsecondary enrollment are all balanced as indicated by each of the matched standardized differences being less than 0.2, and each of the matched variance ratios being close to one. Within the individual school district analyses, however, some of the models struggle to reach balance. Thus, I cannot interpret these results as having causal inference, but they still are informative for descriptive purposes.

3.4.3 Second Question The second research question has two parts. First, it asks whether absence due to justice system involvement moderates the relationship between justice system involvement and the three educational outcomes. Second, it asks whether justice system involvement moderates the relationship between the total number of days that a student is absent from school and the three outcomes. The second research question is answered with two analyses that assess the moderating impact of absence on the relationship between justice system involvement and educational outcomes and the moderating impact of justice involvement on the relationship between absence and educational outcomes. First I assess the interaction between school absence and justice system involvement. I conduct logistic regression analyses with the key independent and dependent variables including an interaction between the number of days missed due to system involvement (continuous) and system involvement. This model weighs the observations by the inverse of the propensity score calculated in the PSM models that I ran for the first question, which helps to balance the confounding variables between the treated and untreated groups (Chesnaye et al., 2022). I run another model testing this interaction among only the justice-involved youth with the number of days missing from school due to system involvement and the highest level of involvement as the independent variables to be interacted. Here I assess whether the impact of one's level of involvement in the justice system may be

affected by school absence. For example, youth who are residentially placed may experience worse impacts to the educational outcomes if they experience a longer period of absence due to that system involvement. Additionally, this analysis allows me to study the potential moderating impact of absence solely among justice-involved youth, which could further minimize selection above and beyond the propensity score matching by ensuring everyone in the sample is more similar to one another because of their system involvement.

The second hypothesis concerns the moderating impact of justice system involvement on the relationship between absence and educational outcomes. That is, the impact of absence on the three outcomes for justice-involved youth may be greater than the impact of absence on the three outcomes for other youth. Thus, I complete the same interaction as above but use the total days of absence from school as the moderating variable rather than the days absent due to justice system involvement. This model also weighs the observation by the inverse of the propensity scores that were calculated in the first set of models. The interaction between justice system involvement and absence will then show how justice system involvement impacts the relationship between absence and educational outcomes.

3.4.4 Third Research Question The third research question asks whether the impact of justice system involvement on these educational outcomes varies by an adolescent's race and sex. The analyses for the last research question will investigate the possible moderating effects of race and sex on the relationship between justice system involvement and educational outcomes. These analyses will repeat the propensity score matching models used to answer the first research question but stratify youth by race, sex, and race-sex (e.g., White Girls, Black Boys) and includes youth that are often understudied in research on disparities in the juvenile justice system (e.g., Indigenous and Asian youth) (Leiber et al., 2007; Pope, Lovell, & Hsia, 2002). A

significant result indicates that within each demographic group, justice-involved youth differ in the likelihood of experiencing the measured outcome compared to non-justice-involved youth.

I additionally conduct between-group comparisons for these models. I predict the treatment effect for each individual within a stratified group to create a distribution of treatment effect estimates for each subgroup. I conduct unpaired t-tests to test the difference in the average of these treatment effects between groups. The reference groups are white students for the race models and male students for the sex models. In the race-sex models, I compare the average predicted treatment effects for male and female students within each racial identity to see how youth of different sexes experience racialized impacts differently. For example, the average predicted treatment effect among White girls is compared to the average treatment effect for White boys.

3.4.5 Sensitivity Analyses and Robustness Checks

I conduct two robustness checks for this study, which change some of the specifications of the models used to answer the first research question to assess the robustness of these results to those changes. First is to rerun the initial models without replacement. If a control case is matched to a treatment case, it cannot be used to match to another treatment case. This is done to ensure that my results are not contingent on the possible misspecification of the standard errors that could occur as a result of using the same control subject multiple times (Abadie & Spiess, 2022). The treatment and control groups may not be as well-matched in the non-replacement model compared to the replacement model because as soon as a control subject is matched, they cannot be matched to another person even if they are the best match for another treated subject. The same number of matched pairs are generated with the non-replacement model, so even

without replacing control cases that have been matched, each justice-involved youth does find a suitable match. The comparability of the justice-involved and non-justice-involved youth may not be as strong in the non-replacement model, so the replacement models may achieve better covariate balance by creating pairs of more similar individuals. Thus, the results may not drastically change between the replacement and non-replacement models, but I may be more confident in the estimates for the replacement model because it allows for better matches between the subjects. Another robustness check for the first set of analyses is conducted by creating coarser groups of school districts as some of the districts may have a small number of youth who are justice-involved, and thus, those models may be underpowered. These groups are based on the six county-level regions that DJS defines as their operating regions. These areas are Baltimore City (one school district), the Central district (Baltimore County, Carroll, Harford, and Howard counties), Eastern Shore (Caroline, Cecil, Dorchester, Kent, Queen Anne's, Somerset, Talbot, Wicomico, and Worcester counties), Metro (Montgomery and Prince George's counties), Southern (Anne Arundel, Calvert, Charles, and St. Mary's counties), and finally Western (Allegany, Frederick, Garrett, and Washington counties) (Department of Juvenile Services "Facilities and Offices").

I then conduct a series of sensitivity analyses that assess how sensitive my results are to changes in the specification of my primary independent and dependent variables. The first two sensitivity analyses focus on the timing and dosage of justice system involvement. These analyses are mostly descriptive. I calculated the number of semesters in which youth are justice-involved. For the timing analysis, the independent variable is the last semester in which they experience system involvement in high school. The dosage analyses use the number of semesters in which youth are justice-involved as the independent variable. I conduct logistic regression

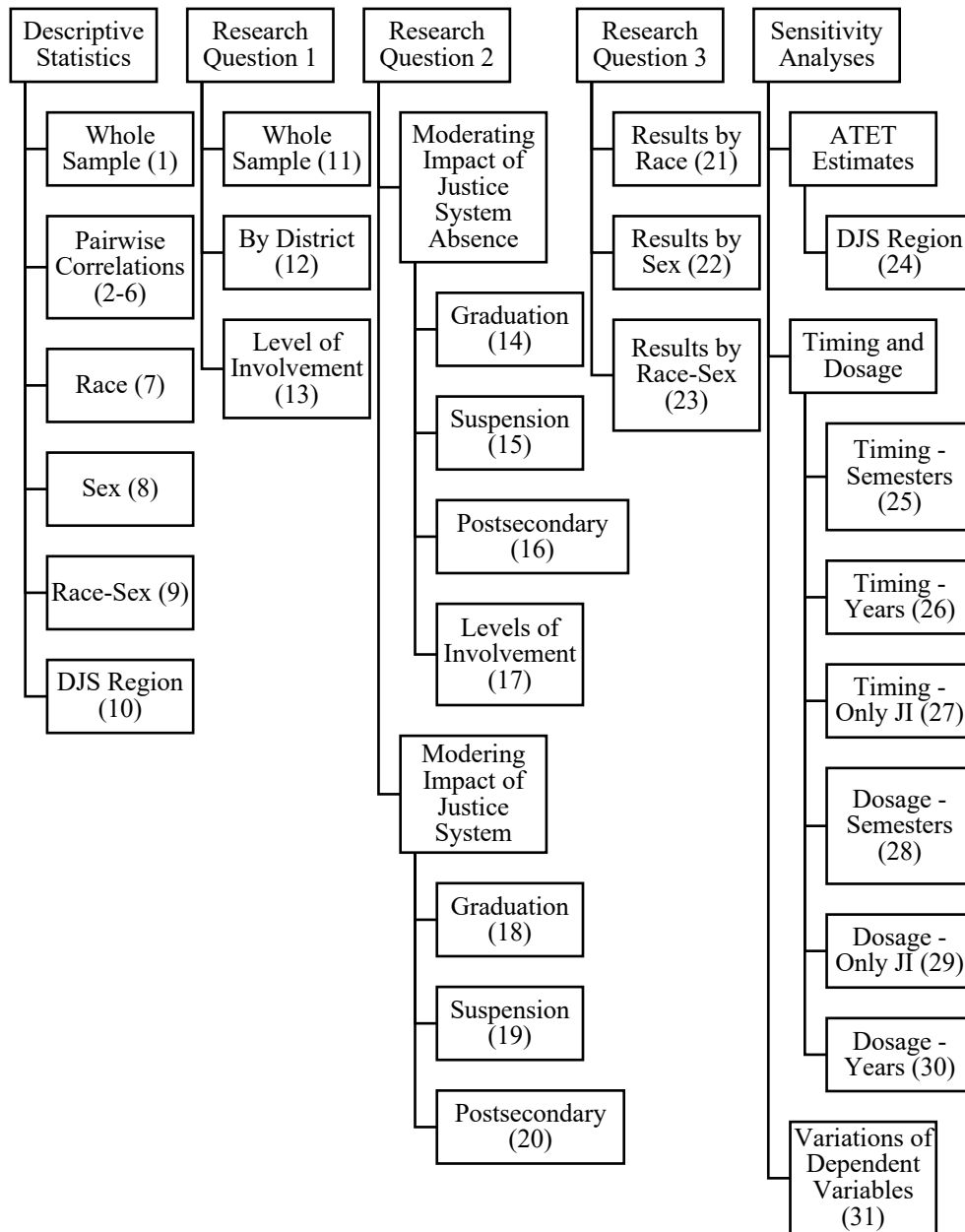
analyses on the three outcomes with these two independent variables and predict that more instances of justice system involvement and system involvement that is closer to the 12th grade will be associated with worse outcomes.

Lastly, I conduct regression analyses using different specifications of my three dependent variables. I assess the impacts of system involvement on timely versus delayed (greater than four years) graduation and earning a GED versus high school diploma/certificate of completion using logistic regression analyses. I use OLS models to assess the impacts of justice system involvement on the total length of time in which one is suspended or expelled in the 12th grade. This model only includes youth who experience at least one suspension or expulsion. Lastly, I explore the impact of justice system involvement on the type of degree that youth pursue in their postsecondary education following high school graduation (among Associate's, or Bachelor's, or some form of certification) using an ordered logistic regression model. This model only includes the youth who enrolled in postsecondary education.

Chapter 4: Results

Figure 3 provides a flowchart of the tables produced for each analysis. Tables 1-10 show the descriptive statistics for the entire sample, the correlation matrices showing the associations between the variables, and the descriptive statistics broken up by race, sex, race-sex, and geographic region. Tables 11-13 show the results for the first research question by displaying the average treatment effect on the treated (ATET) estimates for the whole sample, within each school district, and within each level of involvement. Tables 14-20 show the results for the second research question. Tables 14-16 display the results for the logistic regression analyses testing the interaction between absence due to justice system involvement and the binary measure of justice system involvement for each of the three outcomes. Table 17 shows the same interaction effects by one's level of system involvement. Tables 18-20 display the results for the analyses testing the interaction of justice system involvement and total days absent from school for each of the three outcomes. Tables 21-23 display the ATET estimates for the third research question, which are estimated within race, sex, and race-sex groups, respectively. Tables 24-31 show the results for the robustness checks and sensitivity analyses. Table 24 shows the ATET estimates by geographic region. Tables 25-27 show the results for the sensitivity analysis testing the impact of the timing of justice system involvement, and Tables 28-30 show the results for the sensitivity analysis testing the impact of the dosage of justice system involvement. Lastly, Table 31 shows the regression results for the sensitivity analyses testing the impact of justice system involvement on different specifications of the dependent variables.

Figure 3: Flowchart of Results Tables



Note: “JJ” stands for Justice-Involved and indicates that only justice-involved youth are included in those analyses.

4.1 Descriptive Statistics

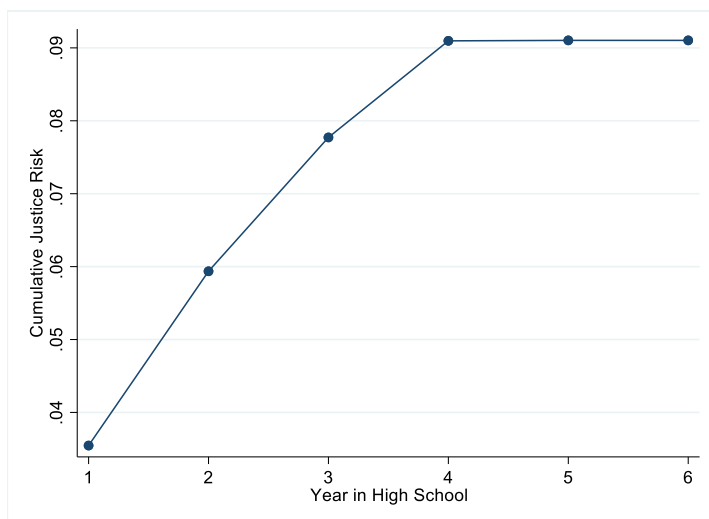
Table 1 shows the descriptive statistics for the entire sample ($N = 57,776$). About eight percent of youth ever experienced justice system involvement during high school. The majority of youth in my sample are White (approximately half) or Black (approximately a third). Twelve percent of youth in the sample are Hispanic, and the rest are Asian or Pacific Islander students, Indigenous or Multiracial. Asian and Pacific Islander youth are combined in the main analyses because less than one percent of youth in the sample identify as Pacific Islander. Most youth graduated from high school (94%), and about three-fourths of youth enroll in postsecondary education following high school. Four percent of students were suspended in the 12th grade, and sixteen percent of students were ever suspended in high school. Youth were absent on average about fifty days total from high school. Figures 4 and 5 show the cumulative risk of justice-system involvement and suspension to briefly show some of the trends over time for the 2013 cohort. Justice system involvement tends to increase steadily over time as does suspension, though the cumulative risk of suspension increases the most between the first and second year of high school.

Table 1: Descriptive Statistics for the Whole Sample

VARIABLES	Mean	SD	Min	Max
Graduated	0.937	0.242	0	1
Suspended in 12th Grade	0.043	0.203	0	1
Postsecondary	0.737	0.440	0	1
Justice-Involved	0.075	0.263	0	1
White	0.505	0.500	0	1
Black	0.361	0.480	0	1
Asian	0.068	0.252	0	1
Pacific Islander	0.005	0.073	0	1
Indigenous	0.042	0.201	0	1
Multiracial	0.080	0.271	0	1
Hispanic	0.123	0.329	0	1
Male	0.502	0.500	0	1
FRL	0.383	0.486	0	1
Special Education	0.100	0.300	0	1
ELL	0.040	0.196	0	1
Ever Suspended	0.155	0.362	0	1
Test Scores	0.481	0.757	-4.360	6.681
Days Absent	49.41	56.61	0	867.5

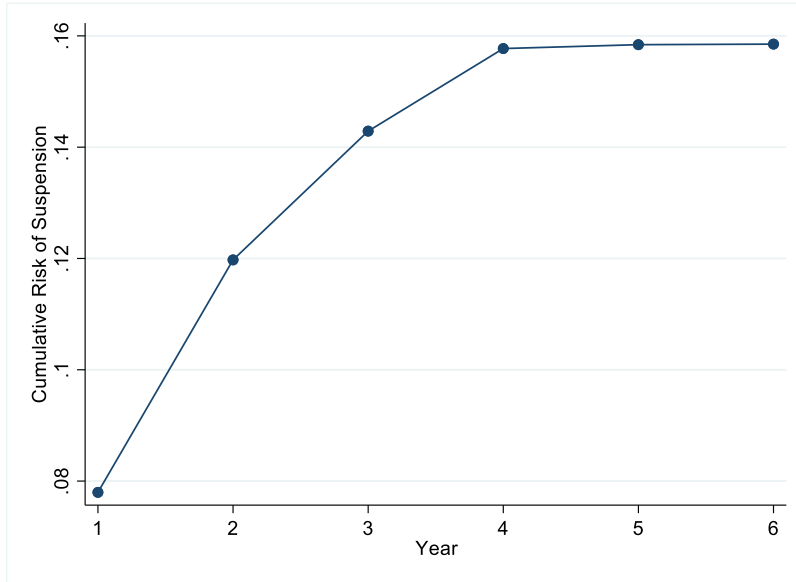
Note: N = 57,776. Youth are considered justice-involved if they have a record with the Department of Juvenile Services during the years in which they are in high school (Fall of 2013 through the end of their time in high school).

Figure 4: Cumulative Risk of Justice System Involvement by Year



Note: This figure shows the cumulative risk for the 2013 cohort. Year in high school indicates the number of years that a student has been in high school.

Figure 5: Cumulative Risk of Suspension by Year



Note: This figure shows the cumulative risk for the 2013 cohort. Year in high school indicates the number of years that a student has been in high school.

4.2 Descriptive Results

4.2.1 Correlations of Independent and Dependent Variables

Tables 2-6 shows the pairwise correlations for justice system involvement and the covariates. Overall, being Black, male, or qualifying for free or reduced lunch is associated with involvement in the justice system, while there is either a significant negative correlation or no significant correlation between justice system involvement and identifying as any other racial group. Suspension, missing more days of school, and being enrolled in special education is associated with justice system involvement, while being an ELL student and higher test scores are negatively associated with justice system involvement. Identifying as Black or Hispanic is negatively associated with graduation and college enrollment and positively associated with suspension. The education control variables and the outcomes follow along predicted patterns. Being suspended, enrolling in special education, and having a greater number of absences is

associated with a lower likelihood of graduating and postsecondary enrollment. Test scores are associated with the positive outcomes of graduation and postsecondary enrollment.

Table 2: Correlation of Primary Independent and Dependent Variables

	Justice Involved	Graduated	Suspended	Postsecondary
Justice Involved	1			
Graduated	-0.248***	1		
Suspended	0.244***	-0.138***	1	
Postsecondary	-0.218***	0.358***	-0.161***	1

Table 3: Correlation of Independent Variable and Demographic Characteristics

	Justice	Male	Black	White	Hispanic	Asian	PacIsl	Indi	Multi	FRL
Justice	1									
Male	0.089***	1								
Black	0.106***	-0.022***	1							
White	-0.074***	0.019***	-0.748***	1						
Hispanic	-0.034***	0.008	-0.214***	0.050***	1					
Asian	-0.060***	-0.006	-0.184***	-0.258***	-0.073***	1				
PacIsl	-0.005***	0.001	-0.049***	-0.044***	0.116***	0.009*	1			
Indi	-0.018***	-0.005	-0.145***	-0.078***	0.429***	-0.049***	0.037***	1		
Multi	-0.015***	-0.016***	-0.142***	-0.174***	0.259***	-0.028***	0.035***	0.066***	1	
FRL	0.153***	-0.002	0.315***	-0.318***	0.163***	-0.070***	0.027***	0.098***	0.036***	1

Table 4: Correlation of Independent Variable and Education Covariates

	Justice	Special Ed	Test Scores	Absence	Suspended	ELL
Justice	1					
Special Ed	0.076***	1				
Test Scores	-0.168***	-0.312***	1			
Absence	0.281***	0.131***	-0.308***	1		
Suspended	0.396***	0.134***	-0.252***	0.292***	1	
ELL	-0.039***	-0.041***	-0.196***	0.023***	-0.029***	1

Table 5: Correlation of Dependent Variables and Demographic Characteristics

	Graduation	Suspension	Postsecondary
Graduation	1		
Suspension	-0.161***	1	
Postsecondary	0.358***	-0.161***	1
Male	-0.075***	0.064***	-0.146***
Black	-0.055***	0.097***	-0.092***
White	0.049***	-0.068***	0.076***
Hispanic	-0.072***	-0.025***	-0.084***
Asian	0.054***	-0.050***	0.119***
PacIsl	-0.002	-0.003	0.004
Indi	-0.021***	-0.021***	-0.016***
Multi	0.010*	-0.019***	0.051***
FRL	-0.179***	0.097***	-0.291***

Table 6: Correlation of Education Covariates and Outcomes

	Special Education	Test Scores	Absence	Suspension 9-11	ELL	Graduation	Suspension 12	Postsecondary
Special Education	1							
Test Scores	-0.312***	1						
Absence	0.131***	-0.308***	1					
Suspension 9-11	0.134***	-0.245***	0.300***	1				
ELL	-0.041***	-0.196***	0.023***	-0.030***	1			
Graduation	-0.101***	0.286***	-0.415***	-0.224***	-0.104***	1		
Suspension 12	0.068***	-0.131***	0.112***	0.271***	-0.013**	-0.138***	1	
Postsecondary	-0.214***	0.393***	-0.367***	-0.271***	-0.122***	0.358***	-0.161***	1

4.2.2 Descriptive Differences by Subgroup

Tables 7-9 shows the differences in the independent and dependent variables by subgroup. Justice system involvement differs by region, race, and sex. I highlight some descriptive statistics of note here. On average, seven percent of youth in my sample are justice-involved, compared to eleven percent of Black youth and six percent of White youth. Hispanic youth have the lowest graduation rate within my sample and are the least likely to enroll in postsecondary education. Black youth are the most likely to be suspended. Boys are more likely to be justice-involved and suspended, while girls were more likely to graduate and enroll in postsecondary education. Table 9 shows the race-sex differences in the independent, dependent, and control variables. The percent of youth who are justice-involved, graduate from high school, are suspended in the 12th grade, and enroll in postsecondary education also vary by one's geographic region, as shown in Table 10. Appendix A shows the percent of youth within each school district who are justice-involved.

Table 7: Descriptive Statistics by Race

VARIABLES	White	Black	AAPI	Indigenous	Multiracial	Hispanic	Range
Graduated	0.958 (0.201)	0.917* (0.276)	0.984* (0.124)	0.967 (0.179)	0.959 (0.199)	0.891* (0.312)	0-1
FRL	0.179 (0.383)	0.594* (0.491)	0.258* (0.438)	0.231* (0.422)	0.313* (0.464)	0.594* (0.491)	0-1
Male	0.516 (0.500)	0.492* (0.500)	0.490* (0.500)	0.421* (0.494)	0.457* (0.498)	0.513 (0.500)	0-1
Ever Suspended	0.104 (0.306)	0.256* (0.437)	0.032* (0.175)	0.115 (0.319)	0.135* (0.342)	0.119* (0.324)	0-1
Special Education	0.086 (0.280)	0.135* (0.342)	0.030* (0.171)	0.064* (0.245)	0.077 (0.267)	0.098* (0.297)	0-1
ELL	0.004 (0.060)	0.023* (0.149)	0.117* (0.322)	---	0.006 (0.077)	0.187* (0.390)	0-1
Justice-Involved	0.057 (0.232)	0.115* (0.319)	0.018* (0.133)	0.071 (0.256)	0.074* (0.262)	0.051* (0.220)	0-1
Test Scores	0.728 (0.634)	0.166* (0.770)	0.785* (0.673)	0.643* (0.741)	0.667* (0.598)	0.270* (0.811)	-4.360-6.681
Days Absent	42.14 (38.13)	59.74* (74.76)	28.17* (34.00)	43.80 (48.06)	43.79* (42.35)	59.11* (57.05)	0-867.5
Suspended in 12th Grade	0.030 (0.171)	0.072* (0.259)	0.006* (0.077)	0.031 (0.173)	0.035 (0.185)	0.030 (0.170)	0-1
Postsecondary	0.780 (0.414)	0.669* (0.471)	0.926* (0.262)	0.857* (0.351)	0.837* (0.370)	0.639* (0.480)	0-1
N	24,213	19,588	3,669	454	2,718	7,314	

Note: Data displayed as Mean (SD). “—” indicates that descriptive statistics had to be suppressed due to low sample size. Youth are considered justice-involved if they have a record with the Department of Juvenile Services during the years in which they are in high school (Fall of 2013 through the end of their time in high school).

*Indicates that the mean for the group is significantly different from the mean for White youth at the $p < 0.05$ level based on t-tests testing the difference of means between groups.

Table 8: Descriptive Statistics by Sex

VARIABLES	Female	Male	Range	t-statistic	p-value
Graduated	0.956 (0.206)	0.919 (0.272)	0-1	18.36	0.000
FRL	0.384 (0.486)	0.382 (0.486)	0-1	0.495	0.621
Postsecondary	0.802 (0.399)	0.674 (0.469)	0-1	34.97	0.000
Special Education	0.068 (0.252)	0.132 (0.338)	0-1	-25.62	0.000
Ever Suspended	0.121 (0.326)	0.188 (0.391)	0-1	-22.27	0.000
ELL	0.038 (0.191)	0.042 (0.201)	0-1	-2.45	0.014
Justice-Involved	0.051 (0.220)	0.098 (0.297)	0-1	-21.50	0.000
Test Scores	0.542 (0.709)	0.420 (0.797)	-4.360-6.681	19.43	0.000
Days Absent	50.64 (55.90)	48.18 (57.28)	0-867.5	5.22	0.000
Suspended in 12th Grade	0.030 (0.171)	0.056 (0.230)	0-1	-15.39	0.000
N	28,761	29,015			

Note: Results displayed as Mean (SD). Youth are considered justice-involved if they have a record with the Department of Juvenile Services during the years in which they are in high school (Fall of 2013 through the end of their time in high school). A comparison of means is shown through a t-test, the results of which are shown in the last two columns.

Table 9: Descriptive Statistics by Race and Sex

VARIABLES	White Girls	White Boys	Black Girls	Black Boys	AAPI Girls	AAPI Boys	Indi Girls	Indi Boys	Multi Girls	Multi Boys	Hisp Girls	Hisp Boys	Range
Graduated	0.968 (0.177)	0.948 (0.222)	0.942 (0.233)	0.891 (0.311)	0.993 (0.086)	0.976 (0.153)	0.981 (0.137)	0.948 (0.223)	0.973 (0.162)	0.942 (0.234)	0.924 (0.265)	0.860 (0.347)	0-1
FRL	0.177 (0.382)	0.180 (0.384)	0.602 (0.219)	0.586 (0.493)	0.241 (0.428)	0.277 (0.448)	0.190 (0.393)	0.288 (0.454)	0.322 (0.468)	0.303 (0.460)	0.574 (0.495)	0.613 (0.487)	0-1
Ever Suspended	0.0681 (0.252)	0.139 (0.346)	0.219 (0.414)	0.295 (0.456)	0.019 (0.136)	0.045 (0.207)	0.088 (0.283)	0.152 (0.360)	0.111 (0.314)	0.164 (0.370)	0.081 (0.273)	0.155 (0.362)	0-1
Special Education	0.056 (0.230)	0.114 (0.317)	0.092 (0.289)	0.180 (0.384)	0.022 (0.148)	0.038 (0.192)	0.042 (0.201)	0.094 (0.293)	0.058 (0.233)	0.101 (0.301)	0.069 (0.254)	0.125 (0.330)	0-1
ELL	0.003 (0.055)	0.004 (0.064)	0.024 (0.152)	0.022 (0.146)	0.107 (0.310)	0.128 (0.334)	**	**	0.007 (0.086)	**	0.174 (0.379)	0.200 (0.400)	0-1
Justice-Involved	0.038 (0.192)	0.075 (0.263)	0.078 (0.268)	0.154 (0.361)	0.011 (0.105)	0.025 (0.156)	0.080 (0.272)	0.058 (0.234)	0.065 (0.247)	0.085 (0.278)	0.031 (0.174)	0.070 (0.255)	0-1
Test Scores	0.780 (0.602)	0.680 (0.658)	0.251 (0.704)	0.079 (0.824)	0.851 (0.648)	0.717 (0.691)	0.731 (0.520)	0.523 (0.954)	0.705 (0.582)	0.621 (0.614)	0.327 (0.765)	0.216 (0.849)	-4.360-6.681
Days Absent	44.18 (39.38)	40.23 (38.21)	60.20 (73.44)	59.26 (76.09)	28.32 (31.86)	28.02 (36.09)	45.27 (45.15)	41.79 (51.85)	45.19 (41.34)	42.13 (43.47)	59.81 (54.68)	58.43 (59.21)	0-867.5
Suspended in 12th Grade	0.017 (0.130)	0.042 (0.201)	0.056 (0.230)	0.089 (0.285)	**	0.008 (0.088)	**	**	0.022 (0.146)	0.052 (0.221)	0.018 (0.133)	0.041 (0.198)	0-1
Postsecondary	0.845 (0.362)	0.718 (0.450)	0.742 (0.438)	0.594 (0.491)	0.944 (0.230)	0.907 (0.291)	0.920 (0.272)	0.770 (0.422)	0.878 (0.328)	0.788 (0.409)	0.708 (0.455)	0.574 (0.495)	0-1
N	11,725	12,488	9,951	9,637	1,871	1,798	263	191	1,477	1,241	3,474	3,660	

Note: Results displayed as Mean (SD). ** indicates values that had to be suppressed due to low sample size. Youth are considered justice-involved if they have a record with the Department of Juvenile Services during the years in which they are in high school (Fall of 2013 through the end of their time in high school).

Table 10: Descriptive Statistics by DJS Region

VARIABLES	Baltimore City	Central	Eastern	Metro	Southern	Western	Range
Graduated	0.851 (0.356)	0.952 (0.215)	0.934 (0.248)	0.937 (0.242)	0.948 (0.222)	0.952 (0.214)	0-1
FRL	0.799 (0.401)	0.311 (0.463)	0.432 (0.495)	0.414 (0.493)	0.265 (0.441)	0.308 (0.462)	0-1
White	0.108 (0.311)	0.597 (0.491)	0.717 (0.450)	0.318 (0.466)	0.637 (0.481)	0.810 (0.392)	0-1
Black	0.873 (0.333)	0.289 (0.454)	0.208 (0.406)	0.451 (0.498)	0.274 (0.446)	0.101 (0.302)	0-1
Asian	0.020 (0.139)	0.083 (0.276)	0.022 (0.147)	0.104 (0.306)	0.036 (0.187)	0.034 (0.182)	0-1
Pacific Islander	0.005 (0.068)	0.003 (0.055)	0.001 (0.031)	0.009 (0.096)	0.006 (0.076)	0.002 (0.050)	0-1
Indigenous	0.004 (0.062)	0.017 (0.129)	0.023 (0.148)	0.089 (0.285)	0.031 (0.174)	0.026 (0.159)	0-1
Multiracial	0.014 (0.117)	0.061 (0.240)	0.065 (0.246)	0.120 (0.324)	0.077 (0.267)	0.074 (0.261)	0-1
Hispanic	0.046 (0.210)	0.070 (0.255)	0.058 (0.234)	0.237 (0.426)	0.080 (0.272)	0.086 (0.280)	0-1
Male	0.473 (0.499)	0.501 (0.500)	0.505 (0.500)	0.503 (0.500)	0.513 (0.500)	0.506 (0.500)	0-1
Ever Suspended	0.236 (0.424)	0.145 (0.352)	0.234 (0.423)	0.124 (0.330)	0.174 (0.379)	0.123 (0.328)	0-1
Special Education	0.164 (0.370)	0.096 (0.294)	0.097 (0.296)	0.106 (0.308)	0.076 (0.265)	0.084 (0.278)	0-1
ELL	0.030 (0.171)	0.021 (0.143)	0.015 (0.123)	0.084 (0.278)	0.018 (0.131)	0.014 (0.115)	0-1
Justice-Involved	0.127 (0.332)	0.069 (0.254)	0.125 (0.331)	0.046 (0.210)	0.101 (0.301)	0.058 (0.233)	0-1
Test Scores	-0.088 (0.929)	0.600 (0.688)	0.481 (0.719)	0.433 (0.784)	0.585 (0.663)	0.589 (0.646)	-4.360-6.681
Days Absent	102.9 (121.4)	42.53 (43.51)	50.26 (42.53)	47.33 (49.29)	44.40 (39.15)	40.44 (38.73)	0-867.5
Suspended in 12th Grade	0.047 (0.212)	0.042 (0.201)	0.086 (0.281)	0.032 (0.177)	0.049 (0.215)	0.036 (0.185)	0-1
Postsecondary	0.524 (0.500)	0.800 (0.403)	0.663 (0.473)	0.754 (0.431)	0.736 (0.441)	0.744 (0.436)	0-1
N	4,474	15,939	4,130	18,364	9,568	5,252	

Note: Results displayed as Mean (SD). Youth are considered justice-involved if they have a record with the Department of Juvenile Services during the years in which they are in high school (Fall of 2013 through the end of their time in high school). The DJS regions are groups of counties that are defined by the Department of Juvenile Services as the regions in which they operate their services. These regions are Baltimore City (one school district), the Central district (Baltimore County, Carroll, Harford, and Howard counties), Eastern Shore (Caroline, Cecil, Dorchester, Kent, Queen Anne’s, Somerset, Talbot, Wicomico, and Worchester counties), Metro (Montgomery and Prince George’s counties), Southern (Anne Arundel, Calvert, Charles, and St. Mary’s counties), and finally Western (Allegany, Frederick, Garrett, and Washington counties). Each county (and Baltimore City) represent one school district.

4.3 Estimating the Impact of Justice System Involvement on Educational Outcomes

4.3.1 Entire Cohort

Table 11 shows the results for the propensity score matching models estimating the average treatment effect on the treated for justice-involved youth on graduation, suspension, and postsecondary enrollment. Appendices B1-B3 shows the balance tables for the graduation, suspension, and postsecondary outcomes, respectively, and the covariates for all three models are balanced. Justice system involvement is associated with a twelve percentage point decrease in the likelihood of graduating from high school and seven percentage point decrease in enrolling in postsecondary education on average. Justice system involvement in grades nine through eleven is also associated with a four percentage point increase in the likelihood of experiencing a suspension or expulsion in the 12th grade on average. Hypothesis 1 is thus supported as justice system involvement is associated with lower likelihoods of graduating and enrolling in postsecondary education and a higher likelihood of suspension in the 12th grade.

Table 11: ATET Estimates for the Whole Sample

Outcome	ATET (Robust SE)	N
Graduation	-0.116 (0.009)***	8,604
Suspension	0.042 (0.010)***	4,864
Postsecondary	-0.072 (0.013)***	3,128

Note: *** $p < 0.01$. The ATET measures the average treatment effect on the treated of justice system involvement on experiencing each of the three outcomes after matching. The ATET estimates represents the difference in the percentage points of the likelihood of experiencing the outcome for justice-involved youth compared to non-justice-involved youth. The matching covariates include school district, sex, race, suspension (for the suspension outcome, this includes only suspensions from grades 9-11), special education status, free or reduced lunch status, English Language Learner status, test scores, and total days absent.

4.3.2 School District

Table 12 shows the average treatment effect on the treated for justice-involved youth in the three outcomes stratified by school district. The balance tables for each of the three models stratified by school district are shown in Appendix B4. Some of the covariates failed to achieve an acceptable level of balance after matching, so I am not confident that the matched treatment and control groups within these districts are comparable enough to interpret the estimated ATET as causal. I still display them to demonstrate the potential differences in the treatment effects between youth in different school districts.

School districts in Maryland are at the county-level with the exception of Baltimore City. These counties represent a variety of students from different socioeconomic backgrounds and demographic characteristics in addition to their differences in policies regarding graduation, suspension, and the reintegration of justice-involved students back into their schools. When conducting the propensity score models separately by school district, Hypothesis 1 is supported within some school districts but not within others. That is, the coefficients for the estimated average treatment effect on the treated for each of the three outcomes are significant within some school districts but not all. For graduation, the coefficients for the average treatment effects on the treated are negative and significant at a 95% confidence level for fourteen districts, and three districts have coefficients that are marginally significant ($p < 0.1$). Fewer districts have coefficients that are significant when assessing the relationship between justice system involvement and postsecondary enrollment and suspension. For suspension, only the Howard, Montgomery, and Washington districts have significant positive coefficients at the 95% confidence level, and four have marginally significant coefficients. For postsecondary enrollment, seven districts have significant negative coefficients of the average treatment effects,

and one has a marginally significant coefficient. Thus, Hypothesis 1 is partially supported once the average treatment effects are estimated separately by districts, suggesting that perhaps geographic location may matter in the extent to which justice system involvement impacts educational outcomes.

Table 12: ATET Estimates by School District

District	Graduation	N	Suspension	N	Postsecondary	N
Allegany ⁺	-0.089 (0.054)	180	0.042 (0.045)	96	0.133 (0.094)	150
Anne Arundel	-0.116 (0.024)***	1104	0.045 (0.025)*	616	-0.095 (0.003)***	826
Baltimore Co.	-0.097 (0.025)***	1170	0.057 (0.030)*	672	-0.033 (0.036)	812
Calvert ⁺	-0.078 (0.050)	230	0.042 (0.054)	120	-0.176 (0.071)**	188
Caroline ⁺	-0.102 (0.060)*	118	0.120 (0.065)*	50	-0.154 (0.122)	104
Carroll	-0.130 (0.035)***	262	0.079 (0.046)*	152	-0.153 (0.063)**	236
Cecil ⁺	-0.085 (0.068)	142	0.071 (0.092)	84	-0.218 (0.090)**	110
Charles	-0.072 (0.038)*	388	0.011 (0.063)	176	-0.077 (0.052)	336
Dorchester ⁺	-0.186 (0.068)***	118	0.057 (0.109)	70	-0.022 (0.106)	92
Frederick ⁺	-0.225 (0.052)***	222	0.067 (0.082)	90	-0.183 (0.073)**	164
Garrett ⁺	-0.194 (0.071)***	62	0.063 (0.061)	32	-0.040 (0.132)	50
Harford ⁺	-0.099 (0.045)**	384	-0.010 (0.070)	196	-0.063 (0.061)	286
Howard	-0.031 (0.042)	388	0.087 (0.039)**	103	-0.025 (0.054)	316
Kent ⁺	-0.105 (0.082)	38	--	--	--	--
Montgomery	-0.115 (0.030)***	800	0.056 (0.026)**	390	-0.088 (0.040)**	556
Prince George's	-0.118 (0.032)***	898	0.003 (0.028)	584	-0.079 (0.041)*	644
Queen Anne's ⁺	-0.167 (0.083)**	72	0.056 (0.132)	36	-0.037 (0.130)	54
St. Mary's ⁺	-0.115 (0.051)**	208	0.109 (0.073)	110	-0.022 (0.076)	180
Somerset ⁺	-0.125 (0.076)*	48	-0.133 (0.215)	30	0.063 (0.129)	32
Talbot ⁺	-0.170 (0.109)	56	0.154 (0.148)	26	0.143 (0.134)	42
Washington ⁺	-0.200 (0.069)***	140	0.129 (0.060)**	62	-0.021 (0.089)	94
Wicomico ⁺	-0.265 (0.050)***	302	0.011 (0.064)	182	-0.098 (0.075)	164
Worcester ⁺	-0.072 (0.068)	138	-0.049 (0.099)	82	--	118
Baltimore City	-0.113 (0.030)***	1132	0.005 (0.021)	788	-0.091 (0.038)**	668

Note: * $p < 0.10$ ** $p < 0.05$ *** $p < 0.01$. Results are displayed as the ATET (robust standard errors). The ATET measures the average treatment effect on the treated of justice system involvement on experiencing each of the three outcomes after matching. The ATET estimates represents the difference in the percentage points of the likelihood of experiencing the outcome for justice-involved youth compared to non-justice-involved youth.

The matching covariates include school district, sex, race, suspension (for the suspension outcome, this includes only suspensions from grades 9-11), special education status, free or reduced lunch status, English Language Learner status, test scores, and total days absent.

⁺Indicates that at least one model did not achieve balance according to the 0.2 standardized difference threshold. Kent County School District did not have a sufficient sample size for the suspension and postsecondary models.

4.3.3 Levels of System Involvement

Similar to the district-level analyses, I isolated justice-involved youth within each level of their involvement so that the propensity scores and treatment effects are estimated only with one level of system involvement at a time. Each of these models tests one group of justice-involved youth (based on their highest level of system involvement) compared to non-justice-involved youth. For example, for the level of adjudication, the propensity scores are estimated solely with adjudicated youth and non-justice-involved youth in the sample. Table 13 shows these results, and the balance tables are shown in Appendix B5.

Being arrested as one's highest level of system involvement is associated with a six percentage point decrease in the likelihood of graduating. Being residentially (out-of-community) placed, however, is associated with a thirty-one percentage point decrease in the likelihood of graduating. Arrest is associated with a three percentage point increase in the likelihood of suspension, and nonresidential (in-community) placement is associated with a seven percentage point increase in the likelihood of suspension. The coefficients at all four levels of system involvement are significant and associated with decreases in the likelihood of postsecondary enrollment. The largest effect size is for youth in residential (out-of-community) placement, which is associated with a fifteen percentage point decrease in the likelihood of postsecondary enrollment. Thus, Hypothesis 1 is mostly supported with respect to one's level of justice system involvement. Moving farther along in the system is associated with stronger impacts on graduation and postsecondary enrollment when compared to those who are not justice-involved and is associated with stronger impacts on suspension for non-residentially placed youth.

Table 13: ATET Estimates by Level of System Involvement

Level of Involvement	ATET (Robust SE)	N
Graduation		
Arrest	-0.061 (0.009)***	5574
Adjudication	-0.063 (0.023)***	1082
Nonresidential	-0.114 (0.018)***	1662
Residential	-0.306 (0.025)***	1490
Suspension		
Arrest	0.031 (0.011)***	3608
Adjudication	0.040 (0.025)	652
Nonresidential	0.069 (0.021)***	1130
Residential	0.033 (0.023)	660
Postsecondary		
Arrest	-0.055 (0.014)***	4566
Adjudication	-0.110 (0.033)***	802
Nonresidential	-0.059 (0.027)**	1240
Residential	-0.154 (0.036)***	636

Note: * $p < 0.10$ ** $p < 0.05$ *** $p < 0.01$. The ATET measures the average treatment effect on the treated of justice system involvement on experiencing each of the three outcomes after matching. For each model, only the justice-involved youth at that particular level of involvement are included as the treatment cases. The ATET estimates represents the difference in the percentage points of the likelihood of experiencing the outcome for justice-involved youth compared to non-justice-involved youth. The matching covariates include school district, sex, race, suspension (for the suspension outcome, this includes only suspensions from grades 9-11), special education status, free or reduced lunch status, English Language Learner status, test scores, and total days absent.

4.4 The Role of Absence in the Relationship Between Justice System Involvement and Education

This question asks how absence may impact the relationship between justice system involvement and educational outcomes. I answered this question in two ways. First, I estimated the interaction between the number of days an adolescent misses school due to justice system involvement and justice system involvement itself. I display the results first with the bivariate model, then the model only including education-related covariates, then the model including all covariates. The models for the graduation, suspension, and postsecondary enrollment outcomes

are shown in Tables 14-16, respectively. The results are reported as the change in the percent odds of experiencing the relevant outcome when the value of the independent variable increases by one (or goes from zero to one), which is calculated by subtracting the reported odds ratio from one.

Justice system involvement alone is associated with a 47% reduction in the odds of graduating, though the direct impact of school absence due to justice system involvement is not itself significantly associated with graduation once all covariates are added. The coefficient for the interaction term is significant, however. Justice-involved youth experience an associated one percent reduction in the odds of graduation for each day that they miss school due to their justice system involvement. There is no associated significant direct effect of justice system involvement on suspension in the 12th grade in these interaction models, but the direct effect of absence due to justice system involvement is associated with a very slight (less than one percent) increase in the odds of suspension. The interaction term here, however, is significant and negative in the final model. For each day that a justice-involved youth misses school due to their system involvement, they experience an associated one percent decrease in the risk of suspension from their justice system involvement, which contrasts the prior results that system involvement is associated with greater suspension risk. The results for postsecondary enrollment show that while justice system involvement alone is associated with a 34% decline in the odds of enrolling in postsecondary education, the direct effect coefficients for absence from system involvement and the interaction of these two variables are not significant once the covariates are added. Thus, the time one is absent from school due to system involvement does not appear to significantly impact the relationship between justice system involvement and postsecondary enrollment. The first part of Hypothesis 2, which states that the number of days a student is absent due to justice

system involvement would moderate the relationship between justice system involvement and the educational outcomes, is partially supported.

Table 14: Logistic Regression Results of Interaction Between Justice System Involvement and Absence Due to System Involvement for Graduation

VARIABLES	Bivariate	Education Covariates	All Covariates
Justice-Involved	0.530 (0.043)***	0.422 (0.033)***	0.419 (0.033)***
Absence due to Justice Involvement	0.994 (0.007)	0.995 (0.003)*	0.996 (0.003)
Justice-Involved x Absence from Justice	0.985 (0.010)	0.989 (0.005)**	0.989 (0.005)**
FRL			0.516 (0.062)***
Black			1.684 (0.244)***
AAPI			1.990 (0.896)
Indigenous			2.506 (0.927)**
Multiracial			1.573 (0.308)**
Hispanic			1.178 (0.222)
Male			0.468 (0.053)***
Special Education		0.855 (0.119)	0.977 (0.133)
Test Scores		2.138 (0.196)***	2.051 (0.177)***
Days Absent		0.988 (0.001)***	0.988 (0.0001)***
Ever Suspended		0.482 (0.038)***	0.505 (0.041)***
ELL		0.321 (0.093)***	0.394 (0.115)***
Constant	14.53 (0.551)***	43.72 (12.15)***	102.1 (31.65)***

Note: * $p < 0.10$ ** $p < 0.05$ *** $p < 0.01$. Results displayed as odds ratios with robust standard errors in parentheses. The second and third models include fixed effects for school district. $N = 57,776$. Observations are weighted by the inverse propensity score calculated from the graduation analysis from Question 1.

Table 15: Logistic Regression Results of Interaction Between Justice System Involvement and Absence Due to System Involvement for Suspension

VARIABLES	Bivariate	Education Covariates	All Covariates
Justice-Involved	1.116 (0.088)	0.956 (0.070)	0.961 (0.070)
Absence due to Justice Involvement	1.006 (0.004)	1.005 (0.003)**	1.005 (0.003)**
Justice-Involved x Absence from Justice	0.996 (0.006)	0.989 (0.005)**	0.987 (0.005)**
FRL			1.210 (0.092)**
Black			1.751 (0.155)***
AAPI			0.325 (0.104)***
Indigenous			0.877 (0.447)
Multiracial			1.007 (0.163)
Hispanic			1.052 (0.149)
Male			1.367 (0.091)***
Special Education		1.143 (0.098)	1.096 (0.094)
Test Scores		0.701 (0.032)***	0.748 (0.0343)***
Days Absent		0.999 (0.0004)**	0.999* (0.0004)
Ever Suspended		7.804 (0.524)***	6.691 (0.472)***
ELL		0.822 (0.186)	1.040 (0.271)
Constant	0.040 (0.001)***	0.026 (0.007)***	0.020 (0.005)***

Note: * $p < 0.10$ ** $p < 0.05$ *** $p < 0.01$. Results displayed as odds ratios with robust standard errors in parentheses. The second and third models include fixed effects for school district. N = 55,893. Observations are weighted by the inverse propensity score calculated from the suspension analysis from Question 1.

Table 16: Logistic Regression Results of Interaction Between Justice System Involvement and Absence Due to System Involvement for Postsecondary Enrollment

VARIABLES	Bivariate	Education Covariates	All Covariates
Justice-Involved	0.630 (0.041)***	0.661 (0.049)***	0.660 (0.049)***
Absence due to Justice Involvement	0.396 (0.173)**	1.002 (0.432)	1.067 (0.399)
Justice-Involved x Absence from Justice	2.480 (1.084)**	0.983 (0.424)	0.927 (0.346)
FRL			0.634 (0.051)***
Black			1.192 (0.132)
AAPI			2.546 (0.868)***
Indigenous			2.496 (0.585)***
Multiracial			1.485 (0.329)*
Hispanic			0.785 (0.111)*
Male			0.457 (0.038)***
Special Education		0.468 (0.078)***	0.529 (0.090)***
Test Scores		2.246 (0.150)***	2.134 (0.145)***
Days Absent		0.990 (0.001)***	0.989 (0.001)***
Ever Suspended		0.580 (0.033)***	0.630 (0.036)***
ELL		0.597 (0.228)	0.723 (0.269)
Constant	3.491 (0.057)***	2.707 (0.512)***	5.187 (1.009)***

Note: * $p < 0.10$ ** $p < 0.05$ *** $p < 0.01$. Results displayed as odds ratios with robust standard errors in parentheses. The second and third models include fixed effects for school district. N = 54,140. Observations are weighted by the inverse propensity score calculated from the postsecondary enrollment analysis from Question 1.

I next estimated the interaction between justice system involvement and the total amount of time an adolescent is absent during high school. Tables 17-19 show the logistic regression results for the graduation, suspension, and postsecondary outcomes, respectively. The direct effect of school absence in each of the models for the three outcomes is associated with worse outcomes (lower odds of graduation and postsecondary enrollment and higher odds of suspension), which aligns with prior research (e.g., Tash, 2018). Each day of absence by itself is associated with a one percent decline in the odds of graduating. Justice system involvement itself is associated with a 47% decline in the odds of graduating. The interaction term is also significant, though each day of absence is associated with a less than one percent decline in the odds of graduating for justice-involved youth. Youth who are justice-involved (the direct effect) have over two times the odds of suspension in the 12th grade, but neither the coefficient for school absence alone nor the interaction term are significant. Justice-involved youth also had an associated 34% decline in the odds of postsecondary enrollment (the direct effect), but again, the coefficients for absence alone and for the interaction term are not significant. The second part of Hypothesis 2, which states that justice system involvement would moderate the relationship between total school absence and educational outcomes, is supported only for the graduation outcome.

Table 17: Logistic Regression Results of Interaction Between Justice System Involvement and All School Absence for Graduation

VARIABLES	Bivariate	Education Covariates	All Covariates
Justice-Involved	0.562 (0.087)***	0.541 (0.088)***	0.533 (0.085)***
Days Absent	0.987 (0.001)***	0.989 (0.001)***	0.989 (0.001)***
Justice-Involved x Days Absent	0.997 (0.002)*	0.997 (0.002)*	0.997 (0.002)*
FRL			0.519 (0.062)***
Black			1.684 (0.245)***
AAPI			2.010 (0.903)
Indigenous			2.589 (0.942)***
Multiracial			1.578 (0.309)**
Hispanic			1.177 (0.223)
Male			0.467 (0.053)***
Special Education		0.855 (0.119)	0.977 (0.133)
Test Scores		2.133 (0.195)***	2.048 (0.176)***
Absence from Justice		0.985 (0.004)***	0.985 (0.004)***
Ever Suspended		0.481 (0.038)***	0.504 (0.041)***
ELL		0.319 (0.091)***	0.393 (0.114)***
Constant	46.40 (4.933)***	38.80 (11.30)***	90.68 (28.87)***

Note: * $p < 0.10$ ** $p < 0.05$ *** $p < 0.01$. Results displayed as odds ratios with robust standard errors in parentheses. The second and third models include fixed effects for school district. $N = 57,776$. Observations are weighted by the inverse propensity score calculated from the graduation analysis from Question 1.

Table 18: Logistic Regression Results of Interaction Between Justice System Involvement and All School Absence for Suspension

VARIABLES	Bivariate	Education Covariates	All Covariates
Justice-Involved	2.177 (0.370)***	2.122 (0.374)***	2.148 (0.374)***
Days Absent	1.003 (0.0004)***	1.000 (0.001)	1.000 (0.001)
Justice-Involved x Days Absent	1.001 (0.001)	1.001 (0.001)	1.001 (0.001)
FRL			1.090 (0.214)
Black			1.418 (0.389)
AAPI			0.777 (0.530)
Indigenous			0.653 (0.361)
Multiracial			0.571 (0.152)**
Hispanic			0.683 (0.189)
Male			1.022 (0.175)
Special Education		1.119 (0.251)	1.100 (0.250)
Test Scores		0.695 (0.059)***	0.724 (0.066)***
Ever Suspended		4.522 (0.605)***	4.212 (0.535)***
ELL		0.551 (0.155)**	0.795 (0.242)
Constant	0.028 (0.001)***	0.021 (0.010)***	0.020 (0.010)***

Note: * $p < 0.10$ ** $p < 0.05$ *** $p < 0.01$. Results displayed as odds ratios with robust standard errors in parentheses. The second and third models include fixed effects for school district. $N = 55,893$. Observations are weighted by the inverse propensity score calculated from the suspension analysis from Question 1.

Table 19: Logistic Regression Results of Interaction Between Justice System Involvement and All School Absence – Postsecondary Enrollment

VARIABLES	Bivariate	Education Covariates	All Covariates
Justice-Involved	0.602 (0.073)***	0.644 (0.085)***	0.662 (0.087)***
Days Absent	0.986 (0.009)***	0.990 (0.001)***	0.990 (0.001)***
Justice-Involved x Days Absent	1.002 (0.002)	1.000 (0.002)	1.000 (0.0017)
FRL			0.631*** (0.051)
Black			1.187 (0.131)
AAPI			2.551 (0.870)***
Indigenous			2.504 (0.587)***
Multiracial			1.487 (0.330)*
Hispanic			0.785 (0.111)*
Male			0.454 (0.038)***
Special Education		0.471 (0.078)***	0.532 (0.090)***
Test Scores		2.251 (0.151)***	2.137 (0.145)***
Ever Suspended		0.577 (0.033)***	0.629 (0.036)***
ELL		0.599 (0.228)	0.725 (0.269)
Constant	7.170 (0.300)***	2.728 (0.526)***	5.192 (1.029)***

Note: * $p < 0.10$ ** $p < 0.05$ *** $p < 0.01$. Results displayed as odds ratios with robust standard errors in parentheses. The second and third models include fixed effects for school district. $N = 54,140$. Observations are weighted by the inverse propensity score calculated from the postsecondary enrollment analysis from Question 1.

I also explored whether the impact of absence due to justice system involvement on the relationship between system involvement and the outcomes may differ based on one’s level of justice system involvement. These models restricted the sample to youth who have been justice-involved and estimated the interaction between the highest level of one’s system involvement and the number of days the student was missing from school for that system involvement. These results are shown in Table 20. For the direct effects, only residential (out-of-community) placement is significantly associated with two of the educational outcomes. Youth who are residentially placed experience an associated 72% lower odds of graduating and 30% lower odds of postsecondary enrollment compared to youth whose highest level of involvement is arrest. The coefficients for the direct effect of days absent due to system involvement are not significant in these models. Only two of the interaction terms are statistically significant. Youth who are adjudicated experience an associated 18% decline in the odds of enrolling in postsecondary

education for each day they are absent due to justice system involvement. Youth who are residentially (out-of-community) placed experience an associated 9% increase in the odds of suspension in the 12th grade for each day they are absent due to justice system involvement. Overall, absence due to justice system involvement mostly does not moderate the relationship between the level of one’s justice system involvement and the educational outcomes.

Table 20: Logistic Regression Results of Interaction between Level of System Involvement and Days Absent Due to Justice Involvement

VARIABLES	Graduation	Suspension	Postsecondary
Adjudication	0.923 (0.135)	0.879 (0.198)	1.034 (0.180)
Nonresidential Placement	0.861 (0.110)	1.013 (0.163)	1.035 (0.141)
Residential Placement	0.280 (0.034)***	0.721 (0.159)	0.700 (0.119)**
Days Absent Due to Justice System	1.002 (0.024)	1.000 (0.021)	1.026 (0.038)
Adjudication x Days Absent Justice	0.886 (0.084)	1.076 (0.185)	0.816 (0.087)*
Nonresidential x Days Absent Justice	0.915 (0.057)	1.088 (0.038)**	0.907 (0.083)
Residential x Days Absent Justice	0.994 (0.024)	0.992 (0.021)	0.973 (0.036)
FRL	0.588 (0.061)***	0.904 (0.131)	0.641 (0.057)***
Black	2.197 (0.252)***	1.771 (0.319)***	1.384 (0.156)***
AAPI	2.004 (0.754)*	1.028 (0.681)	2.613 (0.924)***
Indigenous	10.87 (12.29)**	1.379 (1.162)	1.281 (0.507)
Multiracial	1.493 (0.287)**	1.024 (0.327)	1.653 (0.332)**
Hispanic	1.669 (0.284)***	1.517 (0.403)	0.990 (0.169)
Male	0.534 (0.050)***	1.320 (0.172)**	0.464 (0.040)***
Special Education	1.000 (0.109)	1.069 (0.166)	0.513 (0.068)***
Test Scores	1.746 (0.097)***	0.952 (0.071)	1.792 (0.127)***
Days Absent	0.992 (0.001)***	1.000 (0.001)	0.994 (0.001)***
Ever Suspended	0.618 (0.059)***	4.088 (0.715)***	0.611 (0.054)***
ELL	0.459 (0.144)**	0.939 (0.478)	0.650 (0.280)
Constant	30.90 (9.928)***	0.038 (0.021)***	3.220 (0.840)***
Observations	4,302	2,425	3,128

Note: * $p < 0.10$ ** $p < 0.05$ *** $p < 0.01$. Includes fixed effects for School District. Results are displayed as odds ratios with robust standard errors in parentheses. The samples only include those who were justice-involved (having had at least one instance of contact with the Department of Juvenile Services while in high school). The model predicting suspension outcomes excludes those who were justice-involved during their last year to maintain temporal order. The model predicting postsecondary outcomes excludes those who did not graduate.

4.5 How the Impact of Justice System Involvement Varies by Race and Sex

4.5.1 Stratification by Race

Question 3 asks whether that the impact of justice system involvement will vary based on an individual's race, sex, and race-sex. Table 21 shows the results for propensity score matching models stratified by race for each of the three outcomes, and Appendix B6 shows the balance tables for these models. For Indigenous and multiracial youth, some of the covariates did not achieve balance under the 0.2 standardized difference rule, so I am hesitant to interpret those results as having causal inference. The magnitude of the estimated impact of justice system involvement does appear to differ between youth of different racial identities. Justice system involvement is associated with a twelve percentage point decrease in the likelihood of graduating among White youth and a thirteen percentage point decrease in the likelihood of graduating among Black youth. Multiracial youth have an associated seventeen percentage point decrease in the likelihood of graduating, and Hispanic youth have an associated six percentage point decrease in the likelihood of graduating. The coefficient for Indigenous youth is not significant. Thus, multiracial and Black youth appear to experience larger impacts of justice system involvement on their likelihood of graduating when compared to youth of other racial identities.

The pattern of results slightly differ for the suspension outcome. White youth have an associated four percentage point increase in their likelihood of suspension due to justice system involvement, and Black youth have an associated three percentage point increase. Hispanic and AAPI youth have the largest associated increase in the likelihood of suspension following system involvement of eight percentage points each. Hispanic and AAPI youth are generally less likely to be suspended compared to White and Black youth (see Descriptive Statistics by Race – Table 7) but experienced the larger impact sizes of justice system involvement on their likelihood of suspension compared to other youth.

The results for postsecondary enrollment show a less clear pattern. Hispanic youth have an associated eleven percentage point decrease in the likelihood of postsecondary enrollment due to justice system involvement. Among White youth, justice system involvement is associated with an eight percentage point decrease in the likelihood of postsecondary enrollment. Black youth experience an associated six percentage point decrease in the likelihood of postsecondary enrollment due to justice system involvement. The coefficient for the association between justice system involvement and postsecondary enrollment is not significant among Indigenous and multiracial youth. Hispanic youth are less likely to enroll in postsecondary education than White youth (see Descriptive Statistics) but have a larger estimated treatment effect of justice system involvement on this outcome. However, Black youth are also less likely to enroll in postsecondary education than White youth, but the magnitude of the impact of system involvement is smaller compared to White youth.

Table 21: ATET Estimates by Race

Race	Graduation	N	Suspension	N	Postsecondary	N
White	-0.124 (0.015)***	2768	0.043 (0.017)***	1412	-0.077 (0.020)***	2106
Black	-0.128 (0.013)***	4512	0.033 (0.015)**	2704	-0.059 (0.019)***	3170
AAPI ⁺	-0.091 (0.051)*	132	0.088 (0.049)*	68	-0.107 (0.056)*	112
Indigenous ⁺	0.031 (0.082)	64	0.063 (0.061)	32	-0.067 (0.066)	60
Multiracial ⁺	-0.169 (0.035)***	402	0.061 (0.037)	230	-0.026 (0.063)	306
Hispanic	-0.063 (0.031)**	726	0.081 (0.031)***	418	-0.102 (0.043)**	502

Note: ⁺The groups are not sufficiently balanced under the 0.2 standardized difference rule. The standardized differences and variance ratios for each group are shown in Appendix 6. * p < 0.10
 ** p < 0.05 *** p < 0.01. Results shown as ATET (Robust SE).

The ATET measures the average treatment effect on the treated of justice system involvement on the likelihood of graduating after matching. The ATET estimates represents the difference in the percentage points of the likelihood of experiencing the outcome for justice-involved youth compared to non-justice-involved youth of the same race, sex, or race-sex identity.

The matching covariates include school district, sex, race, suspension (for the suspension outcome, this includes only suspensions from grades 9-11), special education status, free or reduced lunch status, English Language Learner status, test scores, and total days absent.

I ran a comparison of means test to compare the estimated average treatment effects by racial identity group. I estimated the treatment effect for each individual within their own racial group and used those to generate an average treatment effect within each racial identity group. I then ran t-tests to test the significance of the difference in the average of these estimated treatment effects between White youth and the other racial identities. The difference in the predicted average treatment effects on the treated for the graduation outcome between White youth and Black youth (difference of 0.004 percentage points), White and AAPI youth (difference of 0.03 percentage points), and White and Hispanic youth (difference of 0.06 percentage points) are all statistically significant at a 95% confidence level. For the suspension outcome, White and Black (difference of 0.01 percentage points), White and AAPI (difference of

0.04 percentage points), and White and Hispanic youth (difference of 0.04 percentage points) all had statistically significant differences in their predicted treatment effects. White and Black (difference of 0.018 percentage points), White and AAPI (difference of 0.03 percentage points), and White and Hispanic youth (difference of 0.025 percentage points) all differed significantly in their estimated treatment effects on postsecondary enrollment. Hypothesis 3 in reference to the difference in the impact of justice system involvement on the three educational outcomes between youth in different racial identity groups is thus partially supported.

4.5.2 Stratification by Sex

Table 22 shows the ATET estimates for the three outcomes stratified by sex, and the balance tables are shown in Appendix B7. The covariates are balanced across all models. The relationship between justice system involvement and the three outcomes is significant for both female and male youth. Justice system involvement is associated with a seven percentage point decrease for girls and a fourteen percentage point decrease for boys in the likelihood of graduating. Girls experience an associated five percent increase in the likelihood of suspension in the 12th grade due to justice system involvement while boys experience an associated four percent increase. Justice system involvement is also associated with a five percentage point decrease in the likelihood of postsecondary enrollment for girls and a nine percentage point decrease in the likelihood of postsecondary enrollment for boys. The t-tests comparing the estimated average treatment effects for boys and girls show that for all three outcomes, the differences in the predicted average treatment effects are statistically significant (the difference for graduation was 0.073 percentage points, for suspension was 0.008 percentage points, and for postsecondary enrollment was 0.035 percentage points). Boys are generally less likely to

graduate and enroll in postsecondary education than girls (see Table 8) and experience a larger estimated impact of justice system involvement on these two outcomes. Girls are less likely to be suspended in the 12th grade than boys, yet they experience a slightly larger estimated impact of justice system involvement on this outcome compared to boys. Thus, Hypothesis 3 is supported in reference to the differences in the average treatment effect estimates by sex, but the direction of these differences is not consistent across outcomes.

Table 22: ATET Estimates by Sex

Sex	Graduation	N	Suspension	N	Postsecondary	N
Female	-0.068 (0.013)***	2936	0.048 (0.016)***	1810	-0.051 (0.020)**	2386
Male	-0.141 (0.012)***	5668	0.040 (0.014)***	3054	-0.086 (0.016)***	3870

Note: The standardized differences and variance ratios for each group are shown in Appendix 6. * $p < 0.10$ ** $p < 0.05$ *** $p < 0.01$. Results displayed as ATET (Robust SE).

The ATET measures the average treatment effect on the treated of justice system involvement on the likelihood of suspension after matching. The ATET estimates represents the difference in the percentage points of the likelihood of experiencing the outcome for justice-involved youth compared to non-justice-involved youth of the same race, sex, or race-sex identity.

The matching covariates include school district, sex, race, suspension (for the suspension outcome, this includes only suspensions from grades 9-11), special education status, free or reduced lunch status, English Language Learner status, test scores, and total days absent.

4.5.3 Stratification by Race-Sex

Table 23 shows the ATET estimates for the three outcomes stratified by the combined race and sex measure, and the balance tables are shown in Appendix B8. Not all race-sex groups achieved balance across their groups, which is noted in Table 23, so I hesitate to interpret the ATET estimates for those groups as having causal inference. However, they are still informative for descriptive comparisons across groups. All White youth, Black boys, AAPI boys, all multiracial youth, and Hispanic boys have significant and negative coefficients estimating the

average treatment effect of justice system involvement on graduation. The estimated average treatment effect of justice system involvement on the likelihood of graduating is greatest for multiracial boys with an associated twenty-four percentage point decrease. Within the same racial groups, girls either had smaller or nonsignificant estimated average treatment effects of justice system involvement on graduation, which suggests that being a girl may be protective against some of the racialized impacts of system involvement on education.

White girls and Hispanic boys are the only groups for whom the average treatment effect of justice system involvement is significantly associated with suspension at the 95% confidence level. For White girls, justice system involvement is associated with a five percentage point increase in the likelihood of suspension. For Hispanic boys, justice system involvement is associated with an eleven percentage point increase in the likelihood of suspension in the 12th grade. White boys and Black girls had estimates that were marginally significant ($p < 0.10$). Here we see that in general, those who are less likely to be suspended (e.g., White and Hispanic youth) experienced the greater estimated impacts of system involvement on suspension.

The coefficient for the average treatment effect of justice system involvement on postsecondary enrollment is significant at a 95% confidence level for all White youth and Black boys. White girls and White boys both have an associated seven percentage point decrease in the likelihood of postsecondary enrollment due to justice system involvement. Black boys have an associated nine percentage point decrease in the likelihood of postsecondary enrollment due to justice system involvement. The coefficients of the estimated average treatment effects are marginally significant ($p < 0.10$) for AAPI boys, Indigenous girls, and all Hispanic youth. There are less clear patterns of the impact of justice system involvement on postsecondary enrollment across groups. For example, AAPI youth are the group most likely to enroll in postsecondary

education (see Descriptive Statistics), and AAPI boys, but not girls, experienced a decline in the likelihood of postsecondary enrollment. Black and Hispanic youth are overall less likely to enroll in postsecondary education than their peers, but the magnitude of the impact is not the same among Black boys and girls and Hispanic boys and girls.

Justice system involvement tends to be associated with treatment effects of greater magnitude for boys compared to girls, especially for Black, AAPI, and multiracial boys. Being a girl could be somewhat protective in terms of graduation and postsecondary enrollment but not for suspension. For example, the average treatment effect of justice system involvement on the likelihood of suspension is of a higher magnitude for White girls compared to White boys, but the average treatment effect of justice involvement on the likelihood of graduation and postsecondary enrollment is of a higher magnitude for White boys compared to White girls. Thus, in some instances, justice system involvement may be more detrimental to those who are more likely to be in the system (e.g., boys experience worse impacts on graduation) but in other instances may be more detrimental to those who are less likely to be system-involved (e.g., girls experience worse impacts on suspension).

Table 23: ATET Estimates by Race and Sex

Race-Sex	Graduation	N	Suspension	N	Postsecondary	N
White Girls	-0.109 (0.024)***	900	0.052 (0.023)**	458	-0.073 (0.035)**	716
White Boys	-0.126 (0.019)***	1868	0.039 (0.022)*	954	-0.074 (0.024)***	1390
Black Girls	-0.052 (0.019)***	1544	0.046 (0.024)*	1046	-0.015 (0.029)	1260
Black Boys	-0.166 (0.018)***	2968	0.025 (0.0020)	1658	-0.094 (0.025)***	1910
AAPI Girls ⁺	-0.048 (0.046)	42	0.067 (0.064)	30	-0.150 (0.146)	40
AAPI Boys ⁺	-0.156 (0.065)**	90	0.105 (0.070)	38	-0.111 (0.057)*	72
Indigenous Girls ⁺	0.095 (0.204)	42	0.167 (0.108)	24	-0.150 (0.090)*	40
Indigenous Boys ⁺	-0.091 (0.087)	22	--	--	-0.100 (0.170)	20
Multiracial Girls ⁺	-0.115 (0.044)***	192	-0.020 (0.040)	118	-0.048 (0.075)	166
Multiracial Boys ⁺	-0.238 (0.052)***	210	0.089 (0.067)	112	-0.029 (0.090)	140
Hispanic Girls	-0.056 (0.052)	216	0.045 (0.052)	134	-0.122 (0.074)*	164
Hispanic Boys ⁺	-0.067 (0.039)*	510	0.106 (0.038)***	284	-0.086 (0.051)*	338

Note: ⁺The groups are not sufficiently balanced under the 0.2 standardized difference rule. The standardized differences and variance ratios for each group are shown in Appendix 6. * $p < 0.10$ ** $p < 0.05$ *** $p < 0.01$. Results displayed as ATET (Robust SE).

The ATET measures the average treatment effect on the treated of justice system involvement on the likelihood of postsecondary enrollment after matching. The ATET estimates represents the difference in the percentage points of the likelihood of experiencing the outcome for justice-involved youth compared to non-justice-involved youth of the same race, sex, or race-sex identity.

The matching covariates include school district, sex, race, suspension (for the suspension outcome, this includes only suspensions from grades 9-11), special education status, free or reduced lunch status, English Language Learner status, test scores, and total days absent.

I also tested the difference of the predicted average treatment effects between boys and girls within the same racial identity using t-tests. The difference in the average treatment effects of justice system involvement on the likelihood of graduation is statistically significant between White boys and girls (difference of 0.017 percentage points), Black boys and girls (difference of 0.11 percentage points), AAPI boys and girls (difference of 0.11 percentage points), Multiracial boys and girls (difference of 0.12 percentage points), and Hispanic boys and girls (difference of 0.011 percentage points). The difference in average treatment effects of justice system involvement on the likelihood of suspension is statistically significant between White boys and girls (difference of 0.013 percentage points) and Hispanic boys and girls (difference of 0.061 percentage points). Lastly, the difference in the average treatment effects of justice system involvement on the likelihood of postsecondary enrollment is statistically significant between Black boys and girls (difference of 0.079 percentage points) and AAPI boys and girls (difference of 0.036 percentage points). Thus, Hypothesis 3 in reference to race-sex differences is partially supported in that the ATET estimates differ between boys and girls of some racial identity groups but not others.

4.6 Supplemental Analyses

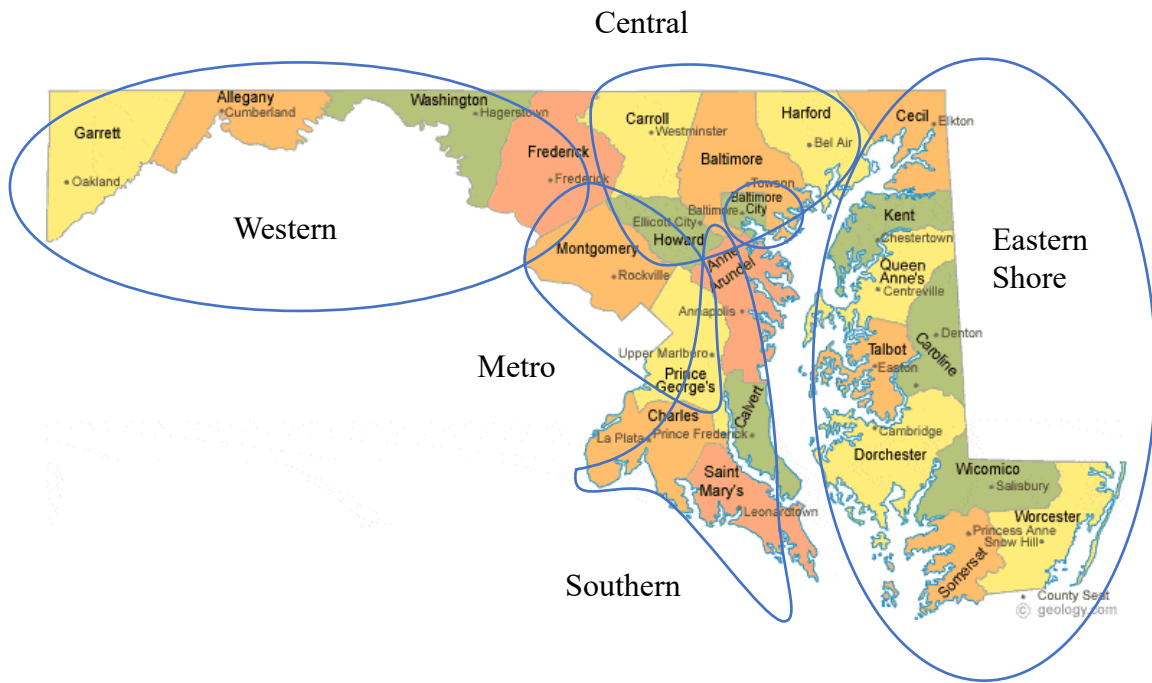
4.6.1 Robustness Checks

I conducted two robustness checks. First, I reran the initial propensity score models without replacement to test if my results rely on the matching process being with replacement. I found that my estimates do not substantively change when compared to the initial models. In the models run without replacement, justice system involvement is associated with an eleven percentage point decrease in the likelihood of graduation, a 3.5 percentage point increase in the

likelihood of graduation, and a seven percentage point decrease in the likelihood of postsecondary enrollment. The number of matched pairs did not change, which means that each treated individual had a corresponding control individual even when the previously matched control observations were not replaced. The standard errors are slightly smaller for the estimates that came from the non-replacement models compared to the standard errors that came from the replacement models. However, these changes in the point estimates and standard errors do not lead to different conclusions.

I also conducted the first set of analyses with a coarsened division of counties (school districts) by regions because some of the models for the individual school districts did not reach sufficient balance. Figure 6 shows a map of the counties of Maryland and their corresponding regions. I selected these regions to match the regions of counties within which the Department of Juvenile Services operates.

Figure 6: County Map of Maryland with DJS Regions Labeled



Note: County map sourced from the Maryland Office of Tourism (n.d.).

Table 24 shows the average treatment effects for graduation, suspension, and postsecondary enrollment stratified by those regions. The balance tables for these analyses are shown in Appendix B9. Using the regions of school districts rather than the individual school districts did improve the balance of the covariates for the geographic region comparisons. Most of the regions have similar coefficient estimates for the average treatment effect of justice system involvement on graduation; justice system involvement is associated with an eleven percentage point decrease in the likelihood of graduating for the Baltimore City, Eastern Shore, Metro, and Southern districts. Justice system involvement is associated with a fifteen percentage point decrease in the likelihood of graduating for youth in the Western region and a nine percentage point decrease in the likelihood of graduating for youth in the Central region. The coefficient for the average treatment effect of justice system involvement on suspension is only statistically significant for the model that includes youth within the Central region; here justice system involvement is associated with a four percentage point increase in the likelihood of suspension. However, the Central region is the only one in which the average treatment effect of justice system involvement was not significantly related to the likelihood of postsecondary enrollment. Justice system involvement is associated with a nine percentage point decrease in the likelihood of postsecondary enrollment in Baltimore City, which was the largest effect size across the regions. Justice system involvement is associated with a seven percentage point decrease in postsecondary enrollment for youth in the Metro area, which is the coefficient with the smallest magnitude. These analyses do reach better covariate balance than the individual district models and confirm that the impact of justice system involvement on one's educational outcomes may vary by geographic region.

Table 24: ATET Estimates by DJS Region

District	Graduation	N	Suspension	N	Postsecondary	N
Baltimore City	-0.111 (0.030)***	1132	0.005 (0.021)	788	-0.091 (0.038)**	668
Central	-0.091 (0.018)***	2204	0.039 (0.023)***	1226	-0.025 (0.025)	1650
Eastern	-0.114 (0.028)***	1032	0.018 (0.042)	570	-0.083 (0.038)**	650
Metro	-0.110 (0.022)***	1698	0.020 (0.025)	974	-0.069 (0.028)**	1200
Southern	-0.117 (0.018)***	1930	0.032 (0.023)	1022	-0.075 (0.025)***	1530
Western	-0.152 (0.032)***	604	0.043 (0.040)	280	-0.090 (0.044)**	458

Note: ⁺Indicates that at least one model did not achieve balance according to the 0.2 standardized difference threshold. * $p < 0.10$ ** $p < 0.05$ *** $p < 0.01$. Note: *** $p < 0.01$. Results displayed as the ATET with robust standard errors in parentheses. The ATET measures the average treatment effect on the treated of justice system involvement on experiencing each of the three outcomes after matching. The ATET estimates represents the difference in the percentage points of the likelihood of experiencing the outcome for justice-involved youth compared to non-justice-involved youth within the same region. The matching covariates include school district, sex, race, suspension (for the suspension outcome, this includes only suspensions from grades 9-11), special education status, free or reduced lunch status, English Language Learner status, test scores, and total days absent.

4.6.2 Sensitivity Analyses

My sensitivity analyses tested the relationship between justice system involvement and these educational outcomes with different specifications of my primary independent and dependent variables.

Timing of Justice System Involvement To test the potential differences in the impact of justice system involvement on the outcomes based on the timing of system contact, I estimated both the last semester and last year in which an adolescent experienced justice system contact and ran a logistic regression using this timing variable as a factor variable. Thus, I could see the association between the last semester or year of one's involvement and experiencing the three outcomes. The matching covariates are included as control variables in these models. Table 25 shows the results of logistic regression analyses with the independent variable being the last semester in which youth were justice-involved. The comparison group is youth who were not justice-involved. While experiencing justice system involvement is deleterious at any point

during high school, including in the first semester, the odds of graduating tend to decrease as the last semester of one’s justice system involvement increases. For example, being justice-involved in one’s 8th semester of high school is associated with an 85% reduction in the odds of graduating compared to youth who were not justice-involved. For suspension, only justice system involvement within the first two years of high school is associated with an increase in the odds of 12th grade suspension. Justice system involvement that occurs later in one’s high school career is associated with decreases in the odds of postsecondary enrollment. For example, having one’s last instance of justice system involvement occur in their 7th semester of high school is associated with a 35% decrease in the odds of enrolling in postsecondary education.

Table 25: Logistic Regression Results for the Timing of System Involvement by Semesters

Last Semester of System Involvement	Graduation	Suspension	Postsecondary
1 st	0.439 (0.071) ***	1.686 (0.262) ***	0.794 (0.112)
2 nd	0.410 (0.053) ***	1.524 (0.215) ***	0.658 (0.083) ***
3 rd	0.447 (0.053) ***	1.595 (0.221) ***	0.784 (0.092) **
4 th	0.410 (0.048) ***	1.595 (0.215) ***	0.808 (0.089) *
5 th	0.480 (0.054) ***	1.490 (0.366)	0.792 (0.078) **
6 th	0.391 (0.046) ***	1.077 (0.318)	0.056 (0.541) ***
7 th	0.265 (0.049) ***	0.843 (0.483)	0.649 (0.137) **
8 th	0.152 (0.055) ***	0.952 (0.762)	0.690 (0.383)
9 th	0.140 (0.065) ***	--	0.171 (0.121) **
10 th	0.409 (0.883)	12.28 (13.78) ***	--
Controls	YES	YES	YES
Constant	121.5 (25.65)***	0.017 (0.004) ***	5.151 (0.516) ***
N	57,135	55,264	53,622

Note: * $p < 0.10$ ** $p < 0.05$ *** $p < 0.01$. Results are displayed as odds ratios with robust standard errors in parentheses. The symbol – indicates that the estimate could not be produced because none of the youth had 9th and 10th semesters of system involvement within those specific analytic samples. The comparison group is youth who were not justice-involved. The control variables include school district, sex, race, suspension (for the suspension outcome, this includes only suspensions from grades 9-11), special education status, free or reduced lunch status, English Language Learner status, test scores, and total days absent.

Table 26 shows the same analysis but uses the last year in which an adolescent is involved in the justice system as the primary independent variable. This is a coarser measure of timing of system involvement that may pick up on a clearer pattern of how the timing of system involvement may be related to one's educational outcomes. These models confirm the pattern shown in the preceding semester-timing models in which justice system involvement that occurs later in one's high school career is associated with lower odds of graduating and postsecondary enrollment, but only justice system involvement within the first two years of high school is associated with higher odds of suspension in the 12th grade. One's last instance of system involvement occurring in the fourth year of high school is associated with a 76% decrease in the odds of graduating compared to those who are not justice involved. Justice system involvement in the first or second year is associated with a roughly 59% increase in the odds of suspension. Lastly, justice system involvement in one's fourth year is associated with a 35% decrease in the odds of enrolling in postsecondary education. Overall, the timing of justice system involvement may matter in this relationship with later justice system involvement being more impactful on graduation and postsecondary enrollment and early justice system involvement being more impactful on suspension.

Table 26: Logistic Regression Results for the Timing of System Involvement by Years

Last Year of System Involvement	Graduation	Suspension	Postsecondary
1 st	0.422 (0.044) ***	1.592 (0.174) ***	0.714 (0.068) ***
2 nd	0.427 (0.037) ***	1.595 (0.163) ***	0.797 (0.065) ***
3 rd	0.435 (0.037) ***	1.304 (0.253)	0.663 (0.049) **
4 th	0.238 (0.039) ***	0.876 (0.412)	0.654 (0.129) **
5 th	0.160 (0.075) ***	1.101 (1.693)	0.163 (0.114) ***
Controls	YES	YES	YES
Constant	120.1 (25.24) ***	0.017 (0.004) ***	5.128 (0.512) ***
N	57,135	55,267	53,624

Note: * $p < 0.10$ ** $p < 0.05$ *** $p < 0.01$. Results are displayed as odds ratios with robust standard errors in parentheses. The comparison group is youth who were not justice-involved. The control variables include school district, sex, race, suspension (for the suspension outcome, this includes only suspensions from grades 9-11), special education status, free or reduced lunch status, English Language Learner status, test scores, and total days absent.

I also repeated the model testing the timing of system involvement in semesters after restricting my sample to only those who had been justice-involved. Restricting the sample to only justice-involved reduces the external validity of these results but may provide more precise estimates because the models do not have to account for the intrinsic differences between justice-involved and non-justice-involved youth. These results are shown in Table 27. Those who were only justice-involved in their first semester acted as the comparison group. Youth who were last involved in the justice system in their 8th and 9th semesters of high school had over 60% lower odds of graduating from high school compared to those whose only system involvement occurred in their first semester. Those whose last involvement in the justice system was in their 9th semester had twelve times greater odds of suspension in their last year and 75% lower odds of enrolling in postsecondary education than youth whose involvement was in their first year. In these models, only those who were justice-involved in their 9th semester (the fall of one's fifth year) experienced a significant association between system involvement and suspension. Compared to justice system involvement in one's first semester of high school, there are fewer

semesters in which there is a significant association between the timing of system involvement and the three outcomes, but in general, later system involvement is associated with lower odds of graduating and postsecondary enrollment.

Table 27: Logistic Regression Results for the Timing of System Involvement with Only Justice-Involved Youth

Last Semester of System Involvement	Graduation	Suspension	Postsecondary
2 nd	0.931 (0.161)	0.948 (0.182)	0.814 (0.137)
3 rd	0.986 (0.163)	1.015 (0.194)	0.986 (0.162)
4 th	0.944 (0.156)	0.980 (0.184)	1.028 (0.164)
5 th	1.126 (0.186)	1.032 (0.274)	1.031 (0.160)
6 th	0.947 (0.158)	0.674 (0.383)	0.742 (0.118)*
7 th	0.634 (0.132)**	0.859 (0.647)	0.863 (0.193)
8 th	0.359 (0.122)***	-	0.956 (0.502)
9 th	0.308 (0.140)***	12.06** (12.79)	0.251 (0.183)*
10 th	0.578 (1.021)	0.948 (0.182)	--
Controls	YES	YES	YES
Constant	34.25 (12.00)***	0.043 (0.023)***	3.651 (1.036)***
N	4,299	2,421	3,124

Note: * $p < 0.10$ ** $p < 0.05$ *** $p < 0.01$. Results are displayed as odds ratios with robust standard errors in parentheses. These analyses only include youth who were justice-involved. The symbol – indicates that the estimate could not be produced because none of the youth had 8th and 10th semesters of system involvement within those specific analytic samples. The control variables include school district, sex, race, suspension (for the suspension outcome, this includes only suspensions from grades 9-11), special education status, free or reduced lunch status, English Language Learner status, test scores, and total days absent.

Number of Semesters of System Involvement I also estimated a possible dosage effect of justice system involvement by including the number of semesters one is justice-involved as a continuous independent measure. Table 28 shows the association between the number of semesters in which one is justice-involved and the three outcomes. Each subsequent semester one is involved in the justice system is associated with almost 40% lower odds of graduating, 13% greater odds in experiencing suspension in the 12th grade, and about 18% lower odds of enrolling in postsecondary education compared to youth who were not justice-involved.

Table 28: Logistic Regression Results for the Number of Semesters of System Involvement

VARIABLES	Graduation	Suspension	Postsecondary
Number of Semesters	0.622 (0.018)***	1.128 (0.047)***	0.816 (0.027)***
Male	0.583 (0.026)***	1.462 (0.074)***	0.483 (0.012)***
Black	1.952 (0.127)***	1.669 (0.119)***	1.418 (0.051)***
AAPI	3.134 (0.480)***	0.353 (0.087)***	2.920 (0.241)***
Indigenous	2.103 (0.760)**	0.966 (0.322)	2.373 (0.350)***
Multiracial	1.509 (0.176)***	1.014 (0.139)	1.792 (0.122)***
Hispanic	1.158 (0.085)**	1.016 (0.104)	0.965 (0.041)
FRL	0.579 (0.030)***	1.282 (0.074)***	0.622 (0.017)***
Special Education	1.162 (0.076)**	1.097 (0.079)	0.513 (0.020)***
Test Scores	2.122 (0.065)***	0.731 (0.025)***	2.275 (0.052)***
Days Absent	0.987 (0.0004)***	1.001 (0.0003)***	0.989 (0.0004)***
Suspended	0.495 (0.025)***	5.305 (0.299)***	0.582 (0.020)***
ELL	0.410 (0.033)***	1.026 (0.145)	0.421 (0.028)***
Constant	100.8 (19.82)***	0.017 (0.004)***	4.985 (0.492)***
Observations	57,776	55,893	54,140

Note: * $p < 0.10$ ** $p < 0.05$ *** $p < 0.01$. Results are displayed as odds ratios with robust standard errors in parentheses. The control variables include school district, sex, race, suspension (for the suspension outcome, this includes only suspensions from grades 9-11), special education status, free or reduced lunch status, English Language Learner status, test scores, and total days absent.

I also repeated the analyses solely among justice-involved youth with youth who only had one semester of system involvement acting as the comparison group. Because this sample is solely justice-involved youth, I wanted to show the possible unique impact of each subsequent semester of system involvement, so I included the number of semesters of involvement as a factor variable. These results are shown in Table 29. Any number of semesters of justice system involvement above one is associated with decreases in the odds of graduating, and the odds of graduating decrease further as one accumulates more semesters of system involvement. Having seven semesters of justice involvement is associated with 92% fewer odds of graduating than youth with one semester of justice system involvement. The association between the amount of system involvement in semesters and suspension is not significant. Lastly, those who had four semesters of system involvement had about 60% fewer odds of enrolling in postsecondary

enrollment than those who had one semester of justice system involvement, but this is the only number of semesters that is significantly related to postsecondary enrollment. Overall, the dosage of system involvement may matter in this relationship with each subsequent semester or year being associated with worse outcomes when compared to non-justice-involved youth. Among solely justice-involved youth, it appears as though the impact of system involvement on graduation is possibly dose responsive.

Table 29: Logistic Regression Results with Number of Semesters of System Involvement Among only Justice-Involved Youth

Number of Semesters of System Involvement	Graduation	Suspension	Postsecondary
2	0.732 (0.073)***	0.964 (0.156)	0.864 (0.094)
3	0.386 (0.054)***	1.057 (0.283)	0.901 (0.172)
4	0.271 (0.057)***	0.736 (0.349)	0.414 (0.145)**
5	0.184 (0.055)***	0.360 (0.375)	0.871 (0.491)
6	0.123 (0.063)***	0.555 (0.542)	0.494 (0.433)
7	0.083 (0.081)**	--	--
Controls	YES	YES	YES
Constant	35.93 (11.61)***	0.042 (0.022)***	3.323 (0.860)***
N	4,299	2,424	3,125

Note: * $p < 0.10$ ** $p < 0.05$ *** $p < 0.01$. Results are displayed as odds ratios with robust standard errors in parentheses. The comparison group is justice-involved youth who had only one semester of system involvement. The control variables include school district, sex, race, suspension (for the suspension outcome, this includes only suspensions from grades 9-11), special education status, free or reduced lunch status, English Language Learner status, test scores, and total days absent.

I also repeated this analysis with the number of years in which one experienced justice involvement, which is shown in Table 30. Each subsequent year of justice system involvement is associated with 53% lower odds of graduating, 32% greater odds of suspension, and 26% lower odds of enrolling in postsecondary education compared to youth who were not justice-involved. It thus appears that the relationship between justice system involvement and one's educational

outcomes may change based on the amount of time that one is involved in the system during high school.

Table 30: Logistic Regression Results with Number of Years of System Involvement

VARIABLES	Graduation	Suspension	Postsecondary
Number of Years	0.467 (0.021)***	1.315 (0.084)***	0.744 (0.033)***
Male	0.583 (0.026)***	1.455 (0.074)***	0.483 (0.012)***
Black	1.945 (0.126)***	1.661 (0.119)***	1.419 (0.051)***
AAPI	3.105 (0.475)***	0.353 (0.087)***	2.919 (0.241)***
Indigenous	2.113 (0.771)**	0.970 (0.322)	2.373 (0.350)***
Multiracial	1.513 (0.176)***	1.009 (0.138)	1.792 (0.122)***
Hispanic	1.149 (0.084)*	1.017 (0.104)	0.965 (0.041)
FRL	0.582 (0.031)***	1.276 (0.073)***	0.622 (0.017)***
Special Education	1.153 (0.075)**	1.098 (0.079)	0.512 (0.020)***
Test Scores	2.121 (0.065)***	0.732 (0.025)***	2.275 (0.052)***
Days Absent	0.987 (0.0004)***	1.001 (0.0003)***	0.989 (0.0004)***
Suspension	0.507 (0.026)***	5.187 (0.295)***	0.585 (0.020)***
ELL	0.406 (0.033)***	1.035 (0.146)	0.421 (0.028)***
Constant	104.0 (20.41)***	0.017 (0.004)***	5.009 (0.494)***
Observations	57,776	55,893	54,140

Note: * $p < 0.10$ ** $p < 0.05$ *** $p < 0.01$. Results are displayed as odds ratios with robust standard errors in parentheses. The comparison group is youth who were not justice-involved. The control variables include school district, sex, race, suspension (for the suspension outcome, this includes only suspensions from grades 9-11), special education status, free or reduced lunch status, English Language Learner status, test scores, and total days absent.

Variations of the Dependent Variable Next, I explored how justice system involvement is related to different aspects of graduation, suspension, and postsecondary enrollment. Table 31 shows these results. First is whether justice-involved youth are more likely to experience delayed graduation (graduating after four years of high school) than their peers. Justice system involvement is associated with approximately 32% higher odds of experiencing a delayed graduation compared to their non-justice-involved peers. Next, I looked at the likelihood of earning a GED rather than a high school diploma for justice-involved youth. Youth who are justice-involved have almost three times the odds of earning a GED than non-justice-involved youth. I also assessed whether there is an association between length of removal for suspensions

and justice system involvement among all youth who were suspended during the 12th grade, but there is no significant association between justice system involvement and the length of one’s removal for suspension. Lastly, I assessed how justice involvement may be related to the type of degree one seeks in their postsecondary education. Justice-involved youth have fourteen percent lower odds of enrolling in the next highest degree program (e.g., moving from Associate’s to Bachelor’s) compared to non-justice-involved youth seeking the next highest degree.

Table 31: Regression Results for Variations of the Dependent Variables

Variable	Delayed Graduation	GED	Days Removed	Degree Sought
Justice-Involved	1.315 (0.142) **	2.980 (0.319) ***	0.778 (0.875)	0.863 (0.032)***
Controls	YES	YES	YES	YES
Constant	0.001 (0.0004) ***	0.002 (0.001) ***	1.469 (1.072)	--
Cut 1				0.033 (0.007)***
Cut 2				0.219 (0.044)***
Cut 3				0.655 (0.132)
N	53,876	57,776	1,740	42,596

Note: * p < 0.10 ** p < 0.05 * p < 0.01. Columns 1 and 2 are odds ratios with robust standard errors in parentheses. The delayed graduation model includes all youth who graduated and did not earn a GED. Column 3 includes those who were suspended in the 12th grade and are the results of an OLS model with standard errors in parentheses. Column 4 shows the results of an ordered logistic regression in odds ratios with standard errors in parentheses and includes those who enrolled in postsecondary education.

The control variables include school district, sex, race, suspension (for the suspension outcome, this includes only suspensions from grades 9-11), special education status, free or reduced lunch status, English Language Learner status, test scores, and total days absent.

These supplemental analyses provide more context to the relationships established in the primary analyses of this study and encourage further research into the ways in which justice system involvement can impact educational outcomes. For example, the timing and dosage analyses further supplement the results shown in the levels of involvement models by providing more evidence that the severity of one’s contact with the justice system may change its impact on one’s educational outcomes. Being delayed in one’s high school graduation and earning a GED

rather than a high school diploma may inhibit future educational and economic prospects (Heckman et al., 2011), so justice system involvement may impact youth above and beyond the binary measure of whether one graduates. Even when justice-involved youth enroll in postsecondary education, they may still not catch up to their peers because they are more likely to enroll in shorter degree programs, such as certification programs or Associate's degrees (as opposed to Bachelor's degrees). This may further limit future economic and educational opportunities. While the reasons why justice-involved youth are limited in these postsecondary educational opportunities are not investigated within the current study, it provides an avenue for future research into the extent to which system involvement could limit educational opportunities across one's lifetime. These analyses add more nuance to the relationship between justice system involvement and educational outcomes and further show that the context of one's system contact and education may complicate this relationship.

Chapter 5: Discussion

5.1 Summary of Results

The goal of this study was to assess the impacts of system involvement on educational outcomes for youth in Maryland. I build upon the concept of the School-to-Prison Pipeline by proposing a School-to-Prison Cycle in which youth may enter a cycle of moving back and forth between the education and justice systems. In this study, I tested the concept of the “reverse” aspect of this cycle by studying how justice system involvement could impact educational outcomes. I had three main hypotheses. First is that justice-involved youth will experience worse educational outcomes compared to their peers, which was supported. Justice-involved youth were less likely to graduate, more likely to be suspended, and less likely to enroll in postsecondary education than their peers. The estimated average treatment effect on graduation was the strongest among the three outcomes, perhaps suggesting that high school completion is the primary area of concern for justice-involved youth. Even among youth who graduated, however, there was still an associated decline in postsecondary enrollment, so the impacts of justice system involvement extend beyond graduation. The smallest impact was on 12th grade suspension with an overall four percentage point increase for justice-involved youth. Perhaps further research could elucidate why justice system involvement may not make as large of an impact on suspension risk when compared to graduation and postsecondary enrollment. This study also contributes to our prior knowledge on the negative impacts of justice system involvement on educational outcomes because I explore some of the possible nuances of this relationship in terms of the potential differences between youth based on their demographic characteristics, school district, and level of one’s system involvement. When estimating the average treatment effect of system involvement on educational outcomes within individual

school districts, I find partial support for Hypothesis 1 in that justice system involvement was associated with negative outcomes in some school districts but not others. I find that the relationship between justice system involvement and the three outcomes do differ by one's school district. It remains to be seen, however, whether these differences are due to school district specific policies or demographic differences between the student populations at these schools. These between-district differences could reflect some of the practical challenges that youth may face as they return to school following their justice system involvement. It is possible that some school districts may facilitate more successful transitions for justice-involved youth in their return to school, which may minimize the negative impact of system involvement on their educational outcomes. This disparity could occur because some districts have more resources for school counselors and additional teachers that could give more individualized attention to the students who need it. Personnel in some districts and even within individual schools could stigmatize justice-involved youth less than their counterparts, which would make a student feel less isolated as they returned to school. Conversely, districts with fewer resources or leadership who view justice-involved youth as dangerous may not provide the necessary support for students as they return to school, which could exacerbate the negative impacts of system involvement. These results concur with the prior research in this area (e.g., Kirk & Sampson, 2013; Sweeten, 2006; Widdowson et al., 2016) and provide further support for the possibility that system involvement could contribute to a cycle of cumulative disadvantage (Sampson & Laub, 1997) by inducing negative educational outcomes. While I do not directly test labeling processes such as stigmatization in this study, these results suggest that justice-involved youth may experience negative consequences from labeling or practical barriers in returning to school

following system involvement (e.g., difficulty in catching up with schoolwork or lack of support staff).

Additionally, the extent to which an individual experiences justice system contact may play a role in this relationship, which provides more support for Hypothesis 1. Separating justice-involved youth by the severity of their system involvement showed that even when compared to similarly situated non-justice-involved youth, moving further into the system appears to be more detrimental, particularly on the likelihood of graduating. For graduation and postsecondary enrollment, residentially (out-of-community) placed youth experienced the most detrimental impacts, perhaps suggesting that there is something about being incarcerated that is particularly harmful for graduation outcomes. Arrest and nonresidential (in-community) placement is associated with increases in the likelihood of suspension in the 12th grade. Overall, it appears as though the extent to which one is involved in the justice system does matter in this relationship, which prior studies have not been able to test.

Hypothesis 2 predicted that the number of days an adolescent is absent from school from justice system involvement would impact the relationship between that system involvement and educational outcomes and that justice system involvement would moderate the relationship between total school absence and educational outcomes. This hypothesis received limited support. School absence due to justice system involvement appears to moderate this relationship for graduation and suspension. Justice system involvement also appears to moderate the relationship between school absence and graduation, though the magnitudes of the coefficients of these interactions are small. School absence does not appear to moderate most of the relationships between the highest level of one's justice involvement and the three outcomes. These results suggest that school absence might slightly impact the relationship between justice

system involvement and educational outcomes in some cases and that justice system involvement could moderate the relationship between absence and graduation. Thus, absence may be marginally related to the labeling processes that could occur after justice system involvement. Future research should work to unpack the relationship between school absence and justice system involvement even further. Prior research suggests that justice-involved youth miss more school than their peers (Mark et al., 2022) and absence is associated with worse educational outcomes (e.g., Tash, 2018), so there may be other ways in which absence influences the impact of system involvement on educational outcomes that this study could not detect.

Hypothesis 3 predicted that the relationship between justice system involvement and educational outcomes varies between youth of different racial identities and sexes, which was mostly supported in that there were statistically significant differences in the coefficients for the estimated average treatment effects within some race, sex, and race-sex groups but not all. I find that differential involvement and differential impact may both play a role in explaining disparities in the relationship between system involvement and educational outcomes. For example, White youth have estimated average treatment effects of larger magnitudes than Black youth even though Black youth are more likely to be justice-involved than White youth (Office of Juvenile Justice, 2022). This pattern suggests that differential involvement and differential impact may not always align. Black youth may be impacted more by justice system involvement because of differential involvement, but the differential impact may mean that labeling effects of system involvement on these outcomes may be worse for those less likely to be involved in the justice system, which aligns with the findings of Chiricos and colleagues (2007). Girls tended to have average treatment effects of smaller magnitudes than boys for graduation and postsecondary enrollment, but not suspension. Taking an intersectional approach to these

findings also reveals some interesting patterns. For example, girls appeared to be less impacted than boys of the same racial identity for some of the outcomes, but not all of them. White boys experienced larger average treatment effects on graduation and postsecondary enrollment compared to White girls. However, White girls experienced larger impacts of justice system involvement on the likelihood of 12th grade suspension than White boys, which would suggest that girls experience stronger labeling impacts than boys in the context of punishment. The average treatment effects of justice system involvement on educational outcomes for Black girls were of lower magnitude than for White boys despite findings from prior research that suggests Black girls may be treated worse than White boys while in the system (Freiburger & Burke, 2011). This finding suggests that theories that hypothesize differences in the impact of justice system involvement by race or sex alone may not be sufficient to fully explain these relationships. Justice system involvement tends to be more detrimental for groups who are overall less likely to graduate, but involvement tends to be more detrimental for those who are less likely to be suspended. The results for postsecondary enrollment did not exhibit as clear of a pattern. Thus, in some instances, system involvement could exacerbate pre-existing barriers to educational success that some youth already experience (i.e., for graduation), but in other instances (i.e., for suspension), the impacts of labeling or practical barriers to successful transitions back to school may be stronger among those who are less likely to experience that outcome.

The supplemental analyses explored further nuances of this relationship. A preliminary exploration of the timing and dosage of one's justice system involvement revealed that these factors of one's involvement may matter in this relationship. In general, justice system involvement that occurs later in one's education is associated with a lower likelihood of

graduation and postsecondary enrollment, while early justice system involvement is associated with a higher likelihood of suspension. When compared to non-justice-involved youth, those who spent more of their time in high school involved with the justice system experienced worse outcomes. Further nuance is uncovered when exploring how justice system involvement may impact specific aspects of one's educational outcomes. Justice system involvement is associated with delayed graduation and earning a GED rather than a diploma and enrollment in shorter-term postsecondary degrees (e.g., Associate's versus Bachelor's).

These results provide an interesting insight into the ways in which youth may experience the negative impacts of system involvement on their educational outcomes. Differences in the results by district may suggest that the distribution of educational resources may lessen or exacerbate the deleterious impact of justice system involvement on these outcomes. For example, teachers in smaller schools or school districts may be more likely to know about a student's justice system involvement because gossip may spread more easily. Additionally, those who move farther into the justice system may experience more detrimental impacts to their education compared to other justice-involved youth. The differences in the impacts of justice system involvement on educational outcomes between youth of different sexes and racial identities suggest that multiple theoretical frameworks could be used to explain these outcomes. For example, perhaps the relationship between justice system involvement and graduation or justice system involvement and postsecondary enrollment is best explained by a labeling framework in which girls are treated less harshly or given more support by the justice system (e.g., MacDonald and Chesney-Lind, 2001), but the relationship between justice system involvement and suspension is better explained by a framework in which girls are treated more harshly by systems of punishment (e.g., Sealock & Simpson, 1998).

I find overall that justice system involvement is associated with worse educational outcomes, which supports the idea of a “reverse” S2PP that is a part of a larger School-to-Prison Cycle. One of the key contributions of the current study is the revelation that there may be nuances in the association between justice system involvement and educational outcomes based on a youth’s demographic characteristics, educational context, and elements of one’s system involvement. These nuances are necessary to understand because they may be informative for both policy and theory when assessing the impact of the School-to-Prison Cycle. Special attention may need to be paid to youth who are the most likely to experience deleterious impacts of justice system involvement. One of the ways this may be addressed is by ensuring that youth who are justice-involved are not frequently absent from school as absence may moderate the relationship between justice system involvement and educational outcomes.

5.2 Limitations

While I have taken measures in my methods to address some of the difficulties in assessing the relationship between justice system involvement and educational outcomes, there remain key limitations with this study. These data have the advantage of providing detailed information on justice system involvement, educational outcomes, and the timing of these events, but there are drawbacks to using administrative data in this context. The primary limitation of this study concerns omitted variable bias. There are key variables that are needed to thoroughly test the mechanisms of how justice system involvement impacts these educational outcomes. First is that I do not have measures of an individual’s behavior, personality, or relationships to others that could greatly inform how justice system involvement impacts these outcomes. For example, I cannot assess a justice-involved adolescent’s motivation to return to

school following their contact. I also cannot account for other individual-level factors such as feelings of strain, level of self-control, or one's feelings of bonds to school, which removes other potentially important mechanisms in this relationship. I cannot assess how others, particularly teachers and school administrators, respond to and treat the justice-involved youth that return to their schools. Thus, while I draw upon labeling and stigma to explain the relationships I have tested in this study, this research cannot be viewed as a direct test of these theoretical frameworks.

Some of my measures could also be considered slightly imprecise, which could contribute to potential omitted variable bias. I use test scores rather than grade point average (GPA) as a measure of academic achievement because GPA's are inconsistently reported for each student while test scores are more reliably recorded. However, test scores may not be the best measure of academic achievement as some youth who have high academic aptitude may not perform well on tests. Additionally, the suspension data only include instances in which a behavior led to exclusionary discipline and not all recorded instances of negative behavior. I cannot account for differences in the likelihood of receiving a suspension and expulsion for similar behaviors between justice-involved youth and their peers. Thus, I cannot be certain whether increases in the likelihood of suspension are due to an increase in negative behavior or due to a greater likelihood of punishment for the same behavior. Lastly, my measure of absence from school due to system involvement is estimated from the reported dates of arrest, intake, adjudication, and placement dates from the Department of Juvenile Services and the approximate dates in which youth are most likely in school. Thus, the number of days missed from school for justice system involvement may be inaccurate if I counted youth as absent from school on days in which school was not in session or for an arrest that took place in the evening.

The methods I employ also cannot prove a causal relationship between justice system involvement and these educational outcomes. Internal validity may be threatened because I was not able to include some potentially important constructs in this relationship for the reasons listed above. I could not, for example, match justice-involved and non-justice-involved youth on intrinsic motivation, bonds to school, or how they are perceived by their teachers. I also needed to remove youth who left the dataset because they moved to another school or passed away, which could lead to non-random attrition from my sample. External validity is also impacted because Maryland is unique in its demographic composition, so it is difficult to assess the implications of these results for youth in other states. Additionally, these data only include youth who attend Maryland public schools, the results are most likely not even generalizable to all Maryland youth. Sample selection bias may also be introduced with my decision to use nearest neighbor matching. Nearest neighbor matching allows for more precise matches for each treated individual; that is, the control subject they are matched with is likely to be a good match for them. However, this means that I remove the non-justice-involved youth who are not close matches to the justice-involved youth. Thus, the non-justice-involved youth in my sample are going to be more similar to justice-involved individuals than to the general student population. Thus, my results may be biased through a loss to external validity.

5.3 Future Directions

This study provides an insight into some of the nuances of the relationship between justice system involvement and one's educational outcomes and opens the door for future studies into this topic. For example, future research on the School-to-Prison Cycle (S2PC) can expand outward to include outcomes of an individual's early adulthood, including workforce outcomes

and future involvement in the criminal justice system. The School-to-Prison Cycle (S2PC) could also be expanded backwards to explore how a student may move into the cycle from an early age. Negative experiences with early education, vicarious justice system contact, or involvement in the child welfare system could explain why some youth move into the S2PC and some do not. Additionally, the longitudinal structure of the data would allow for future research to also assess changes in risk to suspension or other outcomes over time as youth move in and out of the justice system, which may allow for a closer approximation of a causal relationship between system involvement and future outcomes. I could explore how youth who move in and out of the justice system multiple times during high school may experience different outcomes than youth who only have one instance of contact with the justice system. I approximate this phenomenon with the dosage sensitivity analysis, but the longitudinal analyses would further unpack this relationship. Another area I would like to explore in the future is comparing absence due to justice system involvement to all other absences on these educational outcomes. That means, among justice-involved youth, testing whether the absence due to justice system involvement itself is more influential than the subsequent absences incurred after system involvement. This would allow me to further explore the ways in which absence impacts the relationship between justice system involvement and educational outcomes.

Future research could also work to expand on the contribution of this work by exploring even more of the potential nuances of the relationship between justice system involvement and educational outcomes. First is by continuing to assess this relationship across new cohorts. Youth in different generations may experience changes to educational and justice policies that may shape the way in which justice system involvement could impact their educations. One cohort effect that will be of particular interest is the impact of Covid-19. For example, the increase in

online educational services may actually mitigate some of the negative impact of extended absences from system involvement on educational attainment. However, frequent illnesses and interruptions to the school year because of the pandemic may have also made transitioning back to school more difficult for youth who could have benefitted from in-person instruction. Future studies could also expand this work to other states, particularly those that differ from Maryland in their education quality and juvenile justice policies. Another nuance to explore is how assignment to alternative schools, or schools for youth with significant behavioral intervention needs, impacts future educational attainment. Most youth are required to be reenrolled in school after justice system involvement (Bailey, Ford, & Nicely, 2018), but that could mean that they are enrolled in an alternative school rather than their home school. It is possible that this practice may impact how youth transition back into the educational environment after their system involvement.

Lastly, I would also like to collect qualitative data in order to assess how labeling and stigma may inform the relationship between justice system involvement and educational outcomes. Interviews with students and teachers would be beneficial because I would be able to ask justice-involved youth about their motivation to return to school and whether they feel as though they are stigmatized by their teachers. Interviews with teachers could illuminate how they interact with their justice-involved students and the possible barriers that justice-involved youth experience in their educational attainment. Additionally, using qualitative research could help differentiate the impacts of labeling and stigma from the structural barriers that could be due to district-wide policies or a lack of resources within some school districts. Interviews with students and teachers may show that some of these district-level differences could be partially attributed to the variation in attitudes regarding justice-involved youth from school to school or even

teacher to teacher. Thus, differences between youth in the extent to which system involvement impacts educational outcomes could vary based on structural barriers to educational attainment and strains to interpersonal relationships. This qualitative work may also reveal some possible implications for policy and practice regarding educational and transition services for justice-involved youth.

5.4 Conclusion

The goal of the present study is to explore the relationship between two institutions in which youth are involved: the justice and education systems. I expand upon the widely discussed notion of the School-to-Prison Pipeline by proposing a School-to-Prison Cycle in which youth could potentially become part of a cycle of involvement in both the education and justice systems. In the present study, I focus on the “reverse” aspect of this School-to-Prison Cycle by providing evidence that justice system involvement could be detrimental for one’s education. Although I only study the “reverse” aspect of the School-to-Prison Cycle and not how youth enter the justice system, this study still contributes to the prior School-to-Prison Pipeline literature by demonstrating that the ways in which justice system involvement impacts educational outcomes may be as crucial to understanding the intersection of these two institutions as the impact of the education system on justice system exposure. Justice-involved youth are less likely to graduate and enroll in postsecondary education and are more likely to be suspended or expelled in the 12th grade than their peers. The strength of this relationship varies by race, sex, the intersection of race and sex, one’s school district, and the level of one’s system involvement. This study thus provides evidence that justice system involvement can impact educational outcomes, and this relationship may differ between youth. School absence may play

a role in the relationship between justice system involvement and educational outcomes, though the exact nature of this relationship is not yet known.

The present study also contributes to the labeling and stigma literatures through the investigation into one way in which youth could be brought into a cycle of cumulative disadvantage. This study also shows that the labeling impacts of juvenile justice system contact may differ between youth and that absence could be one component that changes the intensity of the labeling effect. The impact of system involvement on these outcomes could be due to structural barriers that youth may experience from their system involvement such as ineffective transition planning or future school absence. Justice system involvement could also induce stigma or loss of motivation, which may induce further absences or introduce more barriers to one's educational attainment. Although I do not focus on these mechanisms in the present study, one might imagine how the social consequences of negative labels and structural barriers from system involvement partially explain this relationship. Some of these structural barriers may be related to the difficulties in the transition back to school after justice system involvement. Transitions back to school for justice-involved youth may be impeded by restrictive policies regarding reenrollment, difficulties in catching up with assigned material, or a lack of support personnel for struggling students. Thus, the practical barriers to success for justice-involved youth as they return to school may be as important or even more important than labeling and stigma.

Involvement in the justice system can have detrimental impacts on one's education, which could continue a cycle of cumulative disadvantage of justice system involvement and negative impacts to participation in prosocial institutions, such as the labor market (Sampson & Laub, 1997). Barriers to academic achievement may then be associated with further justice

system involvement (Pettit & Western, 2004), which could continue a cycle of moving back and forth between the community and the justice system as people experience more barriers to prosocial institutions over time. Differences in one's preexisting barriers to academic achievement and resources within one's school district may also explain potential disparities in the deleterious impacts of system involvement on these outcomes. For example, youth who have fewer educational resources because they are in under-funded school districts may have a more difficult time in their transition back to school than youth in wealthier districts. The difficulties one faces early in their education could begin a cycle of cumulative disadvantage that continues with one's early justice system involvement and stays with a person throughout their life, potentially culminating in criminal justice system involvement as an adult.

The results of this study may be relevant for both juvenile justice and education practitioners as they consider their policies regarding justice-involved youth. While I cannot suggest specific policy implications from this study alone, these results align with the body of evidence that suggests that justice system involvement can be deleterious for one's education. One aspect of this study that may be of particular interest to policymakers is the results regarding the level of one's justice system involvement. Residential placement (placement in which one is removed one's home school) may be particularly detrimental to youth's educational outcomes, especially graduation. Youth who are in the care of the juvenile justice system are required to receive an education through the facilities in which they are housed, but they may not be sufficient to counteract the deleterious impact of being removed from one's educational environment. The exact reason why moving farther along in the system is worse for one's educational outcomes is not assessed in this study, but these results suggest that the additional resources that are available to youth who stay in the justice system may not counteract the

potential negative consequences of that involvement. Justice-involved youth may already experience barriers to educational success prior to their system involvement (e.g., Foley, 2001), and the programming that currently exists within juvenile justice facilities may not be sufficient to encourage stronger bonds to school or even further weaken these bonds. Justice system actors may be motivated by this study to ensure that their education and transition programming facilitates positive outcomes for the youth they serve. Educators can also take care to provide adequate support to the justice-involved youth they teach and not stigmatize them for their prior experience in the system. Both justice system actors and educators could also consider how one's characteristics may change the resources an adolescent needs upon returning to school and that preventing absences may help promote academic success for justice-involved youth. Without these positive interventions, justice-involved youth may enter a School-to-Prison Cycle that could impact them for the rest of their lives.

Chapter 6: Appendices

Appendix A

Table 32: Justice System Involvement by District

District	Percent Justice Involved
Allegany	0.147
Anne Arundel	0.105
Baltimore Co.	0.081
Calvert	0.093
Caroline	0.184
Carroll	0.062
Cecil	0.064
Charles	0.098
Dorchester	0.235
Frederick	0.039
Garrett	0.113
Harford	0.072
Howard	0.049
Kent	0.145
Montgomery	0.038
Prince George's	0.056
Queen Anne's	0.070
St. Mary's	0.095
Somerset	0.146
Talbot	0.087
Washington	0.046
Wicomico	0.170
Worcester	0.159
Baltimore City	0.127

Appendix B: Balance Tables for Each PSM Model

Note: The matched and control pairs are said to be balanced if the standardized difference between the matched and control groups for each variable is less than 0.2 (Apel & Sweeten, 2006). Groups are the most balanced if the standardized difference is zero and the variance ratio is one. If any school district is not balanced, there is a note included on the table. Race is included as a factor variable within the models, so White (the reference group) is not included within the balance tables. A value of “—” means that within that model, no matched pairs included those individuals. Missingness in these groups occurs when there are not a sufficient number of youth who fall under a certain demographic characteristic for analysis. For example, School District 1 does not have enough youth designated as English Language Learners for inclusion in the matching process. The tables do not show balance scores by school districts for parsimony, but school district is included in the matching processes except for the cases when the models are stratified by school district.

B1: Balance for Graduation Analysis – Whole Sample

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Male	0.347	0.002	0.900	0.999
Black	0.414	-0.001	1.139	1.000
AAPI	-0.264	0.000	0.240	1.000
Indigenous	-0.005	0.000	0.943	1.000
Multiracial	-0.002	0.000	0.993	1.000
Hispanic	-0.138	0.005	0.699	1.015
FRL	0.592	0.003	0.992	0.998
Special Education	0.254	0.007	1.741	1.012
Max Test Score	-0.587	-0.058	1.553	1.217
Total Days Absent	0.808	0.099	3.537	1.217
Suspended	1.352	0.025	2.223	0.984
ELL	-0.177	0.000	0.323	1.000

B2: Balance for Suspension Analysis – Whole Sample

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Male	0.281	-0.003	0.935	1.001
Black	0.480	0.002	1.128	0.999
AAPI	-0.273	0.000	0.219	1.000
Indigenous	-0.016	0.000	0.835	1.000
Multiracial	0.001	0.000	1.005	1.000
Hispanic	-0.132	0.004	0.711	1.013
FRL	0.692	0.005	0.931	0.996
Special Education	0.295	0.009	1.862	1.015
Max Test Score	-0.645	-0.054	1.524	1.174
Total Days Absent	0.890	0.092	4.832	1.095
Suspended	1.406	0.024	2.556	0.985
ELL	-0.150	0.000	0.410	1.000

B3: Balance for Postsecondary Enrollment – Whole Sample

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Male	0.271	0.002	0.945	0.999
Black	0.384	-0.001	1.147	1.000
AAPI	-0.255	0.002	0.271	1.018
Indigenous	0.017	0.000	1.195	1.000
Multiracial	0.004	0.000	1.017	1.000
Hispanic	-0.132	0.005	0.701	1.015
FRL	0.462	0.003	1.173	1.000
Special Education	0.181	0.011	1.551	1.022
Max Test Score	-.489	-0.057	1.248	1.235
Total Days Absent	.767	.098	3.181	1.123
Suspended	1.250	.018	2.560	.992
ELL	-0.174	0.000	.289	1.000

B4: Balance Tables Listed by School District

Balance Tables for Allegany

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Graduation				
Male	0.192	-0.045	0.969	1.021
Black	0.211	0.000	2.791	1.000
AAPI	-0.108	--	0.000	--
Indigenous	0.035	--	0.000	--
Multiracial	0.226	0.000	2.451	1.000
Hispanic	-0.021	0.000	0.837	1.000
FRL	0.825	0.000	0.627	1.000
Special Education	0.213	0.063	1.680	1.137
Max Test Score	-0.537	-0.049	1.484	1.049
Total Days Absent	0.788	0.089	1.636	1.074
Suspended	0.959	0.133	2.045	0.988
ELL	--	--	--	--
Suspension				
Male	0.243	0.000	0.956	1.000
Black	0.194	--	0.000	--
AAPI	-0.108	--	0.000	--
Indigenous	-0.124	--	0.000	--
Multiracial	0.336	0.000	3.342	1.000
Hispanic	0.057	0.000	1.569	1.000
FRL	1.098	0.125	0.386	0.749
Special Education	0.295	0.054	1.968	1.097
Max Test Score	-0.508	-0.032	1.602	1.015
Total Days Absent	0.670	0.110	1.454	1.134
Suspended	1.051	0.249	1.454	1.134
ELL	--	--	--	--
Postsecondary				
Male	0.219	-0.110	0.971	1.060
Black	0.205	0.000	2.692	1.000
AAPI	-0.089	--	0.000	--
Indigenous	0.075	0.000	2.236	1.000
Multiracial	0.266	0.000	2.642	1.000
Hispanic	-0.005	0.000	0.969	1.000
FRL	0.754	0.029	0.878	0.973
Special Education	0.119	0.042	1.391	1.108
Max Test Score	-0.363	-0.070	1.202	1.100
Total Days Absent	0.745	0.123	2.105	1.331
Suspended	1.003	0.027	2.179	0.994
ELL	--	--	--	--

Balance Tables for Anne Arundel

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Graduation				
Male	0.273	0.030	0.932	0.985
Black	0.408	-0.008	1.581	0.995
AAPI	-0.151	0.000	0.403	1.000
Indigenous	-0.068	0.000	0.660	1.000
Multiracial	0.044	0.000	1.159	1.000
Hispanic	0.044	0.000	0.873	1.018
FRL	0.585	0.033	1.339	0.998
Special Education	0.191	0.000	1.711	1.000
Max Test Score	-.456213	-.0666407	1.704008	1.301305
Total Days Absent	.8464602	.1156338	3.239834	1.364489
Suspended	1.388934	.0189231	2.575423	.9885151
ELL	-.0938141	0	.5253844	1
Suspension				
Male	0.220	0.079	0.0957	0.972
Black	0.435	-0.007	1.608	1.00
AAPI	-0.129	0.000	0.480	1.00
Indigenous	-0.121	0.000	0.434	1.00
Multiracial	0.062	0.000	1.232	1.00
Hispanic	-0.027	0.000	0.933	1.00
FRL	0.601	0.039	1.339	0.997
Special Education	0.205	0.000	1.770	1.00
Max Test Score	-0.423	-0.085	1.598	1.471
Total Days Absent	-0.795	0.108	4.294	1.470
Suspended	1.539	0.021	2.800	0.985
ELL	-0.034	0.000	0.818	1.00
Postsecondary				
Male	0.188	-0.010	0.973	1.004
Black	0.403	0.000	1.577	1.000
AAPI	-0.139	0.000	0.456	1.000
Indigenous	-0.030	0.000	0.845	1.000
Multiracial	-0.011	0.000	0.964	1.000
Hispanic	-0.048	0.000	0.876	1.000
FRL	0.382	0.005	1.400	1.002
Special Education	0.137	0.000	1.529	1.000
Max Test Score	-0.361	-0.009	1.219	1.158
Total Days Absent	0.703	0.091	2.057	1.122
Suspended	1.242	0.005	3.003	0.998
ELL	-0.088	0.000	0.515	1.000

Balance Tables for Baltimore County

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Graduation				
Male	0.343	-0.007	0.920	1.004
Black	0.403	-0.003	1.014	1.001
AAPI	-0.257	0.000	0.277	1.000
Indigenous	0.0732	0.000	2.835	1.000
Multiracial	-0.033	0.000	0.843	1.000
Hispanic	-0.088	0.000	0.716	1.000
FRL	0.609	0.004	0.824	0.996
Special Education	0.317	0.004	1.929	1.006
Max Test Score	-0.557	-0.029	1.345	1.230
Total Days Absent	0.863	0.070	2.686	1.114
Suspended	1.394	0.004	1.895	0.997
ELL	-0.216	0.000	0.112	1.000
Suspension				
Male	0.320	-0.012	0.933	1.007
Black	0.495	0.006	0.975	0.997
AAPI	-0.303	0.000	0.177	1.000
Indigenous	0.077	0.000	2.963	1.000
Multiracial	-0.039	0.000	0.817	1.000
Hispanic	-0.132	0.000	0.586	1.000
FRL	0.715	0.000	0.742	1.000
Special Education	0.361	0.007	2.053	1.010
Max Test Score	-0.593	-0.015	1.163	1.219
Total Days Absent	0.932	0.057	3.400	1.103
Suspended	1.370	0.000	2.292	1.000
ELL	-0.189	0.000	0.194	1.000
Postsecondary				
Male	0.251	0.015	0.966	0.994
Black	0.437	0.000	0.982	1.000
AAPI	-0.243	0.000	0.319	1.000
Indigenous	0.107	0.000	4.127	1.000
Multiracial	-0.021	0.000	0.898	1.000
Hispanic	-0.076	0.000	0.736	1.000
FRL	0.472	0.005	1.069	0.998
Special Education	0.250	0.000	1.743	1.000
Max Test Score	-0.514	-0.038	1.079	1.327
Total Days Absent	0.802	0.071	2.390	1.171
Suspended	1.312	0.005	2.198	0.997
ELL	-0.239	--	0.000	--

Balance Tables for Calvert

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Graduation				
Male	0.325	-0.055	0.915	1.040
Black	0.269	0.020	1.556	1.025
AAPI	-0.010	0.000	0.935	1.000
Indigenous	-0.060	--	0.000	--
Multiracial	0.119	0.000	1.506	1.000
Hispanic	-0.035	0.000	0.867	1.000
FRL	0.455	0.036	1.597	1.020
Special Education	0.137	0.000	1.571	1.000
Max Test Score	-0.482	-0.220	1.444	2.089
Total Days Absent	0.970	0.166	2.743	0.954
Suspended	1.164	0.070	2.489	0.979
ELL	-0.104	--	0.000	--
Suspension				
Male	0.392	-0.072	0.880	1.066
Black	0.283	0.039	1.596	1.048
AAPI	-0.016	0.000	0.904	1.000
Indigenous	-0.060	--	0.000	--
Multiracial	0.162	0.000	1.721	1.000
Hispanic	-0.190	0.000	0.344	1.000
FRL	0.420	0.034	1.583	1.021
Special Education	0.151	0.000	1.648	1.000
Max Test Score	-0.403	-0.189	1.546	2.107
Total Days Absent	0.969	0.217	2.641	0.954
Suspended	1.278	0.034	2.710	0.985
ELL	-0.104	--	0.000	--
Postsecondary				
Male	0.316	0.022	0.920	0.987
Black	0.261	0.000	1.531	1.000
AAPI	0.016	0.000	1.128	1.000
Indigenous	-0.060	--	0.000	--
Multiracial	0.117	0.000	1.508	1.000
Hispanic	-0.094	0.000	0.649	1.000
FRL	0.504	0.068	1.977	1.053
Special Education	-0.066	0.000	0.765	1.000
Max Test Score	-0.324	-0.186	0.717	1.288
Total Days Absent	0.889	0.188	1.871	1.246
Suspended	0.978	0.127	2.706	1.011
ELL	-0.104	--	0.000	--

Balance Tables for Caroline

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Graduation				
Male	0.264	-0.034	0.984	1.014
Black	0.242	0.039	1.456	1.048
AAPI	-0.124	--	0.000	--
Indigenous	-0.152	--	0.000	--
Multiracial	0.206	0.050	1.766	1.121
Hispanic	-0.158	0.000	0.519	1.000
FRL	0.765	-0.044	0.617	1.078
Special Education	-0.018	0.000	0.952	1.000
Max Test Score	-0.602	-0.162	0.867	1.201
Total Days Absent	0.908	0.148	2.159	0.900
Suspended	1.760	0.185	2.309	0.846
ELL	-0.176	--	0.000	--
Suspension				
Male	0.195	0.237	1.029	1.000
Black	0.208	0.095	1.434	1.140
AAPI	-0.124	--	0.000	--
Indigenous	-0.152	--	0.000	--
Multiracial	0.373	0.102	2.468	1.190
Hispanic	-0.383	--	0.000	--
FRL	0.619	0.000	0.760	1.000
Special Education	0.028	0.000	1.136	1.000
Max Test Score	-0.818	-0.324	0.669	1.283
Total Days Absent	1.136	0.041	3.394	0.934
Suspended	1.871	0.175	2.567	0.838
ELL	-0.176	--	0.000	--
Postsecondary				
Male	0.145	-0.077	1.014	1.018
Black	0.232	0.000	1.441	1.000
AAPI	-0.127	--	0.000	--
Indigenous	-0.127	--	0.000	--
Multiracial	0.294	0.052	2.062	1.099
Hispanic	-0.116	0.000	0.625	1.000
FRL	0.536	-0.083	0.921	1.072
Special Education	-0.074	0.000	0.783	1.000
Max Test Score	-0.585	-0.343	0.710	1.542
Total Days Absent	0.765	0.287	1.915	1.273
Suspended	1.451	0.118	2.976	0.940
ELL	-0.127	--	0.000	--

Balance Tables for Carroll

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Graduation				
Male	0.463	-0.017	0.789	1.019
Black	0.045	0.000	1.240	1.000
AAPI	0.011	0.000	1.085	1.000
Indigenous	-0.010	0.000	0.953	1.000
Multiracial	-0.167	0.000	0.260	1.000
Hispanic	-0.090	0.000	0.652	1.000
FRL	0.556	0.016	2.071	1.010
Special Education	0.123	0.021	1.592	1.043
Max Test Score	-0.616	-0.097	1.593	1.371
Total Days Absent	0.692	0.092	2.507	1.240
Suspended	1.061	0.030	3.530	1.000
ELL	0.095	0.000	2.739	1.000
Suspension				
Male	0.503	-0.030	0.760	1.038
Black	-0.152	0.000	0.370	1.000
AAPI	0.033	0.000	1.249	1.000
Indigenous	0.038	0.000	1.227	1.000
Multiracial	-0.250	--	0.000	--
Hispanic	-0.042	0.000	0.840	1.000
FRL	0.547	0.027	2.074	1.018
Special Education	0.206	0.036	1.645	1.074
Max Test Score	-0.626	0.001	1.136	1.251
Total Days Absent	0.623	0.106	2.097	1.461
Suspended	1.105	0.026	4.279	1.001
ELL	0.079	0.000	2.379	1.000
Postsecondary				
Male	0.497	0.000	0.765	1.000
Black	0.228	0.000	2.377	1.000
AAPI	0.030	0.000	1.220	1.000
Indigenous	0.007	0.000	1.046	1.000
Multiracial	-0.157	0.000	0.290	1.000
Hispanic	-0.075	0.000	0.709	1.000
FRL	0.382	0.038	1.819	1.040
Special Education	0.041	0.028	1.127	1.081
Max Test Score	-0.502	-0.109	1.781	1.765
Total Days Absent	0.692	0.063	1.755	1.075
Suspended	0.987	0.051	3.735	1.010
ELL	0.113	0.000	3.311	1.000

Balance Tables for Cecil

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Graduation				
Male	0.563	0.032	0.738	0.962
Black	0.097	0.000	1.358	1.000
AAPI	0.022	0.000	1.229	1.000
Indigenous	-0.062	--	0.000	--
Multiracial	0.107	0.000	1.460	1.000
Hispanic	0.229	0.000	2.125	1.000
FRL	0.589	0.029	1.033	0.985
Special Education	0.325	0.072	2.064	1.128
Max Test Score	-0.760	-0.103	3.327	1.952
Total Days Absent	1.168	0.146	1.892	1.214
Suspended	1.694	0.218	0.731	0.693
ELL	0.193	0.000	7.212	1.000
Suspension				
Male	0.450	0.051	0.835	0.955
Black	0.161	0.000	1.617	1.000
AAPI	0.092	0.000	2.076	1.000
Indigenous	-0.062	--	0.000	--
Multiracial	0.219	0.000	1.200	1.000
Hispanic	0.247	0.000	2.249	1.000
FRL	0.502	0.000	1.083	1.000
Special Education	0.307	0.061	2.028	1.110
Max Test Score	-0.748	-0.151	3.345	2.080
Total Days Absent	1.126	0.130	2.313	1.259
Suspended	1.748	0.284	0.994	0.681
ELL	0.170	0.000	6.179	1.000
Postsecondary				
Male	0.454	0.000	0.840	1.000
Black	0.172	0.000	1.621	1.000
AAPI	0.051	0.000	1.544	1.000
Indigenous	-0.063	--	0.000	--
Multiracial	0.065	0.000	1.286	1.000
Hispanic	0.266	0.000	2.310	1.000
FRL	0.510	0.036	1.112	0.989
Special Education	0.188	0.108	1.621	1.279
Max Test Score	-0.594	-0.145	2.324	1.689
Total Days Absent	1.070	0.299	2.360	1.674
Suspended	1.351	0.201	1.138	0.820
ELL	0.230	0.000	9.021	1.000

Balance Tables for Charles

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Graduation				
Male	0.314	0.022	0.902	0.986
Black	0.377	0.011	0.866	0.991
AAPI	-0.151	0.000	0.331	1.000
Indigenous	-0.095	--	0.000	--
Multiracial	-0.077	0.000	0.742	1.000
Hispanic	-0.098	0.000	0.654	1.000
FRL	0.589	0.021	1.318	0.998
Special Education	0.250	0.014	1.851	1.027
Max Test Score	-0.482	-0.094	1.492	1.244
Total Days Absent	0.887	0.115	1.970	1.096
Suspended	1.529	0.013	1.128	0.983
ELL	-0.135	--	0.000	--
Suspension				
Male	0.146	0.068	0.986	0.983
Black	0.343	0.024	0.893	0.983
AAPI	-0.142	0.000	0.367	1.000
Indigenous	-0.095	--	0.000	--
Multiracial	-0.030	0.000	0.905	1.000
Hispanic	0.047	0.000	1.201	1.000
FRL	0.670	0.023	1.306	0.994
Special Education	0.248	0.032	1.856	1.063
Max Test Score	-0.554	-0.142	1.406	1.329
Total Days Absent	0.975	0.090	2.804	1.114
Suspended	1.568	0.027	1.349	0.967
ELL	-0.135		0.000	--
Postsecondary				
Male	0.167	0.000	0.974	1.000
Black	0.371	0.000	0.869	1.000
AAPI	-0.143	0.000	0.369	1.000
Indigenous	-0.096	--	0.000	--
Multiracial	-0.026	0.000	0.917	1.000
Hispanic	0.003	0.000	1.016	1.000
FRL	0.492	0.120	1.406	1.002
Special Education	0.178	0.018	1.646	1.043
Max Test Score	-0.389	-0.051	1.319	1.275
Total Days Absent	0.846	0.109	2.589	1.076
Suspended	1.384	0.014	1.320	0.985
ELL	-0.144	--	0.000	--

Balance Tables for Dorchester

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Graduation				
Male	0.321	0.069	0.950	0.969
Black	0.174	-0.034	1.117	0.988
AAPI	0.112	0.000	3.254	1.000
Indigenous	0.010	0.000	1.096	1.000
Multiracial	0.0003	0.000	1.013	1.000
Hispanic	-0.041	0.000	0.830	1.000
FRL	0.445	0.076	0.772	0.924
Special Education	0.090	0.000	1.431	1.000
Max Test Score	-0.370	-0.099	1.348	1.989
Total Days Absent	0.843	0.381	2.846	2.297
Suspended	1.215	0.144	1.334	0.895
ELL	-0.102	--	0.000	--
Suspension				
Male	0.153	-0.057	1.021	1.013
Black	0.341	0.000	1.177	1.000
AAPI	-0.102	--	0.000	--
Indigenous	0.087	0.000	1.838	1.000
Multiracial	0.066	0.000	1.265	1.000
Hispanic	-0.295	--	0.000	--
FRL	0.511	0.191	0.726	0.818
Special Education	0.178	0.000	2.000	1.000
Max Test Score	-0.433	-0.286	1.732	1.953
Total Days Absent	0.849	0.500	3.459	3.479
Suspended	1.127	0.172	1.911	0.941
ELL	-0.102	--	0.000	--
Postsecondary				
Male	0.232	0.173	0.989	0.970
Black	0.282	0.000	1.161	1.000
AAPI	-0.102	--	0.000	--
Indigenous	0.044	0.000	1.399	1.000
Multiracial	-0.032	0.000	0.913	1.000
Hispanic	-0.114	0.000	0.539	1.000
FRL	0.394	0.000	0.895	1.000
Special Education	0.208	0.000	2.287	1.000
Max Test Score	-0.286	-0.058	1.276	1.269
Total Days Absent	0.707	0.269	3.163	1.997
Suspended	1.081	0.175	1.743	0.939
ELL	-0.102	--	0.000	--

Balance Tables for Frederick

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Graduation				
Male	0.409	-0.059	0.872	1.052
Black	0.713	0.019	2.963	1.011
AAPI	-0.317	--	0.000	--
Indigenous	0.062	0.000	2.253	1.000
Multiracial	0.049	0.000	1.199	1.000
Hispanic	-0.046	0.000	0.902	1.000
FRL	0.669	-0.036	1.572	1.002
Special Education	0.236	0.025	1.818	1.051
Max Test Score	-0.666	-0.160	1.279	1.833
Total Days Absent	0.939	0.187	5.195	1.629
Suspended	1.481	0.076	2.566	0.951
ELL	-0.082	0.000	0.493	1.000
Suspension				
Male	0.467	-0.100	0.841	1.112
Black	0.630	0.047	0.287	1.037
AAPI	-0.317	--	0.000	--
Indigenous	0.159	0.000	5.558	1.000
Multiracial	0.183	0.000	1.795	1.000
Hispanic	0.031	0.000	1.096	1.000
FRL	0.833	-0.090	1.555	1.038
Special Education	0.355	0.056	2.273	1.095
Max Test Score	-0.709	-0.243	1.043	2.164
Total Days Absent	1.150	0.289	7.793	1.816
Suspended	1.842	0.148	2.456	0.862
ELL	-0.195	--	0.000	--
Postsecondary				
Male	0.524	-0.113	0.796	1.146
Black	0.519	0.000	2.613	1.000
AAPI	-0.219	--	0.000	--
Indigenous	-0.087	--	0.000	--
Multiracial	-0.046	0.000	0.843	1.000
Hispanic	0.013	0.000	1.044	1.000
FRL	0.545	-0.049	1.770	0.983
Special Education	0.206	0.000	1.768	1.000
Max Test Score	-0.568	-0.083	0.895	1.468
Total Days Absent	0.835	0.160	3.959	1.515
Suspended	1.244	0.025	3.155	0.992
ELL	-0.156	--	0.000	--

Balance Tables for Garrett

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Graduation				
Male	0.847	0.000	0.463	1.000
Black	--	--	--	--
AAPI	-0.091	--	0.000	--
Indigenous	--	--	--	--
Multiracial	0.209	--	0.000	--
Hispanic	0.209	0.000	--	1.000
FRL	0.184	-0.064	1.105	0.992
Special Education	0.286	0.090	2.148	1.204
Max Test Score	-0.288	-0.108	1.819	1.893
Total Days Absent	0.520	0.201	1.229	1.525
Suspended	0.953	0.064	3.932	1.018
ELL	--	--	--	--
Suspension				
Male	0.856	0.000	0.465	1.000
Black	--	--	--	--
AAPI	-0.091	--	0.000	--
Indigenous	--	--	--	--
Multiracial	-0.182	--	0.000	--
Hispanic	0.320	0.000	15.25	1.000
FRL	0.279	-0.122	1.152	1.016
Special Education	0.495	0.147	3.073	1.231
Max Test Score	-0.667	-0.26	2.274	2.219
Total Days Absent	0.583	0.196	1.786	2.203
Suspended	1.674	0.128	4.220	0.917
ELL	--	--	--	--
Postsecondary				
Male	0.850	0.113	0.439	0.786
Black	--	--	--	--
AAPI	-0.091	--	0.000	--
Indigenous	--	--	--	--
Multiracial	-0.206	--	0.000	--
Hispanic	0.241	0.000	9.56	1.000
FRL	0.233	0.000	1.212	1.000
Special Education	0.378	0.102	2.512	1.190
Max Test Score	-0.248	0.008	1.719	1.140
Total Days Absent	0.372	0.205	0.964	1.642
Suspended	0.858	0.081	4.232	1.042
ELL	--	--	--	--

Balance Tables for Harford

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Graduation				
Male	0.247	-0.011	0.942	1.009
Black	0.418	0.011	1.733	1.001
AAPI	-0.173	0.000	0.294	1.000
Indigenous	-0.095	--	0.000	--
Multiracial	0.079	0.000	1.339	1.000
Hispanic	0.018	0.000	1.069	1.000
FRL	0.604	0.021	1.396	0.999
Special Education	0.141	0.014	1.371	1.028
Max Test Score	-0.457	-0.026	1.354	1.248
Total Days Absent	0.978	0.154	2.632	1.380
Suspended	1.674	0.024	1.707	0.972
ELL	-0.095	--	0.000	--
Suspension				
Male	0.075	-0.020	1.003	1.004
Black	0.469	0.021	1.804	1.014
AAPI	-0.097	0.000	0.573	1.000
Indigenous	-0.095	--	0.000	--
Multiracial	0.074	0.000	1.321	1.000
Hispanic	0.106	0.000	1.420	1.000
FRL	0.704	0.000	1.383	0.992
Special Education	0.214	0.027	1.567	1.046
Max Test Score	-0.580	-0.067	1.819	1.333
Total Days Absent	1.101	0.186	3.338	1.762
Suspended	1.868	0.048	1.999	0.941
ELL	-0.095	--	0.000	--
Postsecondary				
Male	0.110	-0.028	0.996	1.007
Black	0.432	0.000	1.759	1.000
AAPI	-0.155	0.000	0.372	1.000
Indigenous	-0.092	--	0.000	--
Multiracial	0.127	0.000	1.571	1.000
Hispanic	0.050	0.000	1.190	1.000
FRL	0.599	0.000	1.561	1.000
Special Education	0.048	0.000	1.133	1.000
Max Test Score	-0.445	-0.057	1.137	1.185
Total Days Absent	0.942	0.244	2.516	1.408
Suspended	1.514	0.045	2.101	0.962
ELL	-0.092	--	0.000	--

Balance Tables for Howard

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Graduation				
Male	0.273	-0.011	0.938	1.006
Black	0.749	0.021	1.605	0.998
AAPI	-0.411	0.055	0.291	1.319
Indigenous	0.021	0.000	1.380	1.000
Multiracial	-0.070	0.000	0.785	1.000
Hispanic	0.042	0.000	1.126	1.000
FRL	0.833	0.031	1.901	0.998
Special Education	0.303	0.000	2.168	1.000
Max Test Score	-0.800	-0.150	1.476	1.337
Total Days Absent	1.073	0.159	3.571	1.475
Suspended	1.575	0.043	3.532	0.972
ELL	-0.113	0.000	0.418	1.000
Suspension				
Male	0.237	-0.080	0.959	1.045
Black	0.800	0.019	1.600	0.996
AAPI	-0.515	0.081	0.141	1.980
Indigenous	0.073	0.000	2.599	1.000
Multiracial	-0.106	0.000	0.681	1.000
Hispanic	0.114	0.000	1.349	1.000
FRL	0.932	0.039	1.883	0.992
Special Education	0.353	0.025	2.379	1.043
Max Test Score	-0.888	-0.099	1.175	1.344
Total Days Absent	1.047	0.178	4.483	1.872
Suspended	1.620	0.020	4.326	0.987
ELL	-0.039	0.000	0.783	1.000
Postsecondary				
Male	0.266	0.000	0.948	1.000
Black	0.644	-0.025	1.626	0.999
AAPI	-0.378	0.061	0.349	1.316
Indigenous	0.110	0.000	4.222	1.000
Multiracial	-0.078	0.000	0.772	1.000
Hispanic	0.057	0.021	1.174	1.055
FRL	0.712	0.013	1.939	1.002
Special Education	0.209	0.020	1.879	1.048
Max Test Score	-0.734	-0.097	1.298	1.232
Total Days Absent	0.997	0.110	4.769	1.076
Suspended	1.280	0.013	3.971	0.997
ELL	-0.080	0.000	0.551	1.000

Balance Tables for Kent

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Graduation				
Male	0.228	0.313	0.975	0.933
Black	0.638	0.105	2.083	1.048
API	--	--	--	--
Indigenous		0.000	5.895	1.000
Multiracial	0.269	0.000	2.860	1.000
Hispanic	-0.488	--	0.000	--
FRL	0.503	0.420	1.029	0.955
Special Education	0.280	0.000	1.818	1.000
Max Test Score	-0.526	-0.230	2.855	4.483
Total Days Absent	0.919	0.342	1.913	2.577
Suspended	0.694	0.206	1.598	1.023
ELL	-0.271	--	0.000	--
Suspension				
Male	0.594	0.400	0.794	0.667
Black	0.559	0.000	2.428	1.000
API	-0.134	--	--	--
Indigenous	--	--	0.000	--
Multiracial	-0.271	--	0.000	--
Hispanic	-0.488	--	0.000	--
FRL	0.416	0.000	1.257	1.000
Special Education	0.658	0.000	3.108	1.000
Max Test Score	-1.155	-0.728	3.077	4.119
Total Days Absent	1.235	0.105	0.230	0.229
Suspended	2.931	0.632	0.000	0.000
ELL	-0.271	--	0.000	--
Postsecondary				
Male	0.185	0.000	1.019	1.000
Black	0.475	0.000	1.900	1.000
API	--	--	--	--
Indigenous	0.264	0.000	5.941	1.000
Multiracial	0.333	0.000	3.789	1.000
Hispanic	-0.466	--	0.000	--
FRL	0.411	0.230	1.191	1.029
Special Education	0.190	0.162	1.575	1.400
Max Test Score	-0.133	-0.114	1.444	1.655
Total Days Absent	0.920	0.609	2.493	2.393
Suspended	0.617	0.000	1.716	1.000
ELL	-0.200	--	0.000	--

Balance Tables for Montgomery

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Graduation				
Male	0.370	-0.011	0.876	1.008
Black	0.499	0.005	1.483	1.001
AAPI	-0.377	0.026	0.305	1.137
Indigenous	0.013	0.000	1.223	1.000
Multiracial	-0.032	0.000	0.876	1.000
Hispanic	0.084	-0.022	1.092	0.981
FRL	0.611	-0.005	1.185	1.002
Special Education	0.305	0.000	1.852	1.000
Max Test Score	-0.734	-0.058	1.565	1.467
Total Days Absent	1.076	0.122	3.820	1.228
Suspended	1.198	0.005	5.121	1.000
ELL	-0.149	0.000	0.595	1.000
Suspension				
Male	0.280	-0.043	0.931	1.027
Black	0.561	0.000	1.505	1.000
AAPI	-0.350	0.052	0.350	1.272
Indigenous	0.015	0.000	1.257	1.000
Multiracial	-0.078	0.000	0.707	1.000
Hispanic	0.140	-0.033	1.148	0.976
FRL	0.838	0.000	1.067	1.000
Special Education	0.433	0.000	2.184	1.000
Max Test Score	-0.812	-0.042	1.337	1.559
Total Days Absent	1.278	0.105	4.680	1.214
Suspended	1.291	0.010	5.854	0.999
ELL	-0.039	0.000	0.892	1.000
Postsecondary				
Male	0.357	-0.008	0.894	1.005
Black	0.376	-0.015	1.417	0.993
AAPI	-0.342	0.000	0.372	1.000
Indigenous	0.039	0.000	1.698	1.000
Multiracial	-0.009	0.000	0.966	1.000
Hispanic	0.086	0.000	1.102	1.000
FRL	0.357	-0.015	1.328	0.994
Special Education	0.256	0.000	1.743	1.000
Max Test Score	-0.608	-0.076	1.401	1.573
Total Days Absent	0.978	0.101	3.340	1.147
Suspended	1.075	0.000	5.491	1.000
ELL	-0.147	0.000	0.575	1.000

Balance Tables for Prince George's

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Graduation				
Male	0.460	0.000	0.833	1.000
Black	0.270	0.000	0.750	1.000
AAPI	-0.134	0.000	0.431	1.000
Indigenous	0.033	0.000	1.567	1.000
Multiracial	-0.115	0.000	0.478	1.000
Hispanic	-0.202	0.000	0.711	1.000
FRL	0.307	0.005	0.842	0.996
Special Education	0.222	0.006	1.589	1.010
Max Test Score	-0.525	-0.055	1.467	1.279
Total Days Absent	0.900	0.075	2.160	1.172
Suspended	1.493	0.016	1.343	0.982
ELL	-0.206	0.000	0.445	1.000
Suspension				
Male	0.418	-0.015	0.862	1.012
Black	0.265	-0.008	0.755	1.012
AAPI	-0.123	0.000	0.473	1.000
Indigenous	-0.014	0.000	0.807	1.000
Multiracial	-0.130	0.000	0.421	1.000
Hispanic	-0.191	0.010	0.727	1.020
FRL	0.375	0.015	0.801	0.984
Special Education	0.201	0.009	1.536	1.016
Max Test Score	-0.547	-0.059	1.315	1.189
Total Days Absent	0.968	0.080	2.621	1.183
Suspended	1.460	0.015	1.624	0.985
ELL	-0.179	0.000	0.511	1.000
Postsecondary				
Male	0.350	0.013	0.916	0.992
Black	0.341	0.000	0.653	1.000
AAPI	-0.167	0.000	0.330	1.000
Indigenous	0.023	0.000	1.378	1.000
Multiracial	-0.148	0.000	0.365	1.000
Hispanic	-0.243	0.000	0.624	1.000
FRL	0.310	0.019	0.921	0.989
Special Education	0.175	0.008	1.476	1.016
Max Test Score	-0.457	-0.072	1.320	1.297
Total Days Absent	0.878	0.052	2.759	1.226
Suspended	1.446	0.014	1.604	0.986
ELL	-0.217	0.000	0.368	1.000

Balance Tables for Queen Anne's

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Graduation				
Male	0.660	0.247	0.712	0.778
Black	0.106	0.000	1.380	1.000
AAPI	-0.160	--	0.000	--
Indigenous	-0.130	--	0.000	--
Multiracial	0.244	0.000	2.951	1.000
Hispanic	-0.005	0.000	1.007	1.000
FRL	0.556	0.055	1.409	1.003
Special Education	-0.007	0.000	1.008	1.000
Max Test Score	-0.375	-0.051	1.283	1.923
Total Days Absent	0.592	0.243	4.630	2.368
Suspended	1.002	0.055	3.190	1.003
ELL	-0.173	--	0.000	--
Suspension				
Male	0.519	0.231	0.850	0.844
Black	-0.096	0.000	0.755	1.000
AAPI	-0.160	--	0.000	--
Indigenous	-0.130	--	0.000	--
Multiracial	0.139	0.000	2.087	1.000
Hispanic	-0.364	--	0.000	--
FRL	0.671	0.217	1.432	1.000
Special Education	0.151	0.000	1.459	1.000
Max Test Score	-0.300	0.037	1.484	1.915
Total Days Absent	0.904	0.434	4.471	3.382
Suspended	1.045	0.000	3.878	1.000
ELL	-0.173	--	0.000	--
Postsecondary				
Male	0.861	-0.108	0.524	1.278
Black	0.100	0.000	1.368	1.000
AAPI	-0.159	--	0.000	--
Indigenous	-0.112	--	0.000	--
Multiracial	0.320	0.000	3.607	1.000
Hispanic	0.071	0.000	1.336	1.000
FRL	0.379	-0.075	1.508	0.966
Special Education	-0.018	0.000	0.991	1.000
Max Test Score	-0.332	0.036	1.433	1.678
Total Days Absent	0.397	0.218	3.595	2.628
Suspended	0.941	0.000	3.101	1.000
ELL	-0.159	--	0.000	--

Balance Tables for St. Mary's

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Graduation				
Male	0.041	-0.077	1.006	1.016
Black	0.588	0.000	1.899	1.000
AAPI	-0.137	0.000	0.350	1.000
Indigenous	0.053	0.000	1.912	1.000
Multiracial	0.095	0.000	1.379	1.000
Hispanic	-0.158	0.000	0.421	1.000
FRL	0.708	0.038	1.490	0.996
Special Education	0.242	0.000	1.920	1.000
Max Test Score	-0.639	-0.092	1.587	1.490
Total Days Absent	0.901	0.143	1.777	1.159
Suspended	1.507	0.122	2.345	0.919
ELL	-0.101	--	0.000	--
Suspension				
Male	-0.180	-0.218	0.991	0.976
Black	0.500	0.000	1.842	1.000
AAPI	-0.241	--	0.000	--
Indigenous	-0.101	--	0.000	---
Multiracial	0.225	0.000	1.955	1.000
Hispanic	-0.164	0.000	0.402	1.000
FRL	0.722	0.036	1.500	0.995
Special Education	0.294	0.000	2.148	1.000
Max Test Score	-0.713	-0.102	1.534	1.423
Total Days Absent	0.874	0.158	1.825	1.016
Suspended	1.443	0.000	2.900	1.000
ELL	-0.101	--	0.000	--
Postsecondary				
Male	0.017	0.000	1.009	1.000
Black	0.545	0.023	1.907	1.012
AAPI	-0.119	0.000	0.415	1.000
Indigenous	0.067	0.000	2.189	1.000
Multiracial	0.010	0.000	1.046	1.000
Hispanic	-0.135	0.000	0.491	1.000
FRL	0.478	-0.022	1.469	0.995
Special Education	0.352	0.000	2.457	1.000
Max Test Score	-0.591	-0.115	1.638	1.307
Total Days Absent	0.878	0.202	1.979	1.212
Suspended	1.446	0.114	2.852	0.941
ELL	-0.090	--	0.000	--

Balance Tables for Somerset

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Graduation				
Male	0.521	0.000	0.862	1.000
Black	0.636	0.000	0.785	1.000
AAPI	-0.170	--	0.000	--
Indigenous	--	--	--	--
Multiracial	-0.100	0.000	0.688	1.000
Hispanic	0.199	0.000	2.299	1.000
FRL	0.232	-0.097	0.846	1.137
Special Education	0.131	0.105	1.290	1.188
Max Test Score	-0.295	0.013	0.974	2.282
Total Days Absent	0.568	0.178	1.896	2.89
Suspended	1.525	0.116	0.573	0.788
ELL	-0.120	--	0.000	--
Suspension				
Male	0.432	-0.141	0.954	1.136
Black	0.756	0.000	0.687	1.000
AAPI	-0.170	--	0.000	--
Indigenous	--	--	--	--
Multiracial	-0.371	--	0.000	--
Hispanic	0.136	0.000	1.909	1.000
FRL	0.040	-0.141	1.036	1.136
Special Education	0.126	0.000	1.327	1.000
Max Test Score	-0.182	0.074	1.167	1.995
Total Days Absent	0.704	0.237	2.407	3.192
Suspended	1.580	0.174	0.665	0.722
ELL	-0.120	--	0.000	--
Postsecondary				
Male	0.628	0.135	0.801	0.873
Black	0.548	-0.135	0.933	1.146
AAPI	-0.179	--	0.000	--
Indigenous	--	--	--	--
Multiracial	-0.004	0.000	1.043	1.000
Hispanic	0.102	0.000	1.627	1.000
FRL	-0.047	0.000	1.061	1.000
Special Education	0.404	0.135	1.857	1.146
Max Test Score	-0.456	0.043	1.461	0.777
Total Days Absent	0.250	-0.040	1.083	1.874
Suspended	1.355	0.000	0.869	1.000
ELL	-0.126	--	0.000	--

Balance Tables for Talbot

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Graduation				
Male	0.330	0.000	0.855	1.000
Black	0.258	0.000	1.547	1.000
AAPI	0.091	0.000	1.774	1.000
Indigenous	-0.146	--	0.000	--
Multiracial	0.048	0.000	1.340	1.000
Hispanic	0.180	0.000	1.622	1.000
FRL	0.477	0.212	1.131	0.985
Special Education	0.175	0.096	1.478	1.198
Max Test Score	-0.423	-0.312	1.494	1.610
Total Days Absent	0.605	0.547	0.547	1.867
Suspended	0.985	0.141	3.089	1.021
ELL	0.069	0.000	1.526	1.000
Suspension				
Male	0.118	-0.156	1.035	1.111
Black	0.381	0.000	1.837	1.000
AAPI	0.256	0.000	3.822	1.000
Indigenous	-0.144	--	0.000	--
Multiracial	-0.237	--	0.000	--
Hispanic	-0.030	0.000	0.982	1.000
FRL	0.404	0.148	1.199	1.000
Special Education	0.469	0.167	2.242	1.200
Max Test Score	-0.479	-0.261	1.218	1.532
Total Days Absent	0.864	0.743	0.726	1.700
Suspended	0.709	0.000	3.055	1.000
ELL	-0.221	--	0.000	--
Postsecondary				
Male	0.357	0.198	0.860	0.865
Black	-0.004	0.000	1.037	1.000
AAPI	0.121	0.000	1.974	1.000
Indigenous	-0.146	--	0.000	--
Multiracial	0.100	0.000	1.733	1.000
Hispanic	-0.096	0.000	0.725	1.000
FRL	0.257	0.095	1.214	1.038
Special Education	0.237	0.125	1.708	1.259
Max Test Score	-0.006	0.030	0.862	0.672
Total Days Absent	0.678	0.567	0.760	1.768
Suspended	0.735	0.198	3.189	1.156
ELL	-0.146	--	0.000	--

Balance Tables for Washington

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Graduation				
Male	0.408	0.121	0.852	0.915
Black	0.485	0.032	2.319	1.032
AAPI	-0.191	--	0.000	--
Indigenous	-0.220	--	0.000	--
Multiracial	0.127	0.000	1.574	1.000
Hispanic	0.106	0.000	1.450	1.000
FRL	0.769	-0.033	0.817	1.039
Special Education	0.346	0.036	2.178	1.058
Max Test Score	-0.743	-0.133	1.711	1.463
Total Days Absent	0.769	0.123	4.735	2.229
Suspended	1.412	0.029	3.392	0.985
ELL	-0.163	--	0.000	--
Suspension				
Male	0.502	0.208	0.791	0.836
Black	0.093	0.100	1.299	1.286
AAPI	-0.192	--	0.000	--
Indigenous	-0.220	--	0.000	--
Multiracial	0.169	0.000	1.831	1.000
Hispanic	0.143	0.000	1.645	1.000
FRL	0.764	-9.074	0.835	1.095
Special Education	0.405	0.078	2.421	1.120
Max Test Score	-0.670	-0.247	1.805	1.884
Total Days Absent	0.799	0.151	7.693	2.470
Suspended	1.140	0.064	4.407	1.000
ELL	-0.163	--	0.000	--
Postsecondary				
Male	0.222	-0.088	0.965	1.052
Black	0.447	0.048	2.192	1.052
AAPI	-0.209	--	0.000	--
Indigenous	-0.219	--	0.000	--
Multiracial	0.198	0.000	1.944	1.000
Hispanic	0.035	0.000	1.162	1.000
FRL	0.703	0.000	0.916	1.000
Special Education	0.212	0.000	1.735	1.000
Max Test Score	-0.581	-0.080	1.440	1.527
Total Days Absent	0.759	0.241	3.092	2.267
Suspended	1.148	0.000	3.808	1.000
ELL	-0.178	--	0.000	--

Balance Tables for Wicomico

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Graduation				
Male	0.245	-0.013	0.990	1.004
Black	0.569	0.040	1.160	0.989
AAPI	-0.254	0.000	0.146	1.000
Indigenous	-0.090	--	0.000	--
Multiracial	0.062	0.000	1.271	1.000
Hispanic	-0.113	0.000	0.654	1.000
FRL	0.632	0.016	0.702	0.980
Special Education	0.259	0.000	1.914	1.000
Max Test Score	-0.478	-0.078	1.941	1.343
Total Days Absent	0.919	0.241	3.515	1.690
Suspended	1.602	0.051	0.888	0.919
ELL	-0.225	0.000	0.169	1.000
Suspension				
Male	0.081	-0.022	1.018	1.000
Black	0.466	0.066	1.192	0.997
AAPI	-0.316	--	0.000	--
Indigenous	-0.090	--	0.000	--
Multiracial	0.142	0.000	1.654	1.000
Hispanic	-0.029	0.000	0.915	1.000
FRL	0.768	0.056	0.586	0.913
Special Education	0.183	0.000	1.644	1.000
Max Test Score	-0.458	-0.015	1.948	1.242
Total Days Absent	1.013	0.271	4.349	1.744
Suspended	1.634	0.131	1.144	0.840
ELL	-0.188	0.000	0.281	1.000
Postsecondary				
Male	0.138	0.073	1.017	0.998
Black	0.518	0.000	1.161	1.000
AAPI	-0.208	0.000	0.269	1.000
Indigenous	-0.093	--	0.000	--
Multiracial	0.066	0.000	1.316	1.000
Hispanic	-0.039	0.000	0.882	1.000
FRL	0.428	0.000	1.024	1.000
Special Education	0.017	0.000	1.064	1.000
Max Test Score	-0.165	0.043	1.241	1.035
Total Days Absent	0.786	0.204	2.366	1.140
Suspended	1.250	-0.027	1.325	1.028
ELL	-0.163	0.000	0.338	1.000

Balance Tables for Worcester

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Graduation				
Male	0.307	-0.060	0.936	1.040
Black	0.687	0.087	1.960	1.026
AAPI	-0.211	--	0.000	--
Indigenous	-0.105	--	0.000	--
Multiracial	-0.140	0.000	0.527	1.000
Hispanic	0.027	0.000	1.187	1.000
FRL	0.619	-0.061	1.002	1.044
Special Education	0.404	0.035	2.437	1.052
Max Test Score	-0.617	-0.141	1.270	1.462
Total Days Absent	0.774	0.343	1.416	1.130
Suspended	1.054	0.323	3.078	1.035
ELL	-0.074	--	0.000	--
Suspension				
Male	0.100	0.000	1.017	1.000
Black	0.716	0.048	1.991	1.010
AAPI	-0.211	--	0.000	--
Indigenous	-0.105	--	0.000	--
Multiracial	-0.348	--	0.000	--
Hispanic	0.128	0.000	1.977	1.000
FRL	0.690	-0.161	0.966	1.174
Special Education	0.287	0.066	2.048	1.133
Max Test Score	-0.547	-0.158	0.925	1.261
Total Days Absent	0.861	0.336	1.372	1.442
Suspended	1.046	0.244	3.294	1.050
ELL	-0.074	--	0.000	--
Postsecondary				
Male	0.200	0.034	0.993	0.991
Black	0.785	0.101	2.002	1.014
AAPI	-0.212	--	0.000	--
Indigenous	-0.105	--	0.000	--
Multiracial	-0.007	0.000	0.987	1.000
Hispanic	0.057	0.000	1.374	1.000
FRL	0.677	0.035	1.065	0.980
Special Education	0.189	0.000	1.670	1.000
Max Test Score	-0.486	-0.100	0.915	1.634
Total Days Absent	0.752	0.474	1.262	1.689
Suspended	1.070	0.238	3.561	1.051
ELL	-0.074	--	0.000	--

Balance Tables for Baltimore City

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Graduation				
Male	0.478	0.004	0.890	0.997
Black	0.380	0.000	0.321	1.000
AAPI	-0.185	0.000	0.084	1.000
Indigenous	-0.022	0.000	0.629	1.000
Multiracial	-0.061	0.000	0.497	1.000
Hispanic	-0.251	0.000	0.180	1.000
FRL	0.331	0.000	0.519	1.000
Special Education	0.294	0.000	1.548	1.000
Max Test Score	-0.600	-0.027	1.394	1.160
Total Days Absent	0.898	0.058	2.150	1.113
Suspended	0.927	0.011	1.611	0.996
ELL	-0.226	0.000	0.107	1.000
Suspension				
Male	0.378	-0.011	0.947	1.006
Black	0.431	0.000	0.242	1.000
AAPI	-0.210	--	0.000	--
Indigenous	-0.005	0.000	0.903	1.000
Multiracial	-0.033	0.000	0.712	1.000
Hispanic	-0.261	0.000	0.155	1.000
FRL	0.385	0.000	0.442	1.000
Special Education	0.310	0.000	1.575	1.000
Max Test Score	-0.636	-0.028	1.326	1.121
Total Days Absent	1.060	0.063	2.445	1.24
Suspended	0.964	0.015	1.761	0.995
ELL	-0.266	--	0.000	--
Postsecondary				
Male	0.323	0.024	0.990	0.992
Black	0.505	0.000	0.097	1.000
AAPI	-0.201	--	0.000	--
Indigenous	-0.073	--	0.000	--
Multiracial	-0.093	0.000	0.284	1.000
Hispanic	-0.311	--	0.000	--
FRL	0.292	-0.015	0.746	1.021
Special Education	0.253	0.000	1.538	1.000
Max Test Score	-0.509	-0.027	1.042	1.111
Total Days Absent	0.838	0.046	2.812	1.054
Suspended	1.021	0.006	1.713	0.997
ELL	-0.235	--	0.000	--

B5: Balance Tables for Level of Involvement Sensitivity Analysis

Arrest

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Graduation				
Male	0.187	0.000	0.974	1.000
Black	0.288	0.002	1.139	1.000
AAPI	-0.235	0.005	0.311	1.036
Indigenous	-0.004	0.000	0.954	1.000
Multiracial	0.019	0.000	1.085	1.000
Hispanic	-0.100	0.000	0.779	1.000
FRL	0.481	0.005	1.051	0.998
Special Education	0.169	0.007	1.495	1.014
Max Test Score	-0.444	-0.051	1.230	1.221
Total Days Absent	0.678	0.091	2.550	1.120
Suspended	1.152	0.021	2.507	0.993
ELL	-0.173	0.000	0.338	1.000
Suspension				
Male	0.152	0.056	0.984	0.999
Black	0.360	0.001	1.146	1.000
AAPI	-0.246	0.004	0.284	1.031
Indigenous	-0.022	0.000	0.773	1.000
Multiracial	0.021	0.000	1.090	1.000
Hispanic	-0.089	0.000	0.803	1.000
FRL	0.576	0.008	1.009	0.996
Special Education	0.223	0.010	1.656	1.020
Max Test Score	-0.518	-0.052	1.339	1.226
Total Days Absent	0.762	0.087	3.132	1.105
Suspended	1.230	0.021	2.871	0.993
ELL	-0.162	0.000	0.375	1.000
Postsecondary				
Male	0.157	0.003	0.986	0.999
Black	0.292	-0.001	1.144	1.000
AAPI	-0.232	0.003	0.328	1.020
Indigenous	0.008	0.000	1.088	1.000
Multiracial	0.026	0.000	1.114	1.000
Hispanic	-0.097	0.002	0.778	1.004
FRL	0.391	0.005	1.182	1.000
Special Education	0.134	0.012	1.406	1.027
Max Test Score	-0.399	-0.041	1.051	1.153
Total Days Absent	0.691	0.087	2.556	1.133
Suspended	1.105	0.016	2.767	0.997
ELL	-0.173	0.000	0.295	1.000

Adjudication

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Graduation				
Male	0.455	0.000	0.832	1.000
Black	0.510	-0.004	1.127	1.001
AAPI	-0.308	0.000	0.145	1.000
Indigenous	-0.289	0.000	0.704	1.000
Multiracial	-0.050	0.000	0.795	1.000
Hispanic	-0.110	0.019	0.758	1.057
FRL	0.694	0.020	0.939	0.985
Special Education	0.250	0.016	1.741	1.025
Max Test Score	-0.726	-0.058	1.563	1.168
Total Days Absent	0.923	0.078	4.342	1.069
Suspended	1.550	0.032	2.120	0.971
ELL	-0.154	0.000	0.402	1.000
Suspension				
Male	0.357	-0.006	0.897	1.005
Black	0.639	-0.006	1.077	1.003
AAPI	-0.309	0.000	0.144	1.000
Indigenous	-0.021	0.000	0.780	1.000
Multiracial	-0.051	0.000	0.793	1.000
Hispanic	-0.081	0.021	0.823	1.057
FRL	0.829	0.007	0.841	0.992
Special Education	0.313	0.015	1.929	1.023
Max Test Score	-0.846	-0.075	1.591	1.029
Total Days Absent	1.002	0.082	5.906	1.067
Suspended	1.513	0.033	2.584	0.976
ELL	-0.100	0.000	0.589	1.000
Postsecondary				
Male	0.418	0.016	0.865	0.988
Black	0.541	-0.005	1.125	1.002
AAPI	-0.311	0.000	0.152	1.000
Indigenous	-0.038	0.000	0.623	1.000
Multiracial	-0.040	0.000	0.839	1.000
Hispanic	-0.152	0.019	0.658	1.066
FRL	0.603	-0.005	1.145	1.002
Special Education	0.157	0.000	1.477	1.000
Max Test Score	-0.657	-0.023	1.248	1.147
Total Days Absent	0.844	0.078	4.977	1.108
Suspended	1.484	0.005	2.438	0.996
ELL	-0.177	0.000	0.281	1.000

Nonresidential

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Graduation				
Male	0.414	0.003	0.860	0.998
Black	0.465	0.005	1.137	0.999
AAPI	-0.288	0.000	0.188	1.000
Indigenous	0.018	0.000	1.217	1.000
Multiracial	-0.018	0.000	0.925	1.000
Hispanic	-0.193	0.005	0.586	1.016
FRL	0.654	-0.018	0.964	1.013
Special Education	0.328	0.009	1.965	1.013
Max Test Score	-0.663	-0.072	1.377	1.217
Total Days Absent	0.804	0.124	3.655	1.156
Suspended	1.540	0.018	2.131	0.984
ELL	-0.188	0.000	0.292	1.000
Suspension				
Male	0.383	-0.015	0.880	1.012
Black	0.489	0.000	1.133	1.000
AAPI	-0.311	0.000	0.139	1.000
Indigenous	0.010	0.000	1.120	1.000
Multiracial	-0.005	0.000	0.980	1.000
Hispanic	-0.206	0.007	0.570	1.025
FRL	0.731	-0.019	0.914	1.018
Special Education	0.338	0.009	1.996	1.012
Max Test Score	-0.681	-0.085	1.443	1.212
Total Days Absent	0.811	0.118	4.614	1.184
Suspended	1.503	0.019	2.594	0.986
ELL	-0.172	0.000	0.343	1.000
Postsecondary				
Male	0.385	0.000	0.885	1.000
Black	0.473	0.013	1.143	0.998
AAPI	-0.290	0.000	0.195	1.000
Indigenous	0.033	0.000	1.400	1.000
Multiracial	-0.022	0.000	0.911	1.000
Hispanic	-0.155	0.006	0.652	1.020
FRL	0.580	0.013	1.153	0.996
Special Education	0.290	0.017	1.900	1.028
Max Test Score	-0.597	-0.077	1.249	1.235
Total Days Absent	0.794	0.109	3.543	1.089
Suspended	1.451	0.017	2.474	0.988
ELL	-0.166	0.000	0.317	1.000

Residential

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Graduation				
Male	0.725	0.031	0.608	0.953
Black	0.857	0.003	0.934	0.997
AAPI	-0.348	0.000	0.063	1.000
Indigenous	-0.031	0.000	0.682	1.000
Multiracial	-0.040	0.000	0.834	1.000
Hispanic	-0.214	0.000	0.545	1.000
FRL	0.993	0.013	0.704	0.981
Special Education	0.473	0.003	2.349	1.003
Max Test Score	-0.994	-0.104	2.435	1.289
Total Days Absent	1.193	0.100	5.735	1.022
Suspended	1.843	0.013	1.757	0.983
ELL	-0.233	0.000	0.163	1.000
Suspension				
Male	0.616	0.000	0.705	1.000
Black	0.016	0.022	0.807	0.973
AAPI	-0.357	0.000	0.048	1.000
Indigenous	-0.022	0.000	0.770	1.000
Multiracial	-0.087	0.000	0.657	1.000
Hispanic	-0.254	0.000	0.467	1.000
FRL	1.147	0.017	0.570	0.969
Special Education	0.507	0.007	2.433	1.006
Max Test Score	-0.118	-0.073	1.876	1.012
Total Days Absent	1.448	0.093	8.621	0.991
Suspended	1.787	0.007	2.221	0.992
ELL	-0.212	0.000	0.221	1.000
Postsecondary				
Male	0.588	0.065	0.737	0.930
Black	0.893	0.007	0.918	0.993
AAPI	-0.363	0.000	0.048	1.000
Indigenous	0.015	0.000	1.174	1.000
Multiracial	-0.085	0.000	0.667	1.000
Hispanic	-0.279	0.000	0.400	1.000
FRL	0.725	-0.040	1.086	1.026
Special Education	0.387	0.008	2.188	1.010
Max Test Score	-0.862	-0.125	2.067	1.572
Total Days Absent	1.179	0.141	5.590	1.164
Suspended	1.688	0.028	2.182	0.971
ELL	-0.241	0.000	0.089	1.000

B6: Balance Tables by Race

White

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Graduation				
Male	0.348	-0.003	0.878	1.002
FRL	0.608	0.007	1.793	1.002
Special Education	0.168	-0.002	1.539	0.996
Max Test Score	-0.502	-0.043	1.617	1.399
Total Days Absent	0.838	0.094	2.453	1.198
Suspended	1.208	0.009	3.473	0.998
ELL	-0.064	0.000	0.195	1.000
Suspension				
Male	0.350	0.006	0.878	0.996
FRL	0.676	0.011	1.819	1.002
Special Education	0.238	0.004	1.773	1.007
Max Test Score	-0.506	-0.044	1.660	1.442
Total Days Absent	0.859	0.093	2.855	1.213
Suspended	1.286	0.006	4.121	0.998
ELL	-0.086	--	0.000	--
Postsecondary				
Male	0.321	0.004	0.898	0.997
FRL	0.418	0.010	1.806	1.009
Special Education	0.091	0.000	1.299	1.000
Max Test Score	-0.394	-0.038	1.184	1.256
Total Days Absent	0.741	0.112	2.186	1.272
Suspended	1.045	0.008	2.859	1.001
ELL	-0.056	0.000	0.264	1.000

Black

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Graduation				
Male	0.385	-0.001	0.904	1.001
FRL	0.454	-0.006	0.706	1.008
Special Education	0.267	0.007	1.604	1.010
Max Test Score	-0.521	-0.054	1.618	1.203
Total Days Absent	0.790	0.097	3.016	1.101
Suspended	1.302	0.016	1.238	0.983
ELL	-0.189	0.000	0.125	1.000
Suspension				
Male	0.289	0.005	0.953	0.998
FRL	0.547	-0.006	0.619	1.009
Special Education	0.278	0.007	1.629	1.009
Max Test Score	-0.579	-0.050	1.526	1.144
Total Days Absent	0.911	0.095	3.983	1.095
Suspended	1.311	0.016	1.448	0.985
ELL	-0.191	0	0.119	1.000
Postsecondary				
Male	0.276	0.008	0.963	0.997
FRL	0.357	-0.012	0.884	1.009
Special Education	0.193	0.003	1.465	1.005
Max Test Score	-0.402	-0.048	1.247	1.214
Total Days Absent	0.760	0.090	2.995	1.087
Suspended	1.279	0.019	1.377	0.982
ELL	-0.191	0.000	0.125	1.000

AAPI

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Graduation				
Male	0.403	0.000	0.882	1.000
FRL	0.265	-0.123	1.254	0.955
Special Education	0.149	0.067	2.006	1.312
Max Test Score	-0.402	-0.125	1.155	1.799
Total Days Absent	0.914	0.322	4.848	1.360
Suspended	1.010	1.158	9.951	1.101
ELL	-0.143	0.000	0.682	1.000
Suspension				
Male	0.144	-0.118	1.016	1.044
FRL	0.332	-0.234	1.309	0.972
Special Education	0.248	0.111	2.876	1.453
Max Test Score	-0.376	-0.054	1.265	1.969
Total Days Absent	0.894	0.335	5.204	1.589
Suspended	1.134	0.118	12.298	1.044
ELL	-0.002	-0.086	1.026	0.828
Postsecondary				
Male	0.324	-0.152	0.935	1.125
FRL	0.097	-0.040	1.142	0.961
Special Education	0.196	0.073	2.335	1.308
Max Test Score	-0.323	-0.139	0.950	1.438
Total Days Absent	0.834	0.311	4.727	1.882
Suspended	0.894	0.154	10.254	1.143
ELL	-0.300	-0.086	0.347	0.679

Indigenous

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Graduation				
Male	-0.169	-0.064	0.950	0.962
FRL	0.411	0.127	1.457	1.069
Special Education	0.119	0.115	1.513	1.450
Max Test Score	-0.535	-0.444	2.051	3.961
Total Days Absent	0.804	0.413	2.399	2.470
Suspended	0.847	0.126	3.093	1.050
ELL	-0.069	--	0.000	---
Suspension				
Male	-0.374	-0.264	0.816	0.800
FRL	0.412	0.252	1.536	1.145
Special Education	0.215	0.209	2.013	1.867
Max Test Score	-0.523	-0.420	0.533	1.115
Total Days Absent	0.851	0.460	4.203	3.405
Suspended	1.174	0.122	3.535	0.984
ELL	-0.069	--	0.000	--
Postsecondary				
Male	-0.174	-0.136	0.943	0.926
FRL	0.384	0.289	1.523	1.298
Special Education	0.152	0.000	1.681	1.000
Max Test Score	-0.513	-0.314	2.418	3.401
Total Days Absent	0.854	0.255	2.728	1.367
Suspended	0.879	0.134	3.514	1.057
ELL	--	--	--	--

Multiracial

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Graduation				
Male	0.142	0.020	1.012	0.999
FRL	0.785	0.062	1.116	0.965
Special Education	0.154	0.047	1.543	1.124
Max Test Score	-0.738	-0.162	1.411	1.379
Total Days Absent	0.909	0.241	3.695	1.964
Suspended	1.621	0.190	2.559	0.877
ELL	-0.113	--	0.000	--
Suspension				
Male	0.071	0.017	1.017	1.001
FRL	0.873	0.092	1.061	0.937
Special Education	0.236	0.050	1.855	1.111
Max Test Score	-0.750	-0.194	1.378	1.560
Total Days Absent	0.945	0.291	4.222	2.077
Suspended	1.617	0.235	3.120	0.879
ELL	-0.113	--	0.000	--
Postsecondary				
Male	0.019	-0.065	1.010	0.993
FRL	0.737	0.118	1.312	0.972
Special Education	0.075	0.047	1.270	1.150
Max Test Score	-0.647	-0.238	1.004	1.291
Total Days Absent	0.839	0.251	2.684	1.526
Suspended	1.468	0.095	3.029	0.950
ELL	-0.111	--	0.000	--

Hispanic

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Graduation				
Male	0.416	0.006	0.838	0.995
FRL	0.260	-0.006	0.851	1.006
Special Education	0.140	0.016	1.403	1.034
Max Test Score	-0.336	-0.112	1.084	1.332
Total Days Absent	0.773	0.141	1.998	1.161
Suspended	1.249	0.034	2.845	0.988
ELL				
Suspension				
Male	0.364	-0.021	0.875	1.016
FRL	0.254	0.000	0.867	1.000
Special Education	0.188	0.027	1.548	1.053
Max Test Score	-0.369	-0.118	1.037	1.335
Total Days Absent	0.869	0.147	2.586	1.205
Suspended	1.305	0.029	3.279	0.989
ELL	-0.086	0.027	0.866	1.053
Postsecondary				
Male	0.383	-0.008	0.884	1.006
FRL	0.222	-0.016	0.966	1.007
Special Education	0.129	0.048	1.376	1.113
Max Test Score	-0.274	-0.074	1.195	1.533
Total Days Absent	0.735	0.163	2.228	1.253
Suspended	1.156	0.024	3.447	0.997
ELL	-0.173	0.000	0.671	1.000

B7: Balance Tables by Sex

Female

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Graduation				
Black	0.390	0.005	1.118	0.999
AAPI	-0.272	0.000	0.223	1.000
Indigenous	0.051	0.006	1.606	1.049
Multiracial	0.063	0.000	1.273	1.000
Hispanic	-0.166	0.003	0.631	1.009
FRL	0.598	-0.003	0.971	1.002
Special Education	0.169	0.009	1.647	1.021
Max Test Score	-0.555	-0.054	1.176	1.216
Total Days Absent	0.819	0.107	3.160	1.101
Suspended	1.336	0.049	2.749	0.977
ELL	-0.188	0.000	0.268	1.000
Suspension				
Black	0.500	-0.002	1.094	1.001
AAPI	-0.257	0.000	0.258	1.000
Indigenous	0.042	0.010	1.490	1.090
Multiracial	0.063	0.000	1.271	1.000
Hispanic	-0.166	0.004	0.635	1.014
FRL	0.700	0.002	0.906	0.998
Special Education	0.210	0.013	1.813	1.031
Max Test Score	-0.623	-0.061	1.202	1,175
Total Days Absent	0.890	0.109	4.071	1.063
Suspended	1.451	0.055	3.066	0.970
ELL	-0.172	0.000	0.318	1.000
Postsecondary				
Black	0.402	0.008	1.123	0.999
AAPI	-0.263	0.000	0.254	1.000
Indigenous	0.068	0.007	1.839	1.052
Multiracial	0.076	0.000	1.325	1.000
Hispanic	-0.173	0.007	0.611	1.023
FRL	0.513	-0.005	1.126	1.001
Special Education	0.108	0.006	1.420	1.017
Max Test Score	-0.519	-0.053	0.978	1.137
Total Days Absent	0.804	0.107	3.405	1.149
Suspended	1.265	0.044	3.066	0.985
ELL	-0.176	0.000	0.271	1.000

Male

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Graduation				
Black	0.441	-0.002	1.163	1.000
AAPI	-0.258	0.003	0.250	1.022
Indigenous	-0.041	0.000	0.566	1.000
Multiracial	-0.032	0.002	0.860	1.009
Hispanic	-0.128	0.005	0.724	1.014
FRL	0.597	0.007	1.009	0.996
Special Education	0.247	0.009	1.565	1.013
Max Test Score	-0.575	-0.069	1.649	1.252
Total Days Absent	0.824	0.104	3.922	1.142
Suspended	1.320	0.043	1.875	0.970
ELL	-0.179	0.000	0.337	1.000
Suspension				
Black	0.481	0.001	1.158	1.000
AAPI	-0.282	0.000	0.197	1.000
Indigenous	-0.062	0.000	0.383	1.000
Multiracial	-0.034	0.004	0.852	1.018
Hispanic	-0.118	0.005	0.746	1.013
FRL	0.695	0.008	0.950	0.994
Special Education	0.302	0.014	1.683	1.018
Max Test Score	-0.636	-0.063	1.624	1.200
Total Days Absent	0.906	0.098	5.552	1.145
Suspended	1.350	0.043	2.196	0.973
ELL	-0.145	0.000	0.445	1.000
Postsecondary				
Black	0.384	-0.001	1.172	1.000
AAPI	-0.250	0.000	0.282	1.000
Indigenous	-0.022	0.000	0.750	1.000
Multiracial	-0.042	0.000	0.822	1.000
Hispanic	-0.108	0.004	0.753	1.011
FRL	0.446	0.006	1.214	1.014
Special Education	0.182	0.008	1.437	1.301
Max Test Score	-0.451	-0.069	1.367	1.148
Total Days Absent	0.787	0.111	3.224	1.148
Suspended	1.212	0.037	2.193	0.983
ELL	-0.175	0.000	0.296	1.000

B8: Balance Tables by Race-Sex

White Girls

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Graduation				
FRL	0.669	0.013	1.801	1.002
Special Education	0.054	0.009	1.220	1.031
Max Test Score	-0.547	-0.089	1.400	1.595
Total Days Absent	0.920	0.109	2.142	1.216
Suspended	1.149	0.009	5.168	1.000
ELL	-0.016	0.000	0.739	1.000
Suspension				
FRL	0.684	0.035	1.808	1.006
Special Education	0.075	0.034	1.310	1.123
Max Test Score	-0.501	-0.089	1.335	1.655
Total Days Absent	0.948	0.084	2.369	1.013
Suspended	1.181	0.009	6.171	1.000
ELL	-0.078	--	0.000	--
Postsecondary				
FRL	0.498	0.000	1.865	1.000
Special Education	-0.036	0.000	0.862	1.000
Max Test Score	-0.046	-0.102	0.942	1.344
Total Days Absent	0.846	0.975	2.413	1.204
Suspended	0.977	0.006	5.578	1.002
ELL	-0.001	0.000	0.993	1.000

White Boys

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Graduation				
FRL	0.582	0.017	1.796	1.006
Special Education	0.168	0.000	1.431	1.000
Max Test Score	-0.451	-0.036	1.666	1.393
Total Days Absent	0.834	0.106	2.745	1.263
Suspended	1.191	0.020	2.641	0.993
ELL	-0.094	--	0.000	--
Suspension				
FRL	0.675	0.025	1.838	1.005
Special Education	0.257	0.010	1.657	1.016
Max Test Score	-0.478	-0.048	1.745	1.477
Total Days Absent	0.851	0.104	3.275	1.333
Suspended	1.298	0.026	3.105	0.990
ELL	-0.094	--	0.000	--
Postsecondary				
FRL	0.386	0.013	1.799	1.013
Special Education	0.098	0.000	1.261	1.000
Max Test Score	-0.332	-0.012	1.267	1.287
Total Days Absent	0.730	0.110	2.093	1.254
Suspended	1.042	0.201	2.959	0.999
ELL	-0.094	--	0.000	--

Black Girls

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Graduation				
FRL	0.438	-0.032	0.697	1.047
Special Education	0.192	0.026	1.592	1.054
Max Test Score	-0.441	-0.029	1.208	1.186
Total Days Absent	0.767	0.090	2.635	1.068
Suspended	1.345	0.026	1.354	0.974
ELL	-0.212	0.000	0.052	1.000
Suspension				
FRL	0.531	-0.025	0.609	1.044
Special Education	0.219	0.016	1.678	1.030
Max Test Score	-0.507	-0.044	1.210	1.150
Total Days Absent	0.856	0.091	3.211	1.038
Suspended	1.417	0.030	1.519	0.971
ELL	-0.205	0.000	0.077	1.000
Postsecondary				
FRL	0.388	-0.028	0.840	1.026
Special Education	0.139	0.015	1.448	1.034
Max Test Score	-0.417	-0.024	0.999	1.152
Total Days Absent	0.772	0.086	3.104	1.085
Suspended	1.338	0.028	1.474	0.974
ELL	-0.209	0.000	0.063	1.000

Black Boys

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Graduation				
FRL	0.482	0.003	0.709	0.996
Special Education	0.242	0.006	1.411	1.007
Max Test Score	-0.517	-0.071	1.683	1.232
Total Days Absent	0.830	0.101	3.468	1.126
Suspended	1.244	0.017	1.143	0.982
ELL	-0.177	0.000	0.164	1.000
Suspension				
FRL	0.574	0.006	0.625	0.990
Special Education	0.264	0.008	1.445	1.008
Max Test Score	-0.589	-0.063	1.592	1.156
Total Days Absent	0.965	0.102	4.804	1.140
Suspended	1.221	0.032	1.366	0.973
ELL	-0.182	0.000	0.147	1.000
Postsecondary				
FRL	0.356	-0.009	0.913	1.006
Special Education	0.177	-0.005	1.322	0.994
Max Test Score	-0.364	-0.062	1.343	1.275
Total Days Absent	0.810	0.090	3.286	1.072
Suspended	0.216	0.024	1.285	0.979
ELL	-0.179	0.000	0.165	1.000

AAPI Girls

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Graduation				
FRL	0.406	0.192	1.416	1.102
Special Education	0.137	0.309	2.196	--
Max Test Score	-0.350	-0.233	1.143	1.727
Total Days Absent	0.973	0.459	4.310	1.919
Suspended	1.012	0.097	17.208	1.061
ELL	-0.494	--	0.000	--
Suspension				
FRL	0.623	0.129	1.468	1.000
Special Education	0.212	0.365	3.075	--
Max Test Score	-0.555	-0.360	1.264	2.557
Total Days Absent	0.952	0.611	1.937	2.057
Suspended	1.224	0.130	24.923	1.037
ELL	-0.494	--	0.000	--
Postsecondary				
FRL	0.049	0.000	1.119	1.000
Special Education	0.141	0.000	2.290	1.000
Max Test Score	-0.261	-0.108	0.916	1.228
Total Days Absent	0.945	0.396	5.717	1.781
Suspended	0.943	0.104	17.153	1.083
ELL	-0.490	--	0.000	--

AAPI Boys

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Graduation				
FRL	0.173	-0.180	1.175	0.928
Special Education	0.130	0.096	1.756	1.465
Max Test Score	-0.371	-0.163	1.141	1.795
Total Days Absent	0.887	0.339	4.936	1.366
Suspended	0.973	0.232	7.080	1.168
ELL	0.053	0.000	0.902	1.000
Suspension				
FRL	0.088	-0.425	1.143	0.867
Special Education	0.260	0.191	2.742	1.889
Max Test Score	-0.218	-0.068	1.324	1.667
Total Days Absent	0.922	0.322	7.226	1.532
Suspended	1.025	0.105	8.316	1.048
ELL	0.217	0.000	1.567	1.000
Postsecondary				
FRL	1.265	0.000	1.191	1.000
Special Education	0.190	0.108	2.159	1.456
Max Test Score	-0.312	-0.262	0.971	1.693
Total Days Absent	0.754	0.269	4.174	1.658
Suspended	0.837	0.247	7.380	1.286
ELL	-0.231	0.000	0.507	1.000

Indigenous Girls

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Graduation				
FRL	0.244	0.220	1.435	1.324
Special Education	-0.308	--	0.000	--
Max Test Score	-0.515	-0.291	0.986	1.025
Total Days Absent	0.722	0.186	3.917	1.288
Suspended	0.695	-0.097	3.763	0.942
ELL	--	--	--	--
Suspension				
FRL	0.342	0.176	1.623	1.185
Special Education	-0.308	--	0.000	--
Max Test Score	-0.728	-0.266	1.253	0.910
Total Days Absent	0.787	0.128	6.465	1.379
Suspended	1.077	-0.161	4.671	1.029
ELL	--	--	--	--
Postsecondary				
FRL	0.244	0.246	1.531	1.471
Special Education	-0.311	--	0.000	--
Max Test Score	-0.452	-0.429	0.818	1.524
Total Days Absent	0.714	0.254	3.291	1.342
Suspended	0.774	0.104	4.618	1.083
ELL	--	--	--	--

Indigenous Boys

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Graduation				
FRL	0.778	0.354	1.294	0.933
Special Education	0.493	0.208	2.840	1.333
Max Test Score	-0.733	-0.526	2.734	3.899
Total Days Absent	0.984	0.766	1.001	1.650
Suspended	1.208	0.541	2.359	1.000
ELL	--	--	--	--
Suspension				
FRL	1.023	0.463	1.271	0.750
Special Education	0.920	0.463	4.339	1.333
Max Test Score	-0.330	0.127	0.133	0.262
Total Days Absent	1.030	0.865	1.889	2.586
Suspended	1.552	1.000	2.633	1.000
ELL				
Postsecondary				
FRL	0.715	0.387	1.387	1
Special Education	0.574	0.221	3.302	1.313
Max Test Score	-0.740	-0.361	3.610	4.479
Total Days Absent	1.125	0.713	2.028	2.186
Suspended	1.143	0.387	2.684	1.000
ELL	--	--	--	--

Multiracial Girls

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Graduation				
FRL	0.584	0.063	1.160	0.982
Special Education	0.185	0.000	1.835	1.000
Max Test Score	-0.618	-0.162	1.315	1.428
Total Days Absent	0.936	0.256	3.202	1.173
Suspended	1.516	0.382	3.360	0.906
ELL	-0.127	--	0.000	--
Suspension				
FRL	0.643	0.102	1.143	0.965
Special Education	0.278	0.050	2.317	1.121
Max Test Score	-0.688	-0.181	1.395	1.200
Total Days Absent	0.958	0.376	3.492	1.600
Suspended	1.582	0.380	3.895	0.899
ELL	-0.127	--	0.000	--
Postsecondary				
FRL	0.566	-0.024	1.263	1.005
Special Education	0.126	0.000	1.573	1.000
Max Test Score	-0.559	-0.213	0.988	1.255
Total Days Absent	0.864	0.371	2.433	1.782
Suspended	1.438	0.341	3.703	0.943
ELL	-0.122	--	0.000	--

Multiracial Boys

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Graduation				
FRL	1.003	0.143	1.057	0.894
Special Education	0.111	0.088	1.322	1.232
Max Test Score	-0.838	-0.288	1.431	1.458
Total Days Absent	0.897	0.271	4.235	2.356
Suspended	1.703	0.031	1.933	0.783
ELL	-0.094	--	0.000	--
Suspension				
FRL	1.159	0.199	0.931	0.817
Special Education	0.188	0.156	1.556	1.410
Max Test Score	-0.810	-0.332	1.353	1.838
Total Days Absent	0.936	0.369	5.129	3.486
Suspended	1.637	0.262	2.518	0.843
ELL	-0.094	--	0.000	--
Postsecondary				
FRL	0.961	0.289	1.389	0.918
Special Education	0.021	0.101	1.074	1.357
Max Test Score	-0.752	-0.371	0.987	1.361
Total Days Absent	0.813	0.227	3.060	1.748
Suspended	1.499	0.149	2.465	0.910
ELL	-0.096	--	0.000	--

Hispanic Girls

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Graduation				
FRL	0.324	-0.042	0.825	1.045
Special Education	0.088	0.033	1.326	1.100
Max Test Score	-0.305	-0.076	0.702	1.003
Total Days Absent	0.819	0.156	2.463	1.432
Suspended	1.113	0.074	4.010	1.003
ELL	-0.156	0.000	0.738	1.000
Suspension				
FRL	0.311	-0.033	0.841	1.034
Special Education	0.078	0.054	1.294	1.181
Max Test Score	0.312	-0.181	0.736	1.087
Total Days Absent	0.953	0.200	3.167	1.481
Suspended	1.342	0.119	4.400	0.975
ELL	-0.071	0.042	0.890	1.092
Postsecondary				
FRL	0.369	-0.026	0.894	1.020
Special Education	0.020	0.048	1.086	1.184
Max Test Score	-0.245	-0.033	0.714	1.284
Total Days Absent	0.784	0.175	2.020	1.244
Suspended	1.085	0.049	4.432	1.005
ELL	-0.110	0.000	0.791	1.000

Hispanic Boys

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Graduation				
FRL	0.211	-0.009	0.873	1.008
Special Education	0.112	0.032	1.266	1.064
Max Test Score	-0.314	-0.082	1.165	1.295
Total Days Absent	0.762	0.174	1.754	1.275
Suspended	1.256	0.081	2.214	0.962
ELL	-0.228	-0.024	0.656	0.948
Suspension				
FRL	0.207	0.000	0.878	1.000
Special Education	0.189	0.055	1.449	1.096
Max Test Score	-0.361	-0.082	1.104	1.318
Total Days Absent	0.835	0.188	2.257	1.395
Suspended	1.243	0.043	2.668	0.983
ELL	-0.113	0.019	0.837	1.037
Postsecondary				
FRL	0.156	-0.024	0.991	1.007
Special Education	0.124	0.065	1.296	1.134
Max Test Score	-0.271	-0.124	1.396	1.473
Total Days Absent	0.756	0.216	2.478	1.440
Suspended	1.152	0.059	2.816	0.987
ELL	-0.215	0.000	0.608	1.000

B9: Balance Tables for Analyses by DJS Region

Region 1

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Graduation				
Male	0.478	0.004	0.890	0.997
Black	0.380	0.000	0.321	1.000
AAPI	-0.185	0.000	0.084	1.000
Indigenous	-0.022	0.000	0.629	1.000
Multiracial	-0.061	0.000	0.497	1.000
Hispanic	-0.251	0.000	0.180	1.000
FRL	0.331	0.000	0.519	1.000
Special Education	0.294	0.000	1.548	1.000
Max Test Score	-0.600	-0.027	1.394	1.160
Total Days Absent	0.898	0.058	2.150	1.113
Suspended	0.927	0.011	1.611	0.996
ELL	-0.226	0.000	0.107	1.000
Suspension				
Male	0.378	-0.011	0.947	1.006
Black	0.431	0.000	0.242	1.000
AAPI	-0.210	--	0.000	--
Indigenous	-0.005	0.000	0.903	1.000
Multiracial	-0.033	0.000	0.712	1.000
Hispanic	-0.261	0.000	0.155	1.000
FRL	0.385	0.000	0.442	1.000
Special Education	0.310	0.000	1.575	1.000
Max Test Score	-0.636	-0.028	1.326	1.121
Total Days Absent	1.060	0.063	2.445	1.24
Suspended	0.964	0.015	1.761	0.995
ELL	-0.266	--	0.000	--
Postsecondary				
Male	0.323	0.024	0.990	0.992
Black	0.505	0.000	0.097	1.000
AAPI	-0.201	--	0.000	--
Indigenous	-0.073	--	0.000	--
Multiracial	-0.093	0.000	0.284	1.000
Hispanic	-0.311	--	0.000	--
FRL	0.292	-0.015	0.746	1.021
Special Education	0.253	0.000	1.538	1.000
Max Test Score	-0.509	-0.027	1.042	1.111
Total Days Absent	0.838	0.046	2.812	1.054
Suspended	1.021	0.006	1.713	0.997
ELL	-0.235	--	0.000	--

Region 2

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Graduation				
Male	0.324	-0.006	0.913	1.004
Black	0.457	0.000	1.312	1.000
AAPI	-0.275	0.000	0.282	1.000
Indigenous	0.019	0.000	1.234	1.000
Multiracial	-0.040	0.000	0.839	1.000
Hispanic	-0.047	0.000	0.848	1.000
FRL	0.672	0.002	1.162	0.999
Special Education	0.277	0.000	1.845	1.000
Max Test Score	-0.620	-0.004	1.369	1.094
Total Days Absent	0.890	0.047	2.992	1.075
Suspended	1.443	0.000	2.314	1.000
ELL	-0.142	0.000	0.252	1.000
Suspension				
Male	0.283	-0.017	0.935	1.009
Black	0.517	0.003	1.318	1.000
AAPI	-0.308	0.000	0.213	1.000
Indigenous	0.042	0.000	1.550	1.000
Multiracial	-0.061	0.000	0.757	1.000
Hispanic	-0.034	0.000	0.889	1.000
FRL	0.765	0.000	1.114	1.000
Special Education	0.325	0.000	1.990	1.000
Max Test Score	-0.682	0.010	1.237	1.088
Total Days Absent	0.934	0.042	3.805	1.068
Suspended	1.461	0.000	2.803	1.000
ELL	-0.114	0.000	0.377	1.000
Postsecondary				
Male	0.261	0.012	0.948	0.994
Black	0.444	0.000	1.301	1.000
AAPI	-0.254	0.000	0.336	1.000
Indigenous	0.061	0.000	1.840	1.000
Multiracial	-0.026	0.000	0.892	1.000
Hispanic	-0.029	0.000	0.904	1.000
FRL	0.536	-0.002	1.350	1.000
Special Education	0.187	0.003	1.587	1.007
Max Test Score	-0.556	-0.031	1.172	1.203
Total Days Absent	0.850	0.061	2.637	1.162
Suspended	1.298	0.002	2.688	0.999
ELL	-0.135	0.000	0.250	1.000

Region 3

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Graduation				
Male	0.333	-0.037	0.916	1.024
Black	0.503	0.020	1.685	1.009
AAPI	-0.104	0.000	0.395	1.000
Indigenous	-0.028	0.000	0.669	1.000
Multiracial	0.087	0.000	1.380	1.000
Hispanic	-0.008	0.000	0.971	1.000
FRL	0.656	0.000	0.876	1.000
Special Education	0.197	0.005	1.600	1.011
Max Test Score	-0.528	-0.043	1.766	1.272
Total Days Absent	0.795	0.099	2.551	1.259
Suspended	1.346	0.038	1.473	0.965
ELL	-0.079	0.000	0.480	1.000
Suspension				
Male	0.191	-0.043	0.979	1.016
Black	0.526	0.021	1.706	1.009
AAPI	-0.112	0.000	0.358	1.000
Indigenous	-0.039	0.000	0.607	1.000
Multiracial	0.107	0.000	1.477	1.000
Hispanic	-0.024	0.000	0.913	1.000
FRL	0.686	0.000	0.856	1.000
Special Education	0.202	0.010	1.621	1.019
Max Test Score	-0.539	-0.037	1.805	1.236
Total Days Absent	0.900	0.113	3.163	1.331
Suspended	1.411	0.046	1.736	0.961
ELL	-0.086	0.000	0.435	1.000
Postsecondary				
Male	0.275	-0.027	0.950	1.014
Black	0.464	0.000	1.658	1.000
AAPI	-0.104	0.000	0.400	1.000
Indigenous	-0.001	0.000	0.983	1.000
Multiracial	0.132	0.000	1.607	1.000
Hispanic	-0.0003	0.000	1.001	1.000
FRL	0.509	-0.005	1.076	1.002
Special Education	0.101	0.008	1.306	1.020
Max Test Score	-0.370	-0.009	1.279	1.147
Total Days Absent	0.700	0.114	2.014	1.279
Suspended	1.118	0.022	1.806	0.989
ELL	-0.050	0.000	0.612	1.000

Region 4

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Graduation				
Male	0.414	0.000	0.853	1.000
Black	0.443	-0.017	0.970	1.009
AAPI	-0.304	0.000	0.291	1.000
Indigenous	0.024	0.000	1.412	1.000
Multiracial	-0.077	0.000	0.686	1.000
Hispanic	-0.064	0.006	0.920	1.008
FRL	0.496	-0.005	0.955	1.003
Special Education	0.263	0.000	1.719	1.000
Max Test Score	-0.659	-0.038	1.447	1.197
Total Days Absent	0.998	0.064	2.924	1.127
Suspended	1.365	0.010	2.567	0.994
ELL	-0.180	0.000	0.515	1.000
Suspension				
Male	0.358	-0.009	0.890	1.006
Black	0.521	-0.035	0.928	1.025
AAPI	-0.295	0.000	0.309	1.000
Indigenous	-0.001	0.000	0.987	1.000
Multiracial	-0.119	0.000	0.527	1.000
Hispanic	-0.060	0.015	0.926	1.022
FRL	0.647	-0.009	0.861	1.008
Special Education	0.301	0.000	1.820	1.000
Max Test Score	-0.729	-0.023	1.279	1.090
Total Days Absent	1.114	0.076	3.502	1.115
Suspended	1.443	0.004	2.900	0.997
ELL	-0.121	0.000	0.665	1.000
Postsecondary				
Male	0.350	-0.004	0.904	1.002
Black	0.437	-0.007	0.972	1.004
AAPI	-0.302	0.000	0.310	1.000
Indigenous	0.031	0.000	1.530	1.000
Multiracial	-0.080	0.000	0.676	1.000
Hispanic	-0.086	0.000	0.885	1.000
FRL	0.386	0.003	1.106	1.000
Special Education	0.216	0.000	1.606	1.000
Max Test Score	-0.578	-0.027	1.310	1.247
Total Days Absent	0.941	0.057	3.022	1.161
Suspended	1.287	0.003	2.980	0.999
ELL	-0.186	0.000	0.464	1.000

Region 5

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Graduation				
Male	0.261	0.013	0.934	0.993
Black	0.383	-0.006	1.346	0.998
AAPI	-0.133	0.000	0.422	1.000
Indigenous	-0.049	0.000	0.678	1.000
Multiracial	0.037	0.000	1.137	1.000
Hispanic	-0.059	0.004	0.826	1.015
FRL	0.585	0.012	1.383	1.000
Special Education	0.204	0.000	1.751	1.000
Max Test Score	-0.479	-0.032	1.608	1.245
Total Days Absent	0.860	0.072	2.822	1.263
Suspended	1.390	0.009	2.119	0.993
ELL	-0.089	0.000	0.454	1.000
Suspension				
Male	0.182	0.036	0.969	0.988
Black	0.366	-0.008	1.339	0.997
AAPI	-0.124	0.000	0.456	1.000
Indigenous	-0.094	0.000	0.429	1.000
Multiracial	0.080	0.000	1.303	1.000
Hispanic	-0.027	0.000	0.919	1.000
FRL	0.606	0.008	1.383	0.999
Special Education	0.216	0.000	1.803	1.000
Max Test Score	-0.464	-0.033	1.561	1.377
Total Days Absent	0.833	0.071	3.694	1.339
Suspended	1.486	0.004	2.361	0.997
ELL	-0.038	0.000	0.746	1.000
Postsecondary				
Male	0.179	0.008	0.971	0.997
Black	0.384	0.003	1.345	1.001
AAPI	-0.120	0.000	0.478	1.000
Indigenous	-0.025	0.000	0.829	1.000
Multiracial	0.005	0.000	1.018	1.000
Hispanic	-0.049	0.000	0.853	1.000
FRL	0.434	-0.003	1.457	0.999
Special Education	0.156	0.000	1.599	1.000
Max Test Score	-0.390	-0.012	1.247	1.163
Total Days Absent	0.769	0.055	2.168	1.149
Suspended	1.255	0.011	2.429	0.995
ELL	-0.092	0.000	0.407	1.000

Region 6

Variable	Standardized Difference Raw	Standard Difference Matched	Variance Ratio Raw	Variance Ratio Matched
Graduation				
Male	0.388	-0.014	0.870	1.011
Black	0.406	0.016	2.369	1.022
AAPI	-0.259	--	0.000	--
Indigenous	-0.036	0.000	0.673	1.000
Multiracial	0.081	0.000	1.347	1.000
Hispanic	-0.077	0.000	0.784	1.000
FRL	0.768	-0.007	1.119	1.004
Special Education	0.265	0.000	1.896	1.000
Max Test Score	-0.653	-0.043	1.590	1.299
Total Days Absent	0.823	0.070	3.723	1.358
Suspended	1.274	0.014	2.836	0.994
ELL	-0.117	0.000	0.237	1.000
Suspension				
Male	0.443	-0.016	0.834	1.015
Black	0.242	0.040	1.824	1.082
AAPI	-0.259	--	0.000	--
Indigenous	-0.030	0.000	0.728	1.000
Multiracial	0.178	0.000	1.814	1.000
Hispanic	-0.029	0.000	0.921	1.000
FRL	0.941	-0.016	1.003	1.015
Special Education	0.370	0.018	2.262	1.026
Max Test Score	-0.698	-0.051	1.592	1.386
Total Days Absent	0.851	0.084	5.321	1.497
Suspended	1.396	0.029	3.193	0.985
ELL	-0.169	--	0.000	--
Postsecondary				
Male	0.389	-0.047	0.872	1.040
Black	0.297	0.000	2.000	1.000
AAPI	-0.264	--	0.000	--
Indigenous	-0.062	0.000	0.461	1.000
Multiracial	0.086	0.000	1.370	1.000
Hispanic	-0.067	0.000	0.806	1.000
FRL	0.678	0.026	1.309	0.994
Special Education	0.208	0.000	1.726	1.000
Max Test Score	-0.530	-0.021	1.321	1.250
Total Days Absent	0.774	0.082	2.803	1.284
Suspended	1.140	0.009	3.200	0.998
ELL	-0.151	--	0.000	--

Chapter 7: Bibliography

Abadie, A., & Spiess, J. (2022). Robust post-matching inference. *Journal of the American Statistical Association*, 117(538), 983-995.

Abrams, L. S. (2006). Listening to juvenile offenders: Can residential treatment prevent recidivism?. *Child and Adolescent Social Work Journal*, 23, 61-85.

Allensworth, E., & Easton, J. Q. (2001). Calculating a Cohort Dropout Rate for the Chicago Public Schools: A Technical Research Report. *Consortium on Chicago School Research*.

American Civil Liberties Union (n.d.). *School-to-Prison Pipeline*. Retrieved from <https://www.aclu.org/issues/juvenile-justice/juvenile-justice-school-prison-pipeline>.

American Immigration Council (2020). *Immigrants in Maryland*. Retrieved from <https://www.americanimmigrationcouncil.org/research/immigrants-in-maryland>.

Amusa, L., Zewotir, T., & North, D. (2019). Evaluation of subset matching methods: Evidence from a monte carlo simulation study. *American Journal of Applied Sciences*, 16(3), 92-100.

Anagnostopoulos, D. (2006). “Real students” and “true demotes”: Ending social promotion and the moral ordering of urban high schools. *American Educational Research Journal*, 43(1), 5-42.

Andersen, T. S. (2015). Race, ethnicity, and structural variations in youth risk of arrest: Evidence from a national longitudinal sample. *Criminal Justice and Behavior*, 42(9), 900-916.

Annie E. Casey Foundation. (2023). “Juvenile Probation.” Retrieved from <https://www.aecf.org/topics/juvenile-probation>.

Apel, R. J., & Sweeten, G. (2010). Propensity score matching in criminology and criminal justice. *Handbook of Quantitative Criminology*, 543-562.

Bailey, D., Ford, O., & Nicely, S. (2018). “Juvenile Re-Entry” *Maryland Department of Juvenile Services*. Retrieved from https://djs.maryland.gov/Documents/research/201804-01-Research_Spotlight.pdf.

Barnert, E. S. (2020). COVID-19 and youth impacted by juvenile and adult criminal justice systems. *Pediatrics*, 146(2).

Barnert, E. S., Perry, R., & Morris, R. E. (2016). Juvenile incarceration and health. *Academic Pediatrics*, 16(2), 99-109.

Barnert, E., Sun, A., Abrams, L., & Chung, P. J. (2019). Reproductive health needs of recently incarcerated youth during community reentry: a systematic review. *BMJ Sexual & Reproductive Health*, 46(3), 161-171.

- Baumer, E. P., Cundiff, K., & Luo, L. (2021). The contemporary transformation of American youth: An analysis of change in the prevalence of delinquency, 1991–2015. *Criminology*, *59*(1), 109-136.
- Bazemore, G., Stinchcomb, J. B., & Leip, L. A. (2004). Scared smart or bored straight? Testing deterrence logic in an evaluation of police-led truancy intervention. *Justice Quarterly*, *21*(2), 269-299.
- Bernburg, J. G., & Krohn, M. D. (2003). Labeling, life chances, and adult crime: The direct and indirect effects of official intervention in adolescence on crime in early adulthood. *Criminology*, *41*(4), 1287-1318.
- Bernburg, J. G., Krohn, M. D., & Rivera, C. J. (2006). Official labeling, criminal embeddedness, and subsequent delinquency: A longitudinal test of labeling theory. *Journal of Research in Crime and Delinquency*, *43*(1), 67-88.
- Bishop, D. M., & Frazier, C. E. (1988). The influence of race in juvenile justice processing. *Journal of Research in Crime and Delinquency*, *25*(3), 242-263.
- Bishop, D. M., Leiber, M., & Johnson, J. (2010). Contexts of decision making in the juvenile justice system: An organizational approach to understanding minority overrepresentation. *Youth Violence and Juvenile Justice*, *8*(3), 213-233.
- Bishop, J. A., & Inderbitzen, H. M. (1995). Peer acceptance and friendship: An investigation of their relation to self-esteem. *The Journal of Early Adolescence*, *15*(4), 476-489.
- Blalock Jr., Hubert M. (1960). A power analysis of racial discrimination. *Social Forces*, *39*(1), 53-59.
- Blalock Jr., Hubert M. (1967). *Toward a Theory of Minority-Group Relations*. Hoboken, NJ: Wiley.
- Blomberg, T. G., Bales, W. D., Mann, K., Piquero, A. R., & Berk, R. A. (2011). Incarceration, education and transition from delinquency. *Journal of Criminal Justice*, *39*(4), 355-365.
- Blumer, H. (1969). *Symbolic interactionism: Perspective and method*. Englewood Cliffs, NJ: Prentice Hall.
- Borschmann, R., Janca, E., Carter, A., Willoughby, M., Hughes, N., Snow, K., ... & Kinner, S. A. (2020). The health of adolescents in detention: a global scoping review. *The Lancet Public Health*, *5*(2), 114-126.
- Braga, A. A., Brunson, R. K., & Drakulich, K. M. (2019). Race, place, and effective policing. *Annual Review of Sociology*, *45*, 535-555.

- Brame, R., & Piquero, A. R. (2003). Selective attrition and the age-crime relationship. *Journal of Quantitative Criminology*, 19, 107-127.
- Brame, R., Turner, M. G., Paternoster, R., & Bushway, S. D. (2012). Cumulative prevalence of arrest from ages 8 to 23 in a national sample. *Pediatrics*, 129(1), 21-27.
- Brayne, S. (2014). Surveillance and system avoidance: Criminal justice contact and institutional attachment. *American Sociological Review*, 79(3), 367-391.
- Brew, B., Alani, F., Li, A., & Wildeman, C. (2022). Sticky stigma: The impact of incarceration on perceptions of personality traits and deservingness. *Social Forces*, 100(4), 1910-1934.
- Bullis, M., & Yovanoff, P. (2002). Those who do not return: Correlates of the work and school engagement of formerly incarcerated youth who remain in the community. *Journal of Emotional and Behavioral Disorders*, 10(2), 66-78.
- Bulman, G., & Fairlie, R. (2022). The impact of COVID-19 on community college enrollment and student success: Evidence from California administrative data. *Education Finance and Policy*, 17(4), 745-764.
- Button, D. M., & Worthen, M. G. (2017). Applying a general strain theory framework to understand school weapon carrying among LGBTQ and heterosexual youth. *Criminology*, 55(4), 806-832.
- Carey, C. A. (2004). No second chance: People with criminal records denied access to public housing. *University of Toledo Law Review*, 36, 545.
- Carey, K. (2002). State Poverty-Based Education Funding: A Survey of Current Programs and Options for Improvement. *Center on Budget and Policy Priorities*.
- Carroll, M. (2007). Educating expelled students after no child left behind: Mending an incentive structure that discourages alternative education and reinstatement. *UCLA Law Review*, 55, 1909.
- Cauffman, E., Scholle, S. H., Mulvey, E., & Kelleher, K. J. (2005). Predicting First Time Involvement in the Juvenile Justice System Among Emotionally Disturbed Youth Receiving Mental Health Services. *Psychological Services*, 2(1), 28.
- Cavendish, W. (2014). Academic attainment during commitment and postrelease education—related outcomes of juvenile justice-involved youth with and without disabilities. *Journal of Emotional and Behavioral Disorders*, 22(1), 41-52.
- Census Bureau (2021). *Maryland's Population Grew 7% to 6,177,224 Last Decade*. Retrieved from [https://www.census.gov/library/stories/state-by-state/maryland-population-change-between-census-decade.html#:~:text=Race%20and%20ethnicity%20\(White%20alone,or%20More%20Races%2010.2%25\)](https://www.census.gov/library/stories/state-by-state/maryland-population-change-between-census-decade.html#:~:text=Race%20and%20ethnicity%20(White%20alone,or%20More%20Races%2010.2%25).).

Census Bureau (2022). Quick Facts: Maryland. Retrieved from <https://www.census.gov/quickfacts/MD>.

Cerrone, K. M. (1999). The Gun-Free Schools Act of 1994: Zero tolerance takes aim at procedural due process. *Pace Law Review*, 20, 131.

Chesnaye, N. C., Stel, V. S., Tripepi, G., Dekker, F. W., Fu, E. L., Zoccali, C., & Jager, K. J. (2022). An introduction to inverse probability of treatment weighting in observational research. *Clinical Kidney Journal*, 15(1), 14-20.

Chesney-Lind, M. (1989). Girls' crime and woman's place: Toward a feminist model of female delinquency. *Crime & Delinquency*, 35(1), 5-29.

Chin, M. J., Quinn, D. M., Dhaliwal, T. K., & Lovison, V. S. (2020). Bias in the air: A nationwide exploration of teachers' implicit racial attitudes, aggregate bias, and student outcomes. *Educational Researcher*, 49(8), 566-578.

Chiricos, T., Barrick, K., Bales, W., & Bontrager, S. (2007). The labeling of convicted felons and its consequences for recidivism. *Criminology*, 45(3), 547-581.

Chu, E. M., & Ready, D. D. (2018). Exclusion and urban public high schools: Short-and long-term consequences of school suspensions. *American Journal of Education*, 124(4), 479-509.

Civil Rights Data Collection (2018). "School Climate and Safety" Retrieved from <https://www2.ed.gov/about/offices/list/ocr/docs/school-climate-and-safety.pdf>.

Clark, H. G., Mathur, S., Brock, L., O'Cummings, M., & Milligan, D. (2016). Transition toolkit 3.0: Meeting the educational needs of youth exposed to the juvenile justice system. *National Technical Assistance Center for the Education of Neglected or Delinquent Children and Youth (NDTAC)*.

Clark, H. G., Mathur, S. R., & Holding, B. (2011). Transition services for juvenile detainees with disabilities: Findings on recidivism. *Education and Treatment of Children*, 511-529.

Code of Maryland Regulations 13A.08.01.11

Cole, H., & Cohen, R. (2013). Breaking down barriers: A case study of juvenile justice personnel perspectives on school reentry. *Journal of Correctional Education (1974-)*, 64(1), 13-35.

Cook, E. C., Buehler, C., & Henson, R. (2009). Parents and peers as social influences to deter antisocial behavior. *Journal of Youth and Adolescence*, 38, 1240-1252.

Council of State Governments (2018). *Leverging the Every Student Succeeds Act to Improve Educational Services in Juvenile Justice Facilities*. Retrieved from

<https://csgjusticecenter.org/publications/leveraging-the-ever-student-succeeds-act-to-improve-educational-services-in-juvenile-justice-facilities>.

Counts, J., Randall, K. N., Ryan, J. B., & Katsiyannis, A. (2018). School resource officers in public schools: A national review. *Education and Treatment of Children, 41*(4), 405-430.

Crenshaw, Kimberlé Williams. (1989). Demarginalizing the intersection of race and sex: A Black feminist critique of antidiscrimination doctrine, feminist theory and antiracist politics. *University of Chicago Legal Forum, 1989*: 139–67.

Curran, F. C. (2019). The law, policy, and portrayal of zero tolerance school discipline: Examining prevalence and characteristics across levels of governance and school districts. *Educational Policy, 33*(2), 319-349.

Davis, E. (2022). Law Enforcement Agencies that Employ School Resource Officers, 2019. Retrieved from <https://bjs.ojp.gov/media/leaesro19.pdf>.

Dept. of Juvenile Services. (n.d.). “Detention.” *Maryland Department of Juvenile Services*. Retrieved from <https://djs.maryland.gov/Pages/detention/Detention.aspx>.

Dept. of Juvenile Services. (n.d.). “Facilities and Offices.” *Maryland Department of Juvenile Services*. Retrieved from <https://djs.maryland.gov/Pages/facilities/index.aspx>.

Dept. of Juvenile Services. (n.d.). “Re-Entry and Aftercare.” *Maryland Department of Juvenile Services*. Retrieved from <https://djs.maryland.gov/Pages/re-entry-aftercare/Re-Entry-Aftercare.aspx>.

Dept. of Juvenile Services (2015). *Maryland Department of Juvenile Services Re-entry Strategic Plan*. Retrieved from https://djs.maryland.gov/Documents/publications/MD-DJS-Re-entry-Strategic-Plan_2015.pdf.

Dept. of Juvenile Services (2020). *Data Resource Guide*. Retrieved from https://djs.maryland.gov/Documents/DRG/Data_Resource_Guide_FY2020.pdf

Dept. of Juvenile Services (2022a). *Data Resource Guide*. Retrieved from https://djs.maryland.gov/Documents/DRG/Data_Resource_Guide_FY2022.pdf

Dept. of Juvenile Services (2022b). *The Maryland Dept. of Juvenile Services: A Decade of Sustained Success*. Retrieved from <https://djs.maryland.gov/Documents/publications/DJS-Accomplishments-2011-2022.pdf>

Dept. of Juvenile Services (2022c). *Maryland Juvenile Services Long-Term Trends*. Retrieved from <https://djs.maryland.gov/Documents/trends/2021-Statewide-Overall-Trends.pdf>

Dept. of Juvenile Services (2022d). *Juvenile Services Education Program*. Retrieved from <https://djs.maryland.gov/Pages/JSEP/JSEP.aspx>.

- Desai, S. R. (2019). "Hurt people, hurt people": The trauma of juvenile incarceration. *The Urban Review*, 51, 638-658.
- Devlin, D. N., & Gottfredson, D. C. (2018). The roles of police officers in schools: Effects on the recording and reporting of crime. *Youth Violence and Juvenile Justice*, 16(2), 208-223.
- Diliberti, M., Jackson, M., Correa, S., & Padgett, Z. (2019). Crime, Violence, Discipline, and Safety in US Public Schools: Findings from the School Survey on Crime and Safety: 2017-18. First Look. NCES 2019-061. *National Center for Education Statistics*.
- DiLulio, J.J. (1995). "The coming of the Super-Predators." *The Washington Examiner*. Retrieved from <https://www.washingtonexaminer.com/magazine/1558817/the-coming-of-the-super-predators/>.
- Downey, D. B., & Pribesh, S. (2004). When race matters: Teachers' evaluations of students' classroom behavior. *Sociology of Education*, 77(4), 267-282.
- Eitle, D., D'Alessio, S. J., & Stolzenberg, L. (2002). Racial threat and social control: A test of the political, economic, and threat of black crime hypotheses. *Social Forces*, 81(2), 557-576.
- Fader, J. J., Kurlychek, M. C., & Morgan, K. A. (2014). The color of juvenile justice: Racial disparities in dispositional decisions. *Social Science Research*, 44, 126-140.
- Fagan, J., Slaughter, E., & Hartstone, E. (1987). Blind justice? The impact of race on the juvenile justice process. *Crime & Delinquency*, 33(2), 224-258.
- Fagan, J., & Zimring, F. E. (Eds.). (2000). *The changing borders of juvenile justice: Transfer of adolescents to the criminal court*. University of Chicago Press.
- Federal Interagency Reentry Council. (2012). Reentry Myth Buster: On Youth Access to Education upon Reentry. Retrieved from <http://bit.ly/1sxm157>.
- Ferguson, A. A. (2000). *Bad boys: Public schools in the making of black masculinity*. Ann Arbor: University of Michigan Press.
- Finn, J. D. (1989). Withdrawing from school. *Review of Educational Research*, 59(2), 117-142.
- Foley, R. M. (2001). Academic characteristics of incarcerated youth and correctional educational programs: A literature review. *Journal of Emotional and Behavioral Disorders*, 9(4), 248-259.
- Ford, J. D., & Blaustein, M. E. (2013). Systemic self-regulation: A framework for trauma-informed services in residential juvenile justice programs. *Journal of Family Violence*, 28, 665-677.

- Ford, J. D., Chapman, J., Connor, D. F., & Cruise, K. R. (2012). Complex trauma and aggression in secure juvenile justice settings. *Criminal Justice and Behavior, 39*(6), 694-724.
- Freiburger, T. L., & Burke, A. S. (2011). Status offenders in the juvenile court: The effects of gender, race, and ethnicity on the adjudication decision. *Youth Violence and Juvenile Justice, 9*(4), 352-365.
- Fronius, T., Darling-Hammond, S., Persson, H., Guckenburg, S., Hurley, N., & Petrosino, A. (2019). Restorative Justice in US Schools: An Updated Research Review. *WestEd*.
- Funk, S. J. (1999). Risk assessment for juveniles on probation: A focus on gender. *Criminal Justice and Behavior, 26*(1), 44-68.
- Gallardo, L. O., Barrasa, A., & Guevara-Viejo, F. (2016). Positive peer relationships and academic achievement across early and midadolescence. *Social Behavior and Personality: An International Journal, 44*(10), 1637-1648.
- Gearhart, M. C., Bender, A., Barnhart, S., & Berg, K. (2022). Exploring police-initiated post-traumatic stress symptomatology, depression, and anxiety using factor Analysis. *Journal of Evidence-Based Social Work, 19*(2), 147-160.
- Geller, A., & Mark, N. (2022). Student absenteeism and the role of police encounters. *Criminology & Public Policy, 21*(4), 893-914.
- Gershenson, S., & Papageorge, N. (2018). The power of teacher expectations: How racial bias hinders student attainment. *Education Next, 18*(1), 64-71.
- Gilliam, W. S., Maupin, A. N., Reyes, C. R., Accavitti, M., & Shic, F. (2016). Do early educators' implicit biases regarding sex and race relate to behavior expectations and recommendations of preschool expulsions and suspensions. *Yale University Child Study Center, 9*(28), 1-16.
- Goldkind, L. (2011). A leadership opportunity for school social workers: Bridging the gaps in school reentry for juvenile justice system youths. *Children & Schools, 33*(4), 229-239.
- Golzari, M., Hunt, S. J., & Anoshiravani, A. (2006). The health status of youth in juvenile detention facilities. *Journal of Adolescent Health, 38*(6), 776-782.
- Gottfredson, D. C., Crosse, S., Tang, Z., Bauer, E. L., Harmon, M. A., Hagen, C. A., & Greene, A. D. (2020). Effects of school resource officers on school crime and responses to school crime. *Criminology & Public Policy, 19*(3), 905-940.
- Granot, Y., Tyler, T. R., & Durkin, A. (2021). Legal socialization during adolescence: The emerging role of school resource officers. *Journal of Social Issues, 77*(2), 414-436.
- Greenwald, R., Hedges, L. V., & Laine, R. D. (1996). The effect of school resources on student achievement. *Review of Educational Research, 66*(3), 361-396.

- Gremmen, M. C., Van den Berg, Y. H., Steglich, C., Veenstra, R., & Dijkstra, J. K. (2018). The importance of near-seated peers for elementary students' academic engagement and achievement. *Journal of Applied Developmental Psychology, 57*, 42-52.
- Guevara, L., Herz, D., & Spohn, C. (2006). Gender and juvenile justice decision making: What role does race play?. *Feminist Criminology, 1*(4), 258-282.
- Hanes, M., & Hanes, A. A. M. (2012). Disproportionate minority contact. *Washington, DC: Office of Juvenile Justice and Delinquency Prevention.*
- Harding, D. J., & Harris, H. M. (2020). After prison: Navigating adulthood in the shadow of the justice system. *Russell Sage Foundation.*
- Heckman, J. J., Humphries, J. E., & Mader, N. S. (2011). The GED. *Handbook of the Economics of Education, 3*, 423-483.
- Heitzeg, N. A. (2009). Education or incarceration: Zero tolerance policies and the school to prison pipeline. *Forum on Public Policy Online, 2009*(2).
- Hemez, P., Brent, J. J., & Mowen, T. J. (2020). Exploring the school-to-prison pipeline: How school suspensions influence incarceration during young adulthood. *Youth Violence and Juvenile Justice, 18*(3), 235-255.
- Hernandez, D. J. (2011). Double jeopardy: How third-grade reading skills and poverty influence high school graduation. *Annie E. Casey Foundation.*
- Hilaire, B., Campbell, L. O., Kelchner, V. P., Laguardia, E. D., & Howard, C. (2022). Not Another School Shooting: Media, Race, and Gun Violence in K-12 Schools. *Education and Urban Society, 55*(7), 809-824.
- Hirschfield, P. J. (2008). Preparing for prison? The criminalization of school discipline in the USA. *Theoretical Criminology, 12*(1), 79-101.
- Hirschfield, P. J. (2008). The declining significance of delinquent labels in disadvantaged urban communities. *Sociological Forum, 23*(3), 575-601.
- Hirschfield, P. (2009). Another way out: The impact of juvenile arrests on high school dropout. *Sociology of Education, 82*(4), 368-393.
- Hirschfield, P. J. (2014). Effective and promising practices in transitional planning and school reentry. *Journal of Correctional Education (1974-), 65*(2), 84-96.
- Hirschi T. (1969). *Causes of Delinquency*. University of California Press.

Hjalmarsson, R. (2008). Criminal justice involvement and high school completion. *Journal of Urban Economics*, 63(2), 613-630.

H.R.3355 - Violent Crime Control and Law Enforcement Act of 1994.

Huizinga, D., & Elliott, D. S. (1987). Juvenile offenders: Prevalence, offender incidence, and arrest rates by race. *Crime & Delinquency*, 33(2), 206-223.

Hunt, J., & Moodie-Mills, A. (2012). The unfair criminalization of gay and transgender youth: An overview of the experiences of LGBT youth in the juvenile justice system. *Center for American Progress*, 29(1), 1-12.

Jacobsen, W. C., Pace, G. T., & Ramirez, N. G. (2019). Punishment and inequality at an early age: Exclusionary discipline in elementary school. *Social Forces*, 97(3), 973-998.

Jacobsen, W. C., Ragan, D. T., Yang, M., Nadel, E. L., & Feinberg, M. E. (2022). Arrested friendships? Justice involvement and interpersonal exclusion among rural youth. *Journal of Research in Crime and Delinquency*, 59(3), 365-409.

Jacobsen, W. C., & Tinney, E. E. (2024). Does criminal justice contact alter friendship ties? In M. Feinberg & D. W. Osgood (Eds.), *Teen Friendship Networks, Development, and Risky Behaviors*. Oxford University Press.

Jolivet, K., Swoszowski, N. C., McDaniel, S. C., & Duchaine, E. L. (2016). Using positive behavioral interventions and supports to assist in the transition of youth from juvenile justice facilities back to their neighborhood school: An illustrative example. *Journal of Correctional Education (1974-)*, 67(2), 9-24.

Katsiyannis, A., Ryan, J. B., Zhang, D., & Spann, A. (2008). Juvenile delinquency and recidivism: The impact of academic achievement. *Reading & Writing Quarterly*, 24(2), 177-196.

Keeley, J. H. (2006). Will adjudicated youth return to school after residential placement? The results of a predictive variable study. *Journal of Correctional Education*, 57(1), 65-85.

Kenyon, D., Paquin, B., & Munteanu, S. (2022). Public schools and the property tax: A comparison of education funding models in three U.S. states. *Lincoln Institute of Land Policy*. Retrieved from <https://www.lincolninst.edu/publications/articles/2022-04-public-schools-property-tax-comparison-education-models>.

Kim, C. Y., Losen, D. J., & Hewitt, D. T. (2010). *The school-to-prison pipeline: Structuring legal reform*. New York University Press.

Kirk, D. S., & Sampson, R. J. (2013). Juvenile arrest and collateral educational damage in the transition to adulthood. *Sociology of Education*, 86(1), 36-62.

- Koyama, P. R. (2012). The status of education in pre-trial juvenile detention. *Journal of Correctional Education (1974-)*, 63(1), 35-68.
- Kubek, J. B. (2019). *Back to School: A Qualitative Exploration of Re-Entry from Juvenile Justice* (Doctoral dissertation, Loyola University Chicago).
- Kubek, J. B., Tindall-Biggins, C., Reed, K., Carr, L. E., & Fenning, P. A. (2020). A systematic literature review of school reentry practices among youth impacted by juvenile justice. *Children and Youth Services Review*, 110, 104773.
- Kunesh, C. E., & Noltemeyer, A. (2019). Understanding disciplinary disproportionality: Stereotypes shape pre-service teachers' beliefs about black boys' behavior. *Urban Education*, 54(4), 471-498.
- Kupchik, A., & Ward, G. (2014). Race, poverty, and exclusionary school security: An empirical analysis of US elementary, middle, and high schools. *Youth Violence and Juvenile Justice*, 12(4), 332-354.
- Lacoe, J., & Steinberg, M. P. (2018). Rolling back zero tolerance: The effect of discipline policy reform on suspension usage and student outcomes. *Peabody Journal of Education*, 93(2), 207-227.
- Lageson, S. E. (2016). Found out and opting out: The consequences of online criminal records for families. *The ANNALS of the American Academy of Political and Social Science*, 665(1), 127-141.
- Leasure, P., & Martin, T. (2017). Criminal records and housing: An experimental study. *Journal of Experimental Criminology*, 13, 527-535.
- Lee, L. H., Kim, M., Carlson, C., Ellis, T., Johnson, K., & Pretz, A. (2022). The association between perceptions of neighborhood conditions and the employment of emerging adults formerly involved in the juvenile justice system. *Youth & Society*, 54(7), 1280-1303.
- Legewie, J., & Cricco, N. J. (2022). Long-term exposure to neighborhood policing and the racial/ethnic gap in high school graduation. *Demography*, 59(5), 1739-1761.
- Lehmann, P. S., & Meldrum, R. C. (2023). Racial and ethnic identity, gender, and school suspension: Heterogeneous effects across Hispanic and Caribbean subgroups. *Journal of Research in Crime and Delinquency*, 60(2), 167-212.
- Leiber, M. J., Brubaker, S. J., & Fox, K. C. (2009). A closer look at the individual and joint effects of gender and race on juvenile justice decision making. *Feminist Criminology*, 4(4), 333-358.
- Leiber, M. J., & Jamieson, K. M. (1995). Race and decision making within juvenile justice: The importance of context. *Journal of Quantitative Criminology*, 11, 363-384.

- Leiber, M. J., Johnson, J., Fox, K., & Lacks, R. (2007). Differentiating among racial/ethnic groups and its implications for understanding juvenile justice decision making. *Journal of Criminal Justice*, 35(5), 471-484.
- Leiber, M. J., & Peck, J. H. (2015). Race, gender, crime severity, and decision making in the juvenile justice system. *Crime & Delinquency*, 61(6), 771-797.
- Lemert, E. M. (1951). *Social pathology; A systematic approach to the theory of sociopathic behavior*. Literary Licensing LLC.
- Leone, P. E., & Wruble, P. C. (2015). Education services in juvenile corrections: 40 years of litigation and reform. *Education and Treatment of Children*, 38(4), 587-604.
- Livingston, M. D., Rossheim, M. E., & Hall, K. S. (2019). A descriptive analysis of school and school shooter characteristics and the severity of school shootings in the United States, 1999–2018. *Journal of Adolescent Health*, 64(6), 797-799.
- Lochner, L. (2004). Education, work, and crime: A human capital approach. *International Economic Review*, 45(3), 811-843.
- Losen, D. J., Keith, M. A., Hodson, C. L., & Martinez, T. E. (2016). Charter schools, civil rights and school discipline: A comprehensive review. *The Center for Civil Rights Remedies*.
- MacDonald, J. M., & Chesney-Lind, M. (2001). Gender bias and juvenile justice revisited: A multiyear analysis. *Crime & Delinquency*, 47(2), 173-195.
- Makarios, M., Cullen, F. T., & Piquero, A. R. (2017). Adolescent criminal behavior, population heterogeneity, and cumulative disadvantage: Untangling the relationship between adolescent delinquency and negative outcomes in emerging adulthood. *Crime & Delinquency*, 63(6), 683-707.
- Mark, N. D., Geller, A., & Engberg, J. (2022). Adding insult to injury: arrests reduce attendance through institutional mechanisms. *Sociology of Education*, 95(3), 189-215.
- Maryland Association of School Resource Officers. (n.d.). "About Us." Retrieved from <https://www.masro.com/>.
- Maryland Code, Courts & Judicial. Procedures § 3-8A-27
- Maryland Code, Education Section 7-303
- Maryland Rule of Juvenile Causes 11-506
- Maryland *In Re Sf* (2021)

Maryland Office of Tourism (n.d.). *Maryland Regions*. Retrieved from <https://www.visitmaryland.org/article/maryland-regions>.

Maryland State Board of Education (2022). *Graduation Rate, AP, SAT, Postsecondary Enrollment*. Retrieved from <https://www.marylandpublicschools.org/stateboard/Documents/2022/0322/AdjustedCohortGraduationRateAdvancedPlacementSATPostsecondaryEnrollment.pdf>.

Maryland State Dept. of Education (2021). *New Guidelines Announced for Free or Reduced-Price School Meals*. Retrieved from <https://news.maryland.gov/msde/new-guidelines-announced-for-free-and-reduced-price-school-meals-7/>.

Maryland State Dept. of Education (2022). *2021-2022 Report Card*. Retrieved from <https://reportcard.msde.maryland.gov/Graphs/#!/ReportCards/ReportCardSchool/1/E/1/99/XXXX/2022>.

Maryland State Dept. of Education (2023a). *Suspensions By School and Major Offense Category*. Retrieved from <https://www.marylandpublicschools.org/about/Documents/DCAA/SSP/20222023Student/2022-2023-MD-PS-Suspensions-By-School-and-Major-Offense-Category-Out-of-School-Suspensions-and-Expulsions.pdf>.

Maryland State. Dept. of Education (2023b). *English Learners: Eligibility, Guidance, and Laws*. Retrieved from <https://www.marylandpublicschools.org/programs/Pages/English-Learners/Eligibility-Guidance-Laws.aspx>.

Massoglia, M., Remster, B., & King, R. D. (2011). Stigma or separation? Understanding the incarceration-divorce relationship. *Social Forces*, 90(1), 133-155.

Mathur, S. R., & Clark, H. G. (2014). Community engagement for reentry success of youth from juvenile justice: Challenges and opportunities. *Education and Treatment of Children*, 37(4), 713-734.

Mazzotti, V. L., & Higgins, K. (2006). Public schools and the juvenile justice system: Facilitating relationships. *Intervention in School and Clinic*, 41(5), 295-301.

McGloin, J. M. (2009). Delinquency balance: Revisiting peer influence. *Criminology*, 47(2), 439-477.

McNeil, L. M., Coppola, E., Radigan, J., & Heilig, J. V. (2008). Avoidable losses: High-stakes accountability and the dropout crisis. *Education Policy Analysis Archives*, 16(3), 1-48.

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

- Monahan, K. C., VanDerhei, S., Bechtold, J., & Cauffman, E. (2014). From the school yard to the squad car: School discipline, truancy, and arrest. *Journal of Youth and Adolescence*, 43, 1110-1122.
- Morris, M. (2016). *Pushout: The criminalization of Black girls in schools*. The New Press.
- Mowen, T., & Brent, J. (2016). School discipline as a turning point: The cumulative effect of suspension on arrest. *Journal of Research in Crime and Delinquency*, 53(5), 628-653.
- Murnane, R. J. (2007). Improving the education of children living in poverty. *The Future of Children* 17(2), 161-182.
- Na, C., & Gottfredson, D. C. (2013). Police officers in schools: Effects on school crime and the processing of offending behaviors. *Justice Quarterly*, 30(4), 619-650.
- National Center for Education Statistics (2019). *Indicator 15: Retention, suspension, and expulsion. Status and trends in the education of racial and ethnic groups*. Retrieved from https://nces.ed.gov/programs/raceindicators/indicator_rda.asp.
- National Center for Education Statistics (2021). Report on the Condition of Education 2021. Retrieved from <https://nces.ed.gov/pubs2021/2021144.pdf>.
- Natsuaki, M. N., Ge, X., & Wenk, E. (2008). Continuity and changes in the developmental trajectories of criminal career: Examining the roles of timing of first arrest and high school graduation. *Journal of Youth and Adolescence*, 37, 431-444.
- Novak, A., & Fagan, A. (2022). Expanding research on the school-to-prison pipeline: Examining the relationships between suspension, expulsion, and recidivism among justice-involved youth. *Crime & Delinquency*, 68(1), 3-27.
- Office of Juvenile Justice and Delinquency Prevention. (2020). *Arrests of youth declined through 2020*. Retrieved from https://www.ojjdp.gov/ojstatbb/snapshots/DataSnapshot_UCR2020.pdf.
- Office of Juvenile Justice and Delinquency Prevention. (2022). *Youth arrest rates by offense and race*. Retrieved from https://ojjdp.ojp.gov/statistical-briefing-book/special_topics/faqs_fairness/qa11501.
- Osgood, D. W., Ragan, D. T., Wallace, L., Gest, S. D., Feinberg, M. E., & Moody, J. (2013). Peers and the emergence of alcohol use: Influence and selection processes in adolescent friendship networks. *Journal of Research on Adolescence*, 23(3), 500-512.
- Osgood, D. W., Wilson, J. K., O'malley, P. M., Bachman, J. G., & Johnston, L. D. (1996). Routine activities and individual deviant behavior. *American Sociological Review*, 635-655.
- Owens, E. G. (2017). Testing the school-to-prison pipeline. *Journal of Policy Analysis and Management*, 36(1), 11-37.

- Pager, D. (2003). The mark of a criminal record. *American Journal of Sociology*, 108(5), 937-975.
- Paternoster, R., & Iovanni, L. (1989). The labeling perspective and delinquency: An elaboration of the theory and an assessment of the evidence. *Justice Quarterly*, 6(3), 359-394.
- Peng, S. S., & Takai, R. T. (1983). High school dropouts: Descriptive information from high school and beyond. *National Center for Education Statistics Bulletin*.
- Pettit, B., & Western, B. (2004). Mass imprisonment and the life course: Race and class inequality in US incarceration. *American Sociological Review*, 69(2), 151-169.
- Pigott, C., Stearns, A. E., & Khey, D. N. (2018). School resource officers and the school to prison pipeline: Discovering trends of expulsions in public schools. *American Journal of Criminal Justice*, 43, 120-138.
- Piquero, A. R. (2008). Disproportionate minority contact. *The Future of Children*, 18(2), 59-79.
- Platt, J. S., Bohac, P. D., & Wade, W. (2015). The challenges in providing needed transition programming to juvenile offenders. *Journal of Correctional Education (1974-)*, 66(1), 4-20.
- Podgursky, M. J., & Springer, M. G. (2007). Teacher performance pay: A review. *Journal of Policy Analysis and Management*, 26(4), 909-949.
- Pope, C. E., Lovell, R. D., & Hsia, H. M. (2002). Disproportionate minority confinement: A review of the research literature from 1989 through 2001. *Office of Juvenile Justice and Delinquency Prevention*.
- Puzzanchera, C. (2010). *Juvenile arrests (2007)*. Diane Publishing.
- Quinn, A., & Shera, W. (2009). Evidence-based practice in group work with incarcerated youth. *International Journal of Law and Psychiatry*, 32(5), 288-293.
- Quinney, R. (1970). *The Social Reality of Crime*. Transaction Publishers.
- Radice, J. (2017). The juvenile record myth. *Georgetown Law Journal*, 106, 365-446.
- Ramey, D. M. (2015). The social structure of criminalized and medicalized school discipline. *Sociology of Education*, 88(3), 181-201.
- Reid, S. E. (2017). The curious case of loners: Social isolation and juvenile incarceration. *Legal and Criminological Psychology*, 22(1), 180-195.
- Reisman, J. M. (1985). Friendship and its implications for mental health or social competence. *The Journal of Early Adolescence*, 5(3), 383-391.

Rios, V. M. (2006). The hypercriminalization of Black and Latino male youth in the era of mass incarceration. *Souls: A Critical Journal of Black Politics, Culture, and Society*, 8(2), 40-54.

Rodriguez, N. (2010). The cumulative effect of race and ethnicity in juvenile court outcomes and why preadjudication detention matters. *Journal of Research in Crime and Delinquency*, 47(3), 391-413.

Rooks, N. (2017). *Cutting school: Privatization, segregation, and the end of public education*. The New Press.

Rosenberg, M., Schooler, C., Schoenbach, C., & Rosenberg, F. (1995). Global self-esteem and specific self-esteem: Different concepts, different outcomes. *American Sociological Review*, 60(1), 141-156.

Rosenbaum, P. R., & Rubin, D. B. (1984). Reducing bias in observational studies using subclassification on the propensity score. *Journal of the American Statistical Association*, 79(387), 516-524.

Ryan, B., Bashant, J. C., & Brooks, D. (2006). Protecting and supporting children in the child welfare system and the juvenile court. *Juvenile and Family Court Journal*, 57(1), 61-69.

Sampson, R. J., & Laub, J. H. (1997). A life-course theory of cumulative disadvantage and the stability of delinquency. *Developmental Theories of Crime and Delinquency*, 7, 133-161.

Sealock, M. D., & Simpson, S. S. (1998). Unraveling bias in arrest decisions: The role of juvenile offender type-scripts. *Justice Quarterly*, 15(3), 427-457.

Sickmund, M., Sladky, T.J., Puzzanchera, C., & Kang, W. (2022). Easy access to the census of juveniles in residential placement. *Office of Juvenile Justice and Delinquency Prevention*.

Sinclair, J. S., Unruh, D. K., Griller Clark, H., & Waintrup, M. G. (2017). School personnel perceptions of youth with disabilities returning to high school from the juvenile justice system. *The Journal of Special Education*, 51(2), 95-105.

Skiba, R. J., & Knesting, K. (2002). Zero tolerance, zero evidence: An analysis of school disciplinary practice. In R. J. Skiba & G. G. Noam (Eds.), *Zero tolerance: Can suspension and expulsion keep school safe?*, 17-43.

Skiba, R. J., & Peterson, R. L. (2000). School discipline at a crossroads: From zero tolerance to early response. *Exceptional Children*, 66(3), 335-346.

Smithgall, C., Cusick, G., & Griffin, G. (2013). Responding to students affected by trauma: Collaboration across public systems. *Family Court Review*, 51(3), 401-408.

- Snapp, S. D., Day, J. K., & Russell, S. T. (2022). School pushout: the role of supportive strategies versus punitive practices for LGBT youth of color. *Journal of Research on Adolescence*, 32(4), 1470-1483.
- Steglich, C., & Knecht, A. (2014). Studious by association? Effects of teacher's attunement to students' peer relations. *Zeitschrift für Erziehungswissenschaft*, 5(17), 153-170.
- Stephens, R. D., & Arnette, J. L. (2000). From the courthouse to the schoolhouse: Making successful transitions. *Juvenile Justice Bulletin*.
- Stewart, E. A., Baumer, E. P., Brunson, R. K., & Simons, R. L. (2009). Neighborhood racial context and perceptions of police-based racial discrimination among black youth. *Criminology*, 47(3), 847-887.
- Stewart, R., & Uggen, C. (2020). Criminal records and college admissions: A modified experimental audit. *Criminology*, 58(1), 156-188.
- Sunderman, G. L., & Croninger, R. (2018). High suspending schools in Maryland. *Maryland Equity Project*. Retrieved from https://education.umd.edu/sites/default/files/uploads/MEP_Out-of-School%20Suspensions2_Oct%202018_0.pdf.
- Sweeten, G. (2006). Who will graduate? Disruption of high school education by arrest and court involvement. *Justice Quarterly*, 23(4), 462-480.
- Tapia, M. (2010). Untangling race and class effects on juvenile arrests. *Journal of Criminal Justice*, 38(3), 255-265.
- Tash, M. J. (2018). The influence of chronic absenteeism on graduation rate and postsecondary participation in New Jersey high schools. (Doctoral dissertation, Seton Hall University).
- Theriot, M. T. (2009). School resource officers and the criminalization of student behavior. *Journal of Criminal Justice*, 37(3), 280-287.
- Theriot, M. T., & Orme, J. G. (2016). School resource officers and students' feelings of safety at school. *Youth Violence and Juvenile Justice*, 14(2), 130-146.
- Thompson, T., & Massat, C. R. (2005). Experiences of violence, post-traumatic stress, academic achievement and behavior problems of urban African-American children. *Child and Adolescent Social Work Journal*, 22, 367-393.
- Tinney, E. (2023). The "STICKINESS" of stigma: Guilt by association after a friend's arrest. *Criminology*, 61(2), 354-383.
- U.S. Department of Education, National Center for Education Statistics, 2005–06, 2007–08, 2009–10, 2015-16, and 2017-18 School Survey on Crime and Safety (SSOCS), 2006, 2008, 2010, 2016, and 2018; Fast Response Survey System (FRSS), "School Safety and Discipline:

2013-14," FRSS 106, 2014; and Common Core of Data (CCD), "Public Elementary/Secondary School Universe Survey," 2013-14. Table prepared in August 2019.

Wakefield, S., & Uggen, C. (2010). Incarceration and stratification. *Annual Review of Sociology*, 36, 387-406.

Wald, J., & Losen, D. J. (2003). Defining and redirecting a school-to-prison pipeline. *New Directions for Youth Development*, 2003(99), 9-15.

Walton, G. M., Okonofua, J. A., Remington Cunningham, K., Hurst, D., Pinedo, A., Weitz, E., ... & Eberhardt, J. L. (2021). Lifting the bar: A relationship-orienting intervention reduces recidivism among children reentering school from juvenile detention. *Psychological Science*, 32(11), 1747-1767.

Weisburst, E. K. (2019). Patrolling public schools: The impact of funding for school police on student discipline and long-term education outcomes. *Journal of Policy Analysis and Management*, 38(2), 338-365.

Weissman, M. (2015). *Prelude to prison: Student perspectives on school suspension*. Syracuse University Press.

Weitzman, M., Klerman, L. V., Lamb, G., Menary, J., & Alpert, J. J. (1982). School absence: a problem for the pediatrician. *Pediatrics*, 69(6), 739-746.

Welch, F. (1973). Black-white differences in returns to schooling. *The American Economic Review*, 63(5), 893-907.

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

West, S. D., Day, A. G., Somers, C. L., & Baroni, B. A. (2014). Student perspectives on how trauma experiences manifest in the classroom: Engaging court-involved youth in the development of a trauma-informed teaching curriculum. *Children and Youth Services Review*, 38, 58-65.

Western, B., & Pettit, B. (2000). Incarceration and racial inequality in men's employment. *ILR Review*, 54(1), 3-16.

Western, B., & Pettit, B. (2010). Incarceration & social inequality. *Daedalus*, 139(3), 8-19.

Widdowson, A. O., Siennick, S. E., & Hay, C. (2016). The implications of arrest for college enrollment: An analysis of long-term effects and mediating mechanisms. *Criminology*, 54(4), 621-652.

Wildeman, C., Scardamalia, K., Walsh, E. G., O'Brien, R. L., & Brew, B. (2017). Paternal incarceration and teachers' expectations of students. *Socius*, 3.

Wiley, S. A., Slocum, L. A., & Esbensen, F. A. (2013). The unintended consequences of being stopped or arrested: An exploration of the labeling mechanisms through which police contact leads to subsequent delinquency. *Criminology*, *51*(4), 927-966.

Witkow, M. R., & Fuligni, A. J. (2010). In-school versus out-of-school friendships and academic achievement among an ethnically diverse sample of adolescents. *Journal of Research on Adolescence*, *20*(3), 631-650.

Wolf, K. C. (2014). Arrest decision making by school resource officers. *Youth Violence and Juvenile Justice*, *12*(2), 137-151.

Wolf, K. C., & Kupchik, A. (2017). School suspensions and adverse experiences in adulthood. *Justice Quarterly*, *34*(3), 407-430.

Wood, R. J., Wood, A. R., & Mullins, D. T. (2008). Back to school: Recommendations to assist mentally ill, post-incarcerated youth return to school. *Journal of School Health*, *78*(9), 514-517.

Zimring, F. E. (1998). Toward a jurisprudence of youth violence. *Crime and Justice*, *24*, 477-501.