Safety for Whom? How Law Enforcement and School Resource Officer Training Impacts Racial Gaps in School Exclusionary Discipline

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Abstract

Do race-neutral school safety policies have race-neutral impacts? In this paper, I present novel findings on the effects of statewide law enforcement credential and special training requirements for school resource officers (SROs) on Black-White gaps in suspensions, expulsions, law enforcement referrals, and school-related arrests (i.e., school exclusion). I answer these questions using data from the U.S. Department of Education's Office for Civil Rights' 2013-14 through 2020-21 Civil Rights Data Collection school-level surveys and supplementary sources. The study leverages state and time variation in adopting SRO credential and training statutes between 2014-15 and 2020-21. The analysis compares Black-White school exclusion gaps in majority and minority Black middle and high schools with SROs between treated and untreated schools. I estimate average treatment effects on the treated using an advanced difference-in-difference method, clustered by state. The results indicate that requiring SROs to hold sworn law enforcement credentials more than doubles racial gaps in suspensions and law enforcement referrals in majority Black schools but not in minority Black schools and that SRO training policies have no significant relationship with racial school exclusion gaps. I then evaluate whether racial differences in school exclusion outcomes result from individual behaviors and cultural norms or structural factors like systemic discrimination—the first study to assess whether individualist or structuralist explanations underlying the relationship between SROs and racial disparities in school discipline better explain the findings. The findings suggest the need for structural, race-conscious policy changes to address racial disparities in school discipline.

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1 Introduction

Racial disparities in school outcomes have existed since before public education was formalized in the mid-19th century in the U.S. (Persky, 2015).[1] Gaps in academic performance, discipline, and other school outcomes still exist today (Walsh, 2018; Watson and Collins, 2023). In addition to existing gaps in the school system, collaboration across systems, e.g., between the education and criminal/legal systems, may perpetuate disparities.[2] Cross-system collaboration can be a challenge to study empirically because linkages between subsystems are not always transparent. Structural factors, such as the history and legacy of race in the U.S., also hinder our ability to tease out the causal effects of systemic processes since they are determined endogenously. School law enforcement, originating in the U.S. school desegregation era, may provide an empirical setting to learn more about the systemic nature of racial disparities.

School police officers, or school resource officers (SROs), are an example of intersystem collaboration, in this case, between the education and criminal/legal systems. SRO programs have origins in race since SROs began in schools in the mid-20th century, rooted in White-dominated efforts to manage conditions of integration. In addition to these origins, data show that SROs are associated with Black students disproportionately experiencing exclusionary discipline.[3] Broadly, exclusionary discipline, or school exclusion, removes students from school as a punitive measure. Specific examples include suspensions, expulsions, law enforcement referrals, and school-related arrests. The disparate outcomes related to SRO programs (and social justice issues in policing in general) have led to reform efforts intending to strengthen the qualification and training requirements for SROs. Between the 2014-15 and 2020-21 academic years, many states implemented statutes requiring SROs to hold law enforcement credentials (or have significant experience as a sworn law enforcement officer) or complete special training programs (e.g., adolescent development, conflict resolution, mental health, and students with disabilities). In that period, 15 states adopted law enforcement credential requirements, while 20 mandated special training for SROs. These policies aim to formalize the role of SROs and enhance their interaction with students, but their impacts

1. The South Carolina Slave Codes of 1740 explicitly outlawed teaching slaves to read or write (Boutte et al., 2023).

2. Lang and Spitzer (2020) discuss the interconnectedness of systems reinforcing racial gaps, with examples such as discrimination in the labor market leading to fewer home resources for school children. They also discuss how differential treatment in the criminal/legal system limits access to housing in better neighborhoods with better resources.

3. Research has also demonstrated that SRO presence is related to racial gaps in the school-to-prison pipeline (STPP) (Crosse et al., 2022), exacerbating the feedback loop of racial inequality across systems. Wolf and Kupchik (2017) define the STPP as "a complex phenomenon in which students who are subjected to exclusionary discipline are pushed towards the juvenile and criminal justice systems."

on school discipline and racial disparities remain underexplored.

Proponents argue that further training may address the individual biases of police officers in schools associated with racial discipline gaps. However, whether training requirements focused on individual SRO behavior are sufficient to address the racial gaps (as opposed to, or complementary to, structural SRO reform) remains unknown. Thus, I ask two research questions in this paper. First, what is the effect of mandating SROs be sworn law enforcement officers relative to SROs without law enforcement credential requirements on racial gaps in school exclusion? Second, what is the impact of requiring SROs to complete special training relative to SROs without additional training requirements on racial gaps in school exclusion?

To answer the questions above, I use variations in SRO policy and a national data source, the Civil Rights Data Collection (CRDC). The CRDC provides a near-census of all public schools in the U.S. with detailed school-level information, including the presence of SROs and the number of students receiving disciplinary action disaggregated by race. I supplement the CRDC with population density and urbanicity information from the National Center for Education Statistics (NCES) - Common Core of Data (CCD) files. I use a difference-in-difference (DID) estimator to estimate the average treatment effect on the treated (ATT) of SRO law enforcement credential and special training statutes on school-level outcomes. The samples of schools captured in the treatment groups are in 15 states that adopted SRO law enforcement credential statutes and 20 states that adopted SRO special training statutes effective between the 2014-15 and 2020-21 academic periods. Comparison group schools are in 23 states with no SRO law enforcement credential statutes and 25 states with no SRO special training statutes effective during this study period.[4]

Satisfying identifying assumptions, the conditional ATT estimator compares weighted averages of the Black-White discipline gaps between schools in the treatment and comparison groups. Estimates yield the average effect of SRO policies on these racial gaps in schools bound by these policies. Specifically, I examine Black-White gaps in in-school suspensions (ISS), out-of-school suspensions (OSS), expulsions, law enforcement referrals, and school-related arrests. I estimate the ATTs on majority and minority Black samples of middle and high schools with SROs present in the 2013-14, 2015-16, 2017-18, and 2020-21 CRDC biennial school-level surveys, conditioning on school-level characteristics. In this analysis, I focus on the dichotomy of majority Black versus minority Black schools to capture crucial structural differences that significantly affect educational

4. In the main specifications, treatment and comparison groups are mutually exclusive across the entire study period. In other words, once a state becomes treated, it remains treated, and comparison states are never treated during this period.

resource allocation and equity. Majority Black schools, often located in economically disadvantaged areas, typically operate under systemic constraints that influence the execution of policies like SRO law enforcement credentials and special training. By analyzing these policies in both contexts, I aim to understand better how color-blind policy intersects with local structures to shape the effectiveness of school policing interventions. This comparison offers valuable insights for economists interested in how structural inequities affect policy outcomes, and it has broader implications for human capital development, labor market inequality, and the school-to-prison pipeline.

This paper finds that mandating law enforcement credentials for SROs significantly increases racial disparities in school suspensions and law enforcement referrals in majority Black schools. For example, on average, law enforcement credential policies increased the Black-White ISS gap from a baseline mean of 7.5 to 18.2 percentage points. Similarly, the average OSS gap widened from 7.8 to 21.8 percentage points. Law enforcement referrals showed an even sharper rise relative to the baseline, with the average Black-White gap increasing by 4.9 percentage points, from 0.5 to 5.4 percentage points. In contrast, minority Black schools saw no significant changes in any exclusionary discipline actions under law enforcement credential policies, indicating a stark difference in how these policies impact majority versus minority Black schools.

Special training requirements intended to equip SROs to manage student and criminal behavior differently did not have a statistically significant impact on reducing racial disparities in school exclusion in either majority or minority Black schools. Minor changes in the Black-White ISS and OSS gaps were observed in both contexts, but none were statistically significant. This finding suggests that special training, as implemented, fails to address racial disparities in school exclusion meaningfully, even though the primary objective is to improve officer-student interactions. These findings are robust to tests such as relaxing the no anticipation assumption and tests changing the composition of the comparison group. These findings suggest that over-policing majority Black schools leads to increased exclusion that is driven by referring Black students to law enforcement at higher rates and that special training is insufficient to address all the underlying factors of exclusionary discipline culture.

These core findings align with an explanation that SRO-driven Black-White gaps in exclusion are not solely due to individual, direct acts of discrimination but that structural factors such as systemic discrimination also drive racial gaps. Individualist explanations based on rational choice, deterrence, and economics of discrimination theories predict reductions in racial gaps driven by changes in student behavior when exposed to law enforcement. Individualist explanations also

indicate that changes in SRO behavior when required to complete training will reduce racial gaps. These explanations do not account for why the racial dynamics of law enforcement credential policies are only observed in majority Black schools. The systemic discrimination framework yields plausible explanations of these results. First, exposing students in majority Black schools to sworn law enforcement leads to increased criminalization of Black students because of: (1) the policing institution that often views Black behavior more criminally than White behavior; and (2) the surrounding under-resourcing issues these schools face from segregation and community disinvestment. Direct exposure to police officers leads to increased referrals to law enforcement, and even though the referrals do not always result in an arrest, school administrators likely also respond with suspensions, given the severity warranted by law enforcement referrals. Second, SRO special training mandates address only the individual SRO behaviors and thus only direct sources of discrimination. These SRO policies do not address the factors of structural racism related to the institutions of policing and education that contribute to persistent intergroup inequality in access to education.

There is a relatively large body of literature on school policing, often written by education, criminology, and sociology scholars. This literature evaluates the presence of law enforcement personnel in schools and their impacts on student safety and discipline. It also occasionally looks at academic and other school outcomes (Brady, Balmer, and Phenix, 2007; Weisburst, 2019). While the evidence on the efficacy of SROs is mixed and context-dependent, in general, the evidence suggests that SROs can improve school safety (Brown and Benedict, 2005; Theriot, 2009; Chrusciel et al., 2015). However, this often comes at the cost of increased removal of students from school (i.e., exclusion), particularly for younger students and minor infractions (Theriot, 2009; Na and Gottfredson, 2013; Owens, 2017). Frequently, researchers find that Black students and other marginalized groups of students are disproportionately experiencing school exclusion associated with the presence of SROs (A. Jackson, 2002; Crawford and Burns, 2016; Lynch, Gainey, and Chappell, 2016; Sorensen et al., 2023).[5] Many studies investigate the relationship between SROs and the school-to-prison pipeline. They have found a statistically significant, positive relationship through increased exclusion from school (Na and Gottfredson, 2013; Nance, 2016; Owens, 2017; Sorensen, Shen, and Bushway, 2021). Much of the literature acknowledges the importance of qualifications and training on SRO efficacy (McDaniel, 2001; Wolf, 2014; Martinez-Prather, McKenna, and Bowman, 2016). A few studies evaluate how SRO positionality (e.g., race, gender) impacts the

5. These other marginalized groups of students often include Hispanic students, students from low-income backgrounds, and students with disabilities.

officer's choices and student outcomes (Kelly and Swezey, 2015; Crawford and Burns, 2016; Lynch, Gainey, and Chappell, 2016; Fisher et al., 2020).

Although this literature has developed over 30 years, there are still open questions regarding SROs. While informative, most of the literature is qualitative or descriptive, and what we know about the causal relationships between SROs and student outcomes is limited. The causal studies I identified in this literature have corroborated the relationships between SROs and increases in safety but also increases in exclusionary discipline actions, where these effects are heterogeneous across different student demographics (Owens, 2017; Weisburst, 2019; Sorensen, Shen, and Bushway, 2021; Sorensen et al., 2023). However, these causal studies often use proxy measures of SRO presence in schools (Owens, 2017; Weisburst, 2019) or are limited to a smaller geographical context (Weisburst, 2019; Sorensen, Shen, and Bushway, 2021). Related to these gaps, limitations in data collected on SROs and the decentralized nature of policing and education in the U.S. have made it difficult to evaluate these effects without these threats to internal and external validity. Importantly for this study, though there is a consensus on the importance of SRO qualifications and training, no studies provide empirical evidence supporting this claim.

Finally, none of the existing literature evaluating the effects of SROs on racial school gaps analyzes structural factors beyond individual choices or biases and speaks to intra- and inter-system biases related to racial gaps. Derenoncourt (2022) finds a deleterious effect of the Great Migration on Black intergenerational upward mobility, driven by northern local responses to increases in the Black share of the population. Her findings highlight the importance of understanding how local systems create or obstruct access to opportunities that can reduce racial gaps in individual life outcomes. Baron et al. (2023) use a systems-based analysis to investigate racial discrimination in high-risk foster care placements. Key findings of this analysis emphasize the importance of systems-based analysis of discrimination. They conduct the systems-based analysis within the multi-phase subsystem of Child Protective Services; however, their analysis also applies to cross-system contexts. Importantly, Darity (2022) provides a framework for understanding the formation of social identity (e.g., race) and power structures and their impact on intergroup inequality. He emphasizes that the processes that form social groups and the social hierarchy, not cultural differences between social groups, are the critical determinants of persistent intergroup inequality. Bohren, Hull, and Imas (2023) provide a complement to Darity's framework. They present a theoretical model of systemic discrimination, an overlooked component of total discrimination in the economic literature. These papers are fundamental for future research on discrimination and intergroup inequality and provide

the foundations for my systemic discrimination framework.

This paper makes multiple contributions to the literature on law enforcement in schools. First, I use four survey periods on a census of public schools in the United States that contains information about SRO presence in each school in my population of interest. The CRDC, unlike other comparable data sources like the School Survey on Crime and Safety (SSOCS) and Schools and Staffing Survey (SASS), is a mandatory survey of all public schools in the U.S. and requires schools to disclose how many SROs are present full-time. Also, unlike grant data from the Community Oriented Policing Services (COPS) office, the CRDC directly measures SRO presence and not just the funds granted to a local law enforcement agency to hire SROs. Thus, this data source captures a direct measure of school-level exposure to SROs that is less subject to measurement error than what was available in previous studies. Second, I fill a gap in the SRO literature on the empirical analysis of SRO qualifications and training, a widely acknowledged and unanswered question throughout the literature.

Further, while the empirical analysis encompasses the primary contributions, this paper adds to the growing economic literature integrating "systems-based" analysis in research on racial inequities. To do so, I discuss the structural factors underlying education and law enforcement in the U.S. related to racial gaps in school exclusionary discipline. This background has important policy implications because reforms that fail to address these structural factors, where present, are unlikely to result in sufficient progress toward equitable school outcomes for all students.

The rest of this paper is structured as follows: Section 2 provides background on police presence in schools and the SRO policies I evaluate. I discuss the conceptual framework connecting the hypothesized relationship between SROs/SRO policy and racial gaps in Section 3. Section 4 presents the data used for analysis, along with descriptive statistics on the population of interest and empirical samples. Section 5 provides estimation and identification strategies. I present and discuss the results in Section 6. Finally, Section 7 summarizes the paper in the conclusion. I include additional tables, figures, and materials in the appendix.

2 Background

Policing in schools has greatly expanded over the last three decades. There are many different reasons school districts have implemented school policing across the U.S., but there is a historical relationship between school desegregation and school policing programs. Further, public officials

began to tout concerns about crime committed by youth, and law enforcement strategies and technology advanced over a similar period. Concurrently, more schools permanently assign police officers to patrol their campuses, most often in low-income and de facto segregated schools.[6]

School policing continues to be implemented by schools across the country as the U.S. continues its "war on crime" and enters its "war on drugs". Here, federal laws, such as the Violent Crime Control and Law Enforcement Act (i.e., 1994 Crime Bill), led to the most consequential increase in school police. These acts established the Community Oriented Policing Services (COPS) program. COPS subsequently funded local law enforcement agencies working with school districts to hire police in schools with the COPS In Schools (CIS) grant program. The final major, and most recent, driver of increased law enforcement presence in schools is mass school shootings beginning with the shooting at Columbine High School in 1999.[7]

Race and school policing have long been entangled and continue to be so. In this section, I summarize this history as consisting of three periods: (1) the initial integration of law enforcement into schools in the 1950s and 60s, mainly in response to desegregation and civil rights protests; (2) the expansion of school policing in the 1990s, driven by "zero tolerance" policies and concerns over rising crime; and (3) the mass shooting era, which began with events like Columbine, where increased fears of school violence led to a further entrenchment of police in schools, disproportionately affecting Black students and deepening racial disparities in school discipline.

2.1 History of Law Enforcement in Schools

The origins of modern law enforcement in schools date back to the 1940s when police officers were first assigned to schools in newly desegregated neighborhoods, such as Los Angeles. By the 1950s, schools in Flint, MI, permanently stationed the first police officers, and the trend expanded through the 1960s, fueled by school desegregation efforts following the Brown v. Board decision (The Center for Public Integrity, 2021). These early efforts to integrate police into schools targeted urban areas with large Black populations, reinforcing the control of students of color within newly integrated schools (Counts et al., 2018).

During the 1960s and 1970s, the federal government's focus on crime prevention intersected with the civil rights movement. As desegregation efforts continued, the 1968 Omnibus Crime Control

6. Much of the historical and legal context presented in this section comes from two sources: The Center for Public Integrity (2021) and Advancement Project and Alliance for Educational Justice (2021).

7. This is arguably an inflection point where the primary motivation for school police shifts from "policing the sheep" (e.g., school desegregation, juvenile delinquency) to "protecting the flock" (outsider school-based shooting) as coined by Fisher et al. (2020).

and Safe Streets Act encouraged the placement of law enforcement in schools to combat rising fears of youth crime, particularly in cities with large populations of Black students (French-Marcelin and Hinger, 2017). By the mid-1970s, police were playing an established role in schools across the U.S., disproportionately affecting students of color due to their prevalence in urban, low-income districts (Hinton, 2015; Counts et al., 2018).

The 1980s and 1990s saw a further expansion of law enforcement in schools as part of the "War on Drugs" and the adoption of zero-tolerance policies (Welsh, Braga, and Bruinsma, 2015). Inspired by "Broken Windows" policing strategies, schools implemented harsher discipline measures for minor infractions, contributing to the school-to-prison pipeline (Rosenbaum et al., 1994; Irby and Coney, 2021). These policies, combined with the Gun-Free Schools Act and the 1994 Crime Bill, expanded the presence of law enforcement officers in schools, disproportionately targeting students of color for exclusionary discipline (M. Jackson, 1995; Rosenfeld, 2020).

Following the mass shooting at Columbine High School in 1999, the 2000s saw an even greater push to place law enforcement officers in schools in efforts to combat these tragic events. Federal programs such as the COPS grants increased funding for SROs, while state-level policies continued to embed police officers in schools, particularly in urban areas serving students of color (Owens, 2017; Anderson, 2018; Counts et al., 2018). However, research has shown that the increased presence of law enforcement in schools has exacerbated racial disparities in discipline, particularly for Black students (Jennings et al., 2011; Maskaly et al., 2011; Mowen, 2015; Crawford and Burns, 2016; Owens, 2017; Weisburst, 2019; Sorensen, Shen, and Bushway, 2021; Sorensen et al., 2023). Although more states have introduced policies to regulate SRO programs, racial discipline gaps persist. This paper focuses on the period from 2013 to 2020 when several states adopted statutes requiring SROs to hold law enforcement credentials or undergo special training, offering an opportunity to evaluate their impact on racial disparities in school discipline.

2.2 State Statutes on Law Enforcement in Schools

Although police have played direct roles in schools since the mid-20th century, state laws and regulations governing law enforcement qualifications, roles, and responsibilities did not appear until 1991 in Oklahoma, establishing campus police departments. Only then would Kentucky and South Carolina pass new statutes regarding school law enforcement, or SROs, by the end of the 1990s. In the 2000s, more states defined roles, responsibilities, and training for SROs (e.g., Texas in 2001, Louisiana and Washington D.C. in 2005, New Jersey, Mississippi, and Virginia in 2006,

and Tennessee in 2007). The remaining states with statutes governing school law enforcement passed the statutes throughout the 2010s and early 2020s, many of which passed only within the last five years. I identified these statutes through the help of publicly available resources from the Education Commission of the States (ECS) and the National Center on Safe Supportive Learning Environments (NCSSLE).[8] I cross-validate the listed citations from these sources with each other, checking for consistent and specific language related to SROs. I then verify the citations through each state's and D.C.'s legislative website to confirm that the statute is currently in effect and to identify when specific language related to SROs went into effect. Table A1 provides citations of these state SRO statutes.

I use state variation in two sets of SRO statutes to answer my questions in this paper. The first set of statutes requires SROs to hold law enforcement credentials or have significant experience as sworn law enforcement officers. I use the variation in these statutes to understand the impacts of police in Black schools on racial gaps in removing students from class or school. Figure 1 provides a map showing the variation over state and time implementing these law enforcement credential statutes. Fifteen states have statute(s) requiring SROs to hold law enforcement credentials made active between the 2014-15 and 2020-21 academic periods, where 2013-14 and 2020-21 are the endpoints of the data in this study. See Table A1 for more details. Since I observe data in these 15 states before and after their SRO policy change, they will cover the core (i.e., treated) empirical sample for the group-time difference-in-difference identification strategy. Because this group of states has policy variation between the 2013-14 and 2020-21 study period, I will refer to this group as *within scope* going forward.

There are 23 states covering schools that make up the comparison group in this analysis. These states did not have any law enforcement credential statutes before or during the observed study period (though three, Illinois, Maine, and New Mexico, did pass legislation made effective after the 2020-21 academic period). So, I consider the schools in these 23 states as *never treated* for this policy evaluation. Three states, Arizona, Colorado, and Indiana, have active statutes requiring law enforcement credentials over the study period, but they were made active in the first period of observation. Thus, there is no *within scope* variation for this paper's identification strategy, and schools in these three states can be considered *always treated*. The remaining ten states/district

8. ECS's 50 state comparison on K-12 school safety can be found at https://www.ecs.org/50-state-comparison-k-12-school-safety-2022/. The NCSSLE's compendium on school discipline laws and regulations, which include statutes and regulations about partnerships between schools and law enforcement, can be found at https://safesupportivelearning.ed.gov/school-discipline-laws-regulations-state.

are also *always treated* as they have had active statutes regulating SRO credentials since before the 2013-14 academic period. See Table A1 for more details.

I also use state and time variations of special training statutes to evaluate the effectiveness of the policy response (i.e., special training requirements) to SRO-related racial gaps in school exclusion. Figure 2 shows this variation in a map of the U.S. Twenty states have statute(s) requiring SROs to complete special training active between the 2014-15 and 2020-21 academic periods. I observe data in these 20 states before and after their SRO special training policy change. Thus, they will cover the treated empirical sample. This group of states is *within scope*. There are 25 states covering schools that make up the comparison group for the second research question. These states did not have any statutes requiring special training before or during the observed study period (though three, Arkansas, Colorado, and New Mexico, did pass legislation made effective after the 2020-21 academic period). So, I consider the schools in these 25 states as *never treated* for this policy evaluation. The remaining six states/district are *always treated* as they have had active special training statutes since before the 2013-14 academic period. See Table A1 for more details.

To demonstrate how state variation in SRO statutes requiring law enforcement credentials is related to school variation in the presence and number of SROs, Tables 1 and 2 provides a summary of regressions of SRO presence and full-time equivalent (FTE) SROs on active law enforcement credential statute status or newly active law enforcement credential statute status in majority and minority Black schools. The first two columns estimate the association between a law enforcement credential statute being active and a law enforcement credential statute newly becoming active, respectively, on the probability of SRO presence in schools. To understand how the policy "switching on" is related to SRO presence, I limit the sample to schools in states *within scope* to mitigate bias from *always treated* schools. I also exclude the 2015-16 CRDC in the second column to avoid biasing this relationship with schools impacted by the 2015-16 CRDC data anomaly.[9]

The last two columns estimate the same associations but with SRO FTE, a continuous measure of SRO presence in schools. The 2013-14 CRDC does not provide SRO FTE, and I exclude the 2015-16 CRDC from these regressions to remove bias from the 2015-16 CRDC data anomaly. I also restrict the regression in the last column to *within scope* states to estimate the effect of a policy "switching on". All else equal, this summary shows that schools in states with an active law enforcement credential statute are more likely to have SROs present on campus and have higher SRO FTE. However, Tables 1 and 2 also show that all else equal, the association between being

9. See Section 4 for more details.

in a state with a newly effective law enforcement credential statute and SRO presence/FTE in schools is not statistically significant in either type of school. This relationship may indicate that the change in state policy does not immediately change the prevalence of SROs in schools bound by the new policy, and perhaps it takes time for schools to hire SROs who meet the new statute requirements. It also provides some evidence that schools are not selecting into or out of having SROs present in response to state mandates for law enforcement credentials. It is important to note that I cannot observe changes in SRO personnel when the presence/FTE does not change since SRO characteristics are unobserved in the CRDC data. Therefore, this lack of a significant relationship does not mean the policy is not doing what it intends to do. Thus, being in a state with a law enforcement credential statute is associated with an increased probability of having an SRO and an increased number of FTE SROs in schools. However, these increases do not happen immediately after a statute becomes effective, and I cannot say how this changes the composition of the SROs present.

Similarly, Tables 3 and 4 provide the average school policy responses to statutes that require SROs to complete special training. All else equal, this summary shows that schools in states with an active special training statute are less likely to have SROs present on campus and have lower FTE SROs. However, Table 4 shows that all else equal, the association between being in a state with a newly effective special training statute and FTE SROs in schools is positive in minority Black schools, though there is no statistically significant relationship with SRO presence. This table suggests that special training statutes have an inverse relationship with SRO presence and FTE SROs. Special training statutes may have an inverse relationship with SRO presence and the number of SROs in schools because the additional requirements for specialized training may limit the pool of eligible officers available to fill these positions. Schools might face challenges recruiting or retaining SROs who meet the new qualifications, resulting in fewer SROs on campus. Furthermore, schools may limit their reliance on SROs due to the added complexity or costs associated with the specialized training mandates. Interestingly, after requiring SROs to complete special training, there is an increase in the number of FTE SROs hired in minority Black schools, but this seems to be driven by schools that already had SROs present before the statute was effective since there is no significant change in the extensive margin of SRO presence.

3 Conceptual Framework

This section explores two competing frameworks used to understand racial disparities in school exclusion caused by SROs: the individual-level discrimination framework, often used in economics, and the systemic discrimination framework, which is core to my analysis.

3.1 Heterogeneity Across School Types and Policies

The heterogeneity between majority and minority Black schools is central to understanding how law enforcement credential and special training policies impact school exclusion. Majority Black schools often have a history of segregation, underfunding, and over-policed neighborhoods, which are consequences of structural racism. These schools face distinct challenges that minority Black schools may not experience as profoundly. This distinction is crucial to my analysis, as it reveals the role of systemic discrimination in school discipline.

I expect policies requiring law enforcement credentials for SROs to have different effects in these two school contexts. In majority Black schools, the deeply embedded structural racism results in SROs reinforcing racial gaps in exclusionary practices. By contrast, minority Black schools, where structural factors may be less pronounced, are expected to show a more ambiguous response to these policies. Special training policies, which aim to help SROs distinguish between adolescent and criminal behavior, are hypothesized to have more limited effects across both school types. This expectation is because training targeting individual behavior fails to address the underlying institutional racism that drives disparities, particularly in majority Black schools, where systemic factors are more deeply entrenched.

3.2 Individual-Level Discrimination Framework

The traditional economics approach to studying crime and discrimination focuses on individual behavior and direct discrimination. Rooted in rational choice and deterrence theories, the individual-level framework suggests that students weigh the costs of detection and punishment when deciding whether to engage in undesirable behavior (Marshall, 1907; Arrow, 1951; Becker, 1968; Ehrlich, 1973). In this view, SROs—especially those with law enforcement credentials—serve as deterrents, reducing socially undesirable behavior and school exclusion rates. Racial gaps in exclusion are assumed to stem from direct discrimination, where individual SROs treat students differently based on their race, using taste-based, statistical, or stereotype discrimination as frameworks (Becker,

1971; Phelps, 1972; Arrow, 1973; Aigner and Cain, 1977; Bordalo et al., 2016).

From this perspective, law enforcement credential policies should reduce exclusion for all students by increasing deterrence, while special training should reduce racial gaps by selecting less prejudiced officers and providing better information and implicit bias education. The individual-level framework assumes race is exogenous and does not factor in structural influences on behavior or exclusion decisions. Therefore, this framework is limited in explaining the racial dynamics affected by a color-blind policy to individual differences driven by deficiencies in minority races and ethnicities.

3.3 Systemic Discrimination Framework

The systemic discrimination framework, in contrast, accounts for the broader institutional and structural factors that drive disparities in school exclusion. I define systemic discrimination as institutions that stratify information, choice sets, constraints, strategies, and payoff structures across racial and other group identities. Systemic discrimination creates unequal constraints and choice sets for individuals, shaping their behavior and outcomes. It is embedded in institutional practices and policies and operates beyond the actions of individual actors. For example, historical underfunding of majority Black schools and the disproportionate policing of Black neighborhoods create environments where criminalizing student behavior is more prevalent than in minority Black schools. These structural factors contribute to unequal educational outcomes and increased school exclusion for Black students. Systemic discrimination shapes students' environments, their behavior, and how SROs interact with them. These structural factors—rooted in historical and contemporary forms of racism—create barriers to upward mobility for marginalized students, making exclusionary discipline a tool for maintaining social stratification. SROs, especially those with law enforcement credentials, operate within this racialized system, enforcing policies that disproportionately impact Black students in majority Black schools.

Following a pillar of the stratification economics literature, race, as a determinant of systemic discrimination, is endogenous in this relational system (Lefebvre, n.d.). Departing from the individual-level framework, the endogeneity of race plays a fundamental role in shaping both direct and systemic discrimination. In majority Black schools, structural racism is particularly pervasive, amplifying the impact of law enforcement credentials. This results in higher exclusion rates and widening racial gaps. In minority Black schools, where structural racism is less entrenched, the effect of these policies is more ambiguous, as they do not face the same level of systemic

discrimination.

The special training policies are also understood differently under this framework. While training may reduce individual-level bias, it fails to address the structural forces driving disparities in majority Black schools. Without complementary institutional changes, such as reforms to address the structural inequities in these schools, the effects of training are expected to be minimal. In both school contexts, special training alone is insufficient to counter the broader, systemic factors that contribute to racial gaps in school exclusion in the U.S. education system.

4 Data and Descriptive Statistics

The foundational data for this analysis are school-level data on a near-census of almost 138,000 U.S. public schools for the 2013-14, 2015-16, 2017-18, and 2020-21 school years (hereafter referred to as 2013, 2015, 2017, and 2020, respectively) academic periods from the Civil Rights Data Collection (CRDC). The CRDC is a mandatory survey administered by the U.S. Department of Education's (USDOE) Office for Civil Rights (OCR) since 1968. The response rate for the CRDC survey is typically over 99% of districts and schools. The population surveyed also includes juvenile justice facilities, charter schools, magnet schools, alternative schools, and schools serving students with disabilities (Office for Civil Rights, 2020).

The CRDC data are one of the only sources of school-level, nationally scoped data for evaluating the impacts of SRO law enforcement credential and special training laws on Black-White discipline gaps because it represents the complete United States population of public schools. It also contains the critical variable, the presence of SROs, and the number of students receiving a disciplinary action disaggregated by race. These data contain detailed school-level characteristics, including racial composition, which are known to be related to SRO and discipline policies in schools (A. Jackson, 2002; Crawford and Burns, 2016; Lynch, Gainey, and Chappell, 2016; Sorensen et al., 2023). Finally, the data allow users to extract the U.S. state of each school, which can be linked directly to the state's SRO statutes and effective dates.

Despite the CRDC's strengths, it has its limitations. The CRDC began collecting data about the assignment of SROs during the 2013 survey, meaning I observe SRO status only for four periods of observation. The 2013 survey also included an optional question on the number of full-time equivalent (FTE) SROs, which became mandatory in the 2015 survey. Optional data are not available to the public (Office for Civil Rights, 2016). Thus, this paper will speak to the short-term

impacts of the SRO policies evaluated here. Also, a data collection issue in the 2015 CRDC heavily impacted the publicly available SRO presence/FTE variables.[10] For subsequent surveys, the OCR corrected this anomaly, and I use data imputation to recover a portion of the affected 2015 sample.

Using CRDC data, I construct a binary SRO indicator and variables for the yearly number of Black and White students receiving exclusionary discipline actions at the school level. I convert the Black and White exclusion counts to their respective exclusion rates, which I use to calculate Black-White exclusion gaps. The racial gaps are a simple calculation of the differences between the Black exclusion rate per 100 Black students enrolled and the White exclusion rate per 100 White students enrolled.

I also use school enrollment variables by student demographics to calculate the demographic composition within each school. I imputed observations with missing 2015 SRO indicators with the 2013 & 2017 SRO indicator values where indicators in both periods were equal, under the assumption that schools would not switch their SRO status on and off in the span of four years.[11] This enables me to recover some of my anomaly-impacted sample and use four full periods of data where SRO information is collected. This data preparation yields a national, school-level longitudinal data set of SRO presence, Black-White discipline gaps, and detailed student demographic, staffing, and school-type characteristics.

For this analysis, I include a measure of the richness and evenness of racial/ethnic diversity in schools that supplements the disaggregated racial/ethnic enrollment proportions. I construct the racial/ethnic diversity index using Simpson's Diversity Index formula (Simpson, 1949). According to Knudsen (2018), this diversity index, which is analytically identical to the Herfindahl-Hirschman concentration index (HHI), has been borrowed from ecology, adapting the measure of diversity within an ecosystem to measure diversity within an organization. This index measures how many groups are represented within an organization and how evenly distributed the identified groups are. I include this diversity measure to investigate whether the presence of SROs or discipline gaps varies by a single measure of the level of racial/ethnic diversity in the school.

10. "The Sworn Law Enforcement Officers indicator question was inadvertently carried over from the 2013 data collection and displayed in the submission tool for 2015. This carryover caused a reporting issue with the SCH_FTESECURITY_LEO data element. Although the data element was required for all schools, the data element was skipped for over 69,000 of those schools (approximately 73% of the 2015 CRDC school respondents)" (Office for Civil Rights, 2018).

11. Less than 2.5% of 33,000 unique schools in the empirical sample (and about 6% of unique schools with non-missing 2015 SRO indicator) "switch" their SRO status twice across the three biennial year period, lending some support for this imputation assumption. Even though this assumption does not yield time variation in SRO presence for the imputed observations, recovering a portion of the sample impacted by the 2015 CRDC anomaly allows me to exploit the state and time variation from the SRO statutes of interest.

I supplement the CRDC data with information about each school's surrounding population density and urbanicity from the National Center for Education Statistics (NCES) Common Core of Data (CCD). The NCES provides a locale framework to classify school districts based on urbanicity and population density. The CRDC does not collect socioeconomic status information, so I also append school-level proportions of free-and-reduced-price lunch (FRPL) eligible students from the CCD. The NCES is the USDOE statistical agency and a key data source for research in U.S. education. NCES makes the CCD, a database on all public elementary and secondary schools in the U.S., publicly available.

To condition on other possible confounders that pose an internal validity threat, I also use the Policy Surveillance Program (PSP)-*A LawAtlas Project*, and Easy Access to the Census of Juveniles in Residential Placement (EZACJRP) as supplemental data sources.[12] I use data from the PSP to obtain state statutes on exclusionary discipline in schools because if states that regulate SROs also regulate exclusionary discipline through laws, this may lead to non-parallel trends between treated and comparison groups. These data indicate the state statutes that include: (1) mandates on; (2) allowances for; (3) prohibitions on; and (4) alternatives for school exclusionary actions under specific conditions. I use state-level data from the EZACJRP to measure juvenile crime or, more accurately, punishment of juvenile crime because if states pass SRO regulation in response to juvenile crime rates, this may also lead to non-parallel trends between treated and comparison groups. It measures juvenile placement rates as the number of minors placed in a residential facility per 100,000 persons ages 10-17, based on the state where the juvenile committed the offense. Finally, the state statutes summarized in Table A1 are merged with each school-year observation.

After excluding elementary schools and schools with no Black or White students enrolled, the population of interest includes an average of 30,756 school-level observations across the U.S. in each period. SROs are less likely to be assigned to elementary schools, and exclusionary discipline practices are more highly regulated in elementary schools; thus, I exclude elementary schools from this analysis. After imputing the missing 2015 CRDC SRO indicator, I remove school-year observations with missing values for variables used for estimation, yielding an average of 25,426 school-level observations for the empirical sample in each period. Tables A3 and A2 provide descriptions of the variables used in this analysis.

Tables 5 and 6 summarize some basic facts about demographics, schools, surrounding geographic

12. PSP's data on school discipline laws can be found at https://lawatlas.org/datasets/school-discipline-policies. EZACJRP's data on youth in residential placement facilities can be found at https://www.ojjdp.gov/ojstatbb/ezacjrp/.

characteristics, and discipline in the data. Table 5 shows the average student demographics, school staffing, school type, and surrounding geographic characteristics, where schools with SROs are slightly different from schools without SROs. From column 6, SROs tend to be present in schools with more Black students. Traditional high schools, particularly schools with high enrollment, are more likely to have SROs present, though SROs are also more likely to be present in magnet schools. SROs are less likely to be assigned to charter schools. Concerning population density and urbanicity, schools in small cities and fringe rural areas are more likely to have SROs. Other rural area schools are typically less likely to have SROs present.

The data corroborate some of the historical connections between race and SRO programs. For example, the first phases of SRO expansion were targeting schools with higher Black shares of students. The expansion of SROs was also far less likely to be implemented in schools in rural areas where Black students are less likely to attend. These tables show the possible sources of selection bias and indicate that while these differences are often statistically significant, the overall distribution of characteristics is not substantively different between these groups of schools. The differences also have some external validity considerations because my empirical strategy will focus on the population represented by the fourth column of these tables. However, the findings are likely applicable to schools outside this sample, given the minor differences in the distribution of characteristics between the sample of schools with SROs and those without SROs.

Table 6 uses the same format to show the average differences in exclusion rates and Black-White disparities between schools with and without SROs. From column 6, top panel, it is clear that schools with SROs are generally associated with higher average exclusion rates for both Black and White students. However, the bottom panel shows that Black-White exclusion disparities are also positively related to having SROs. Black-White disparities in OSS, expulsions, law enforcement referrals, and arrests are often higher in schools with SROs present. The table also shows that the mean difference in Black-White disparities between schools with and without SROs monotonically increases as the severity of the punitive action increases.

Finally, the characteristics of the empirical sample utilized in this analysis, as depicted in Tables A5 and A4, generally represent the whole population's distribution, with only minor differences. Whether comparing the broader samples or the subsamples, average exclusion gaps, student demographics, staffing, and other school and surrounding area characteristics are pretty similar. Thus, findings from this analysis using the empirical sample generally represent U.S. middle and high schools with Black and White students.

5 Empirical Framework

To evaluate the effects of state statutes governing SRO qualifications and training, I apply a research design that exploits state and time variations in adopting these statutes. More specifically, I identify the two statute categories: *law enforcement credentials* and *special training* based on the existence and language of each state's SRO statute(s). The design also identifies the following state-level adoption timing groups for both SRO statute categories based on the first effective adoption period: *always treated*, *never treated*, A, B, Γ, Δ, E, Z, H. Groups A through H designate 2014 through 2020 adoption periods, respectively. For estimation, *never treated* states serve as a counterfactual for A through H adoption states. This staggered adoption setting (where different states adopt policies at various times), policy variation, and multi-period, school-level CRDC are optimal for estimating Callaway and Sant'Anna (2021) group-time average treatment effects on the treated, or ATT(g,t).[13] This identification strategy also addresses reverse causality by estimating the difference in expected outcomes before and after the policies go into effect and comparing the difference to a counterfactual group.

I use the following criteria to exclude schools: (1) schools in *always treated* states; (2) elementary schools; (3) schools with no SROs; and (4) schools with no Black or no White students enrolled. This results in an average sample of 12,216 U.S. middle and high schools in 2013, 2015, 2017, and 2020. When I evaluate the impact of law enforcement credential statutes on racial gaps in school exclusionary discipline actions in majority Black schools, the sample consists of an average of 1,146 middle and high schools each period. For minority Black schools, the sample consists of an average of 11,070 middle and high schools each period. Note that there is no school-level variation in SRO presence in these samples for the remainder of this analysis; the treatment variation this strategy exploits is at the state level. There is no school-level variation in SRO presence because I have dropped schools with no SROs and do not have data for all years on SRO FTE. In other words, the variation in school SRO presence is from the type of SRO mandated by state policy, and I observe that variation at the state level. I calculate the difference between Black and White exclusion rates for ISS, OSS, expulsions, law enforcement referrals, and arrests in each school-year observation. ATT(g,t) are estimated by computing the 2x2 ATTs using the Sant'Anna and Zhao (2020) doubly robust difference-in-difference (DRDID) estimator for group $g \in \{A, B, \Gamma, \Delta, E, Z, H\}$ in period $t \in \{2013, 2015, 2017, 2020\}$ to estimate differences in Black-White exclusion gaps between

13. Much of the content provided in this section follows Callaway and Sant'Anna (2021).

group g and the *never treated* group in period t.

The equation that illustrates how each ATT(g,t) is estimated separately by group and time, conditional on relevant characteristics, is given by:

$$\widehat{ATT}_{dr}^{nev}(g,t) = E_n\left[\left(\frac{G_g}{E_n[G_g]} - \frac{\frac{\widehat{p}_g(X;\widehat{\pi}_g)C}{1-\widehat{p}_g(X;\widehat{\pi}_g)}}{E_n\left[\frac{\widehat{p}_g(X;\widehat{\pi}_g)C}{1-\widehat{p}_g(X;\widehat{\pi}_g)}\right]}\right)\left(Y_t - Y_{g-1} - \widehat{m}_{g,t}^{nev}\left(X;\widehat{\beta}_{g,t}^{nev}\right)\right)\right] \tag{1}$$

The *dr* subscript indicates the use of the doubly robust (DR) approach to estimate the group-time ATTs, as opposed to inverse probability weighting (IPW) or outcome regression (OR) approaches. The *nev* superscript indicates that the comparison group comprises units that are *never treated* across the entire study period instead of using a comparison group consisting of *not-yet-treated* units. I define G_g as a binary variable where $G_g = 1$ if a unit is in group g; $G_g = 0$ otherwise, and C as a binary variable where $C = 1$ if a unit is in *never treated* group; $C = 0$ otherwise. Y_t represents the outcome in period t while Y_{g-1} represents the outcome in period $g-1$. X is a vector of covariates representing characteristics that could threaten the parallel trends identifying assumption.

While the Black-White gap is the primary outcome of interest in understanding the effects of the SRO policies on racial inequality in school discipline, I also estimate the impact on the Black exclusion rate, the White exclusion rate, and the overall exclusion rate separately. These measures allow me to understand whether any changes in racial gaps are driven by one racial group or the other. It also enables me to determine if these policies affect the overall disciplinary environment in schools. I measure the Black-White gap as the difference between the Black and White rates. I measure the Black rate as (number of Black students excluded / number of Black students enrolled) $\times$ 100. I measure the White rate as (number of White students excluded / number of White students enrolled) $\times$ 100. I measure the overall rate as (number of students excluded / number of students enrolled) $\times$ 100. The CRDC captures enrollment at the beginning of the school year and exclusion at the end. I normalize each outcome measure by transforming the expected change in the outcome as a multiplier of the baseline outcome mean.

DRDID estimates ATT(g,t) in two steps. The first step estimates the conditional probability function (Equation 2) and the conditional expectation function (Equation 3) with IPW and OR approaches, respectively, conditional on a vector of pretreatment covariates X. The conditional probability function, $p_g(X)|_{G_g+C=1}$, estimates the probability of a school being in group g on the combined sample of group g schools and *never treated* schools, conditional on X. The conditional

expectation function, $m_{g,t}^{nev}(X) = E\left[Y_t - Y_{g-1} | X, C = 1\right]$, estimates the expected change in exclusion rates from the adoption period corresponding with treatment group g to the observed period t for the *never treated* group, conditional on X.

$$p_g(X)|_{G_g+C=1} = \text{logit}^{-1}\left(\eta_g + \pi_g G_g + \lambda_g X + \nu_g\right) \tag{2}$$

$$m_{g,t}^{nev}(X) = \alpha_{g,t}^{nev} + \beta_{g,t}^{nev} C + \gamma_{g,t}^{nev} X + \mu_{g,t}^{nev} \tag{3}$$

In the second step, DRDID plugs the estimated values from Equations (2) and (3), $\widehat{\pi}_g$ and $\widehat{\beta}_{g,t}^{nev}$, into Equation (1) to calculate the estimated ATT for group g in time t. The first difference in equation 1 is between the estimated probability weight of being in group g for $G_g = 1$ and the estimated probability weight of being in group g for the *never treated* group. The second difference is the difference-in-differences between treatment group g and the *never treated* group. For valid inference, I calculate clustered, bootstrapped standard errors at the state level.

Because I have ten treatment and outcome pairings, I aggregate the group-time ATTs using $\sum_g \left(\frac{1}{H-g+1}\sum_{t=g}^{H} ATT(g,t)\right) P(G = g | G \leq H)$ to show the average impact of SRO statutes on Black-White exclusion gaps.[14] To show pretrends and heterogeneity of treatment effects over time, I provide estimated effects aggregated by event time ($e = t - g$) using $\sum_g \mathbf{1}\{g + e \leq \mathcal{T}\} P(G = g | G + e \leq \mathcal{T}) ATT(g, g+e)$.[15] See Figures A1-A8. This estimation strategy assumes that once a unit is treated, it remains treated, which is validated through the actual implementation of the SRO policies, and assumes that the panel data are i.i.d. I use this procedure for each of the five disciplinary actions for both sets of SRO policies, to identify plausibly causal effects of each type of SRO policy on Black-White exclusion gaps in ISS, OSS, expulsions, law enforcement referrals, and school-related arrests.

Several assumptions must be met to estimate the unbiased effects of SRO statutes on exclusion gaps. First, I assume that there is no anticipation of treatment. The no-treatment anticipation assumption is reasonable when considering the way school budgeting operates. School budgets are typically planned and approved well in advance, and funding is often allocated based on projected needs for the upcoming school year. Given the tight constraints of most school budgets—due

14. I estimate the effect of two SRO policy treatments on five Black-White exclusion gap outcomes. Thus, showing each $ATT(g,t)$ estimate would yield 280 estimates.

15. Group-level aggregates of ATT(g,t) estimates are the unweighted average of within-group ATT(g,t)s. Overall aggregates of ATT(g,t) estimates are the average of group-level aggregates of ATT(g,t), weighted by the probability of being in group g. Event-time aggregates are the ATT(g,t) weighted by the likelihood of being in group g and the time spent treated by period t.

to limited funding, competing priorities, and taxpayer accountability—administrators are not in a position to allocate critical resources for hypothetical changes or education laws the state legislation may not pass. Second, within each group-time pair, schools in states with and without SRO statutes would experience the same trends in racial exclusion gaps, absent the policy change, conditional on covariates that may threaten parallel trends between treated and never treated groups. Third, for each treated unit with covariates X, there are at least some untreated units in the population with the same value of X (Roth et al., 2023). Lastly, we have the stable unit treatment value assumption (SUTVA), which assumes the potential outcome for a given unit under its treatment status is independent of the treatment assignment mechanism and the treatment status of all other units and periods.

The most salient assumption for identification in this design is the assumption of parallel trends. My design relies on the weaker assumption of conditional parallel trends because satisfying this assumption unconditionally in this setting requires that Black-White exclusion gap trends between schools in states with and without a given SRO statute are parallel in the absence of treatment. This assumption is not directly testable because we do not observe untreated potential outcomes for the treated groups. To examine what confounding factors are likely to violate the unconditional parallel trends assumption, I estimate the relationship between the law enforcement credential and special training statutes with state and school characteristics.

Following Pei, Pischke, and Schwandt (2019), I run a series of balancing regressions to test the null hypothesis that the SRO law enforcement credential and special training statutes are not statistically related to potential confounding variables. I run balancing regressions between SRO law enforcement credential statutes and covariates on the subsamples of majority and minority Black schools with SROs present. I similarly run balancing regressions between SRO special training statutes and covariates on the subsamples of majority and minority Black schools with SROs present. Table A6 provides a summary of the results of the balance tests. The table shows that school and state characteristics are well balanced between treatment and comparison groups in majority and minority Black schools for both policies. There are only minor differences in the student demographic composition, high school status, and urbanicity/population density characteristics.

Considering the background of SRO program implementation, the differences in local environments between majority and minority Black schools, and to make comparisons across treatment effects, I control for the Black share of enrollment, traditional school status, high school status, large and small city statuses, and fringe rural status in all preferred specifications. Even though I

do not detect significant differences between treatment and comparison groups in the Black share of enrollment and traditional school status, these traditional schools with higher shares of Black students are still much more likely to have SROs present. These potential sources of selection into having SROs might threaten the unconditional parallel trends assumption. Similarly, the disciplinary environment in high schools may lend to differential trends compared to schools with lower grades enrolled. Finally, large cities are more likely to have more segregated schools in low-income areas, which are subject to local structures that are more likely to impact majority Black schools.

Given the likely threats to the unconditional parallel trends assumption, my design relies on the weaker assumption of conditional parallel trends. Thus, I include covariates for SRO law enforcement credential statutes and SRO special training statutes that are likely to create differential trends between schools in treated states and schools in untreated states in the absence of treatment. While some unobservable confounders may still be related to the SRO statutes and school exclusion rates, the assumption of conditional parallel trends is more plausible than the assumption of unconditional parallel trends. If the identifying assumptions are satisfied, the DRDID estimator, with adoption group and period indicators as inputs, yields unbiased estimates of ATT(g,t). The aggregated $\widehat{ATT}_{dr}^{nev}(g,t)$ estimates are interpreted as the causal effect of a given SRO policy on Black-White racial gaps in ISS, OSS, expulsions, law enforcement referrals, and school-related arrests.

6 Results and Discussion

In this section, I start with the main results on the effect of policies requiring SROs to have sworn law enforcement credentials or complete special training in majority and minority Black schools in Section 6.1, followed by tests for the robustness of the main findings in Section 6.2. I present the results of Equation (1), aggregated using $\sum_g \left(\frac{1}{H-g+1}\sum_{t=g}^{H} ATT(g,t)\right) P(G=g|G \leq H)$, of law enforcement credential policy effects on suspensions in Section 6.1.1. I subsequently present the corresponding set of results of special training policy effects on suspensions in Section 6.1.2, law enforcement credential policy effects on expulsions, law enforcement referrals, and arrests (i.e., rare school exclusion actions) in Section 6.1.3, and special training policy effects on rare school exclusion actions in Section 6.1.4. I end this section by discussing the underlying explanations of findings in Section 6.3.

6.1 Main Results

6.1.1 SRO Law Enforcement Credentials on Suspensions

In Figure 3, I present the impact of law enforcement credential policies on suspensions in majority Black schools. These policies significantly increased suspension rates, primarily driven by higher suspension rates among Black students, resulting in more pronounced racial gaps. In majority Black schools, the Black-White ISS gap increased by 10.6 percentage points, from a baseline mean of 7.5 to 18.2 percentage points post-treatment—a 1.4 times increase (S.E. = 0.4).[16] OSS exhibited a similar pattern, with the Black-White OSS gap expanding by 14.0 percentage points, rising from a baseline of 7.8 to 21.8 percentage points—a 1.8 times increase (S.E. = 0.5).

For Black students, the ISS rate in majority Black schools increased by 14.4 per 100 Black students, from a baseline mean of 21.0 to 35.3 per 100, a 0.7 times increase (S.E. = 0.3). Similarly, the OSS rate for Black students grew by 10.4 per 100, increasing from 26.1 to 36.5 per 100 Black students—a 0.4 times increase (S.E. = 0.1). Overall ISS rates (per 100 students) also increased by 13.0 percentage points, from 18.4 to 31.3 per 100 students—a 0.7 times increase (S.E. = 0.3). OSS rates followed this pattern, with a rise of 9.9 percentage points, from 23.3 to 33.2 per 100 students, reflecting a 0.4 times increase (S.E. = 0.1).

In stark contrast, Figure 4 shows the effects of law enforcement credential policies in minority Black schools, where I found no significant relationship between the policies and suspension rates. The ISS gap in minority Black schools increased by only 0.5 percentage points, from 9.6 to 10.2 percentage points post-treatment—a 0.1 times increase (S.E. = 0.1), which was not statistically significant. Similarly, the OSS gap increased by 0.9 percentage points, from 10.7 to 11.6 percentage points—a 0.1 times increase (S.E. = 0.1), which was also statistically insignificant. Comparing the x-axes and the 95% confidence intervals of Figure 4 to Figure 3, and given the large sample of over 11,000 minority Black schools, it appears the null effects are precisely estimated. In other words, there is greater power to detect significant changes in suspensions following law enforcement credential policies in minority Black schools, so I am confident that, on average, these policies do not substantially affect suspensions in these settings.

The suspension rates for Black students in minority Black schools saw little change. The ISS rate rose by just 0.3 per 100 students—a 0.02 times increase (S.E. = 0.1)—while the OSS rate increased by 1.2 per 100 students—a 0.1 times increase (S.E. = 0.1). Neither of these results was

16. Henceforward, the standard errors are on the estimated expected change in the outcome measure as a multiplier of the baseline outcome mean, in this case: 1.4 (0.4).

statistically significant. Overall, the ISS rate in minority Black schools decreased by 0.2 percentage points, from 9.5 to 9.3 per 100 students—a 0.03 times decrease (S.E. = 0.1), though not statistically significant. OSS rates in minority Black schools increased slightly by 0.3 percentage points, from 8.7 to 8.9 per 100 students—a 0.03 times increase (S.E. = 0.1), but again, this change was not statistically significant.

6.1.2 SRO Special Training on Suspensions

Turning to special training requirements for SROs, Figure 5 illustrates the estimated effects of this requirement on suspensions in majority Black schools. Unlike law enforcement credential policies, special training had no significant impact on suspension rates. There was suggestive evidence of OSS reductions offset by ISS increases, though none of these changes were statistically significant. In majority Black schools, the Black-White ISS gap increased by 1.0 percentage points—a 0.1 times increase (S.E. = 0.2)—while the OSS gap decreased by 0.2 percentage points—a 0.03 times decrease (S.E. = 0.3). Again, neither change was statistically significant. In minority Black schools, Figure 6 illustrates that special training policies had similarly insignificant effects on suspensions. The Black-White ISS gap decreased by 0.7 percentage points—a 0.1 times decrease (S.E. = 0.1)—while the OSS gap only decreased by 0.03 percentage points, representing a 0.003 times decrease (S.E. = 0.1). These changes were not statistically significant.

The effects of special training on Black student suspension rates in majority Black schools (Figure 5) were similarly negligible. The ISS rate for Black students increased by 2.6 percentage points—a 0.1 times increase (S.E. = 0.2)—while the OSS rate decreased by 1.6 percentage points—a 0.1 times decrease (S.E. = 0.3). In both cases, the changes were not statistically significant. Overall suspension rates in majority Black schools also showed no statistically significant changes, with the ISS rate increasing by 2.7 percentage points—a 0.2 times increase (S.E. = 0.2)—and the OSS rate declining by 1.2 percentage points—a 0.1 times decrease (S.E. = 0.4). In minority Black schools, see Figure 6, the ISS rate for Black students fell by 1.4 percentage points—a 0.1 times decrease (S.E. = 0.1)—while the OSS rate declined by 0.2 percentage points—a 0.01 times decrease (S.E. = 0.1), but neither result was statistically significant.

6.1.3 SRO Law Enforcement Credentials on Rare School Exclusion Actions

I explore the impact of law enforcement credential policies on rarer exclusion outcomes in majority Black schools in Figure 7. Law enforcement credential policies significantly increased law enforce-

ment referral rates, driven by higher Black law enforcement referral rates and more expansive racial gaps. I also found that overall expulsion rates decreased after introducing law enforcement credential policies. However, increases in other exclusionary outcomes offset these reductions: on average, schools referred 5 out of 100 students to law enforcement, suspended 10 out of 100 students out of school, and suspended 13 out of 100 students after states implemented the policies.

The Black-White law enforcement referral gap in majority Black schools increased by 4.9 percentage points, from a baseline of 0.5 to 5.4 percentage points post-treatment—a 9.6 times increase (S.E. = 3.0). In contrast, the Black-White expulsion gap decreased by 1.2 percentage points, from a baseline mean of 0.4 to -0.8 percentage points—a 3.4 times decrease (S.E. = 2.2), though this result was not statistically significant. The Black-White arrest gap increased by 0.4 percentage points, from 0.3 to 0.7 percentage points—a 1.2 times increase (S.E. = 1.6), though this result was insignificant.

Regarding Black student outcomes in majority Black schools, the law enforcement referral rate increased by 5.1 per 100 Black students, from a baseline mean of 1.4 to 6.5 per 100 Black students—a 3.6 times increase (S.E. = 1.0). The Black expulsion rate decreased by 1.1 per 100 Black students, from a baseline of 1.4 to 0.3 per 100 Black students—a 0.8 times decrease (S.E. = 0.4), though this result was insignificant. The Black arrest rate increased by 0.4 per 100 Black students, from 0.8 to 1.2 per 100 Black students—a 0.5 times increase (S.E. = 0.6), but this change was not statistically significant. Combined with the suspension results in majority Black schools, these estimates suggest that schools are substituting away from expulsions and towards law enforcement referrals and less harsh exclusionary discipline like suspensions.

In majority Black schools, the overall expulsion rate decreased significantly by 1.1 per 100 students, from a baseline mean of 1.2 to 0.2 per 100 students—a 0.9 times decrease (S.E. = 0.4). Conversely, the overall law enforcement referral rate increased by 5.1 per 100 students, from 1.3 to 6.4 per 100 students—a 4.1 times rise (S.E. = 1.1). The overall arrest rate saw a minor increase of 0.3 per 100 students—a 0.4 times rise (S.E. = 0.4), though the change in arrest rates was not statistically significant.

Figure 8 presents the effects of law enforcement credential policies on rarer exclusion outcomes in minority Black schools, where I observed no significant changes in expulsions, law enforcement referrals, or school-related arrests. The Black-White expulsion gap decreased by 0.3 percentage points—a 0.4 times reduction (S.E. = 0.4)— but this result was not statistically significant. The referral gap increased by 0.6 percentage points—a 0.5 times increase (S.E. = 0.8), though this result

was also not statistically significant. Similarly, the Black-White arrest gap rose by 0.2 percentage points—a 0.5 times increase (S.E. = 1.4), which was statistically insignificant.

In minority Black schools, the Black expulsion rate declined by 0.3 percentage points—a 0.2 times decrease (S.E. = 0.2)—though this was not statistically significant. The Black law enforcement referral rate increased by 0.8 percentage points—a 0.4 times rise (S.E. = 0.6), but this result was also statistically insignificant. The Black arrest rate increased by 0.2 percentage points—a 0.3 times increase (S.E. = 0.9), which was also statistically insignificant. Overall, the expulsion rate in minority Black schools decreased by 0.1 percentage points—a 0.2 times reduction (S.E. = 0.1), though the result was insignificant. Meanwhile, the overall law enforcement referral rate increased by 0.2 percentage points—a 0.3 times increase (S.E. = 0.2), though this change was also insignificant. The overall arrest rate increased by a mere 0.02 percentage points—a 0.1 times increase (S.E. = 0.2), which was also statistically insignificant. Similar to the findings in majority Black schools, the point estimates of the effects of law enforcement credentials on all exclusionary discipline suggest some substitution away from expulsions and toward other disciplinary responses.

6.1.4 SRO Special Training on Rare School Exclusion Actions

In Figure 9, I show the estimated effects of special training policies on rarer exclusion outcomes, including expulsions, law enforcement referrals, and arrests in majority Black schools. Once again, special training did not significantly impact these outcomes. The Black-White expulsion gap increased by 0.1 percentage points—a 0.2 times rise (S.E. = 1.5)—from a baseline of 0.3 percentage points, though this was not statistically significant. The Black-White law enforcement referral gap decreased by 0.6 percentage points—a 1.0 times reduction (S.E. = 4.2), though this result was also not statistically significant. The Black-White arrest gap decreased by 0.2 percentage points—a 1.5 times reduction (S.E. = 3.9)—but this change was also insignificant.

In majority Black schools, the Black expulsion rate increased by 0.4 percentage points—a 0.4 times rise (S.E. = 2.5)—but this change was not statistically significant. The Black law enforcement referral rate decreased by 0.9 percentage points—a 0.4 times reduction (S.E. = 0.9), though this result was also statistically insignificant. The Black arrest rate increased marginally by 0.01 percentage points—a 0.01 times increase (S.E. = 1.9), which was not statistically significant. Overall, the expulsion rate increased by 0.3 percentage points—a 0.4 times rise (S.E. = 2.3)—though this change was not statistically significant. The overall law enforcement referral rate decreased by 0.7 percentage points—a 0.4 times reduction (S.E. = 1.0)—and the overall arrest rate increased

by 0.1 percentage points—a 0.1 times increase (S.E. = 1.7). However, none of these changes were statistically significant.

Special training requirements also proved ineffective at reducing racial disparities in rarer exclusion outcomes in minority Black schools, as shown in Figure 10. The impacts mirrored those in majority Black schools. The Black-White expulsion gap increased by 0.1 percentage points—a 0.1 times rise (S.E. = 0.4)—but this result was statistically insignificant. The Black-White law enforcement referral gap decreased slightly by 0.04 percentage points—a 0.03 times reduction (S.E. = 0.2)—which was insignificant. The Black-White arrest gap decreased by 0.1 percentage points—a 0.3 times reduction (S.E. = 0.3), but this change was also insignificant.

In minority Black schools, the Black expulsion rate increased slightly by 0.04 percentage points—a 0.04 times rise (S.E. = 0.3), but this change was not statistically significant. The Black law enforcement referral rate decreased by 0.1 percentage points—a 0.04 times reduction (S.E. = 0.2), though this result was also statistically insignificant. The Black arrest rate declined by 0.1 percentage points—a 0.1 times reduction (S.E. = 0.2)—but was not statistically significant. Overall, the expulsion rate increased by 0.02 percentage points—a 0.04 times rise (S.E. = 0.4), and the law enforcement referral rate decreased by 0.1 percentage points—a 0.1 times reduction (S.E. = 0.2)—but neither change was significant. Finally, the overall arrest rate increased by 0.01 percentage points—a 0.03 times rise (S.E. = 0.2), which was also not statistically significant.

The findings of this analysis demonstrate that requiring SROs to hold sworn law enforcement credentials significantly increases racial disparities in school suspensions and law enforcement referrals, particularly in majority Black schools. These policies result in notable rises in exclusion rates, disproportionately impacting Black students and widening Black-White gaps.

6.2 Robustness

I summarize the results from robustness checks in Tables 7-10. In this section, I focus on the results from Table 7 which summarizes the effects of law enforcement credential policies in majority Black schools where the data showed the most significant impacts. As expected, schools with no SROs have minimal effects from law enforcement credential and special training policies. There are consequential impacts of law enforcement credential policies in majority Black schools with SROs on overall in- and out-of-school suspensions and law enforcement referrals, which were driven by increases in the corresponding Black exclusion rates that expanded Black-White exclusion gaps. However, in majority Black schools without SROs, the data show that law enforcement credential

policies have much more minor, generally insignificant effects on the same disciplinary actions.

When I use a different comparison group, the not-yet-treated group, the data show that law enforcement credential policies have slightly lower, but still very consequential, increases in overall suspension and law enforcement referral rates driven by increases in the respective Black exclusion rates, which widen Black-White gaps in majority Black schools. Also, accounting for a one-year anticipation period, the impact of law enforcement credential policies on exclusion in majority Black schools is even higher.

Given the number of hypothesis tests I conduct in this analysis, I use the Bonferroni correction to expand the standard errors. The increase in the Black-White gap in ISS remains statistically significant at the 10% level. The Black OSS rate and the Black-White OSS gap increase remain significant at the 10% level. All law enforcement referral increases remain significant at the 10% level.

6.3 Discussion

The findings from this analysis illustrate the systemic effects of law enforcement credential policies on school exclusion, especially in majority Black schools. Note that the effects of law enforcement credential policies capture the effects of the presence of a sworn law enforcement officer, holding pre-existing school characteristics and patterns fixed. These policies significantly exacerbate racial disparities in suspensions and law enforcement referrals, with the most pronounced impacts occurring in schools where Black students comprise a larger share of the student body. The stark difference in the effect of law enforcement credential policies between majority Black and minority Black schools underscores structural differences shaped by both historical and contemporary factors, including segregation and community disinvestment (Mitchell and Chihaya, 2022).

Here are some examples of how Black students are more likely to face discrimination outside of an SRO interaction or even outside of the school, which may also make them more likely to face exclusionary discipline within an SRO interaction absent direct discrimination. Local responses to high Black shares of the population (Derenoncourt, 2022) have led to systemic disadvantage of Black children, limiting their choice sets, raising their constraints, and possibly lowering their risk aversion relative to White children. The legacies of slavery in the origins of policing and the over-policing of Black neighborhoods (Gleit, 2022) impacts how law enforcement serves Black children relative to White children outside schools, such that these circumstances influence interactions with police in school. Black students are less likely to have access to quality educational resources (Shores, Kim,

and Still, 2020; United Negro College Fund, 2016) and opportunities for upward mobility through "socially desirable" channels, given school and residential segregation and redlining. Thus, systemic underfunding and overcrowding of majority Black schools, where non-police behavioral resources are less available than in minority Black schools, result in limited choice sets on the parts of both students and staff related to behaviors and subsequent responses.

Based on my framework, we expect law enforcement credential policies to increase exclusionary discipline because these policies place sworn law enforcement officers—trained primarily to enforce laws and respond to criminal behavior—within school environments (Hirschfield, 2008). This exposure shifts how personnel interprets student behavior: rather than viewing certain behaviors as typical adolescent misbehavior, these behaviors are perceived as offenses warranting law enforcement involvement (Kupchik, 2010). Given the legacy of racial bias within the policing institution (Brown, 2019), Black students are disproportionately affected, particularly in majority Black schools. The results support this, showing that law enforcement credential policies increase exclusion rates, widen racial gaps, and particularly amplify the criminalization of Black students' behaviors in majority Black schools. The finding that law enforcement referrals, as well as suspensions, increase for Black students suggests that law enforcement credential policies not only increase the detection of perceived criminal offenses but also affect school-enforced disciplinary actions, where school administrators are more likely to impose suspensions following law enforcement referrals (Sorensen, Shen, and Bushway, 2021), even if arrests do not result from the referral.

Were structural issues not at play, we would expect to see similar racial dynamics across both majority and minority Black schools. However, the stark differences in exclusion outcomes between these two types of schools reveal that systemic inequities are at the root of the disparities. In majority Black schools, Black students are more likely to face exclusionary discipline, and the racial gaps between Black and White students are significantly more pronounced. The absence of similar dynamics in minority Black schools suggests that segregation, unequal resource allocation, and the concentration of law enforcement officers in majority Black schools are contributing factors that uniquely affect Black students in these settings.

In contrast, we would expect special training policies to mitigate the harmful effects of law enforcement credential policies. Special training is intended to teach law enforcement officers to distinguish between criminal behavior and normal adolescent misbehavior, equipping them with the skills to de-escalate situations and avoid unnecessarily referring students to the justice system (McKenna and Petrosino, 2022). Ideally, this would reduce overall exclusionary discipline and

disproportionately benefit Black students, who are historically more likely to be criminalized in school environments. However, the results indicate that special training policies have no statistically significant effect on racial exclusion gaps or exclusionary discipline overall. This finding exposes a critical limitation: while training may address individual officers' responses, it does not address the structural issues within majority Black schools—such as underfunding, concentrated disadvantage, and entrenched segregation—that drive racial disparities in exclusionary discipline.

We expect special training to balance the harmful effects of law enforcement credential policies by encouraging officers to use alternative methods for handling minor behavioral infractions. However, the results show that law enforcement credential policies continue to significantly increase exclusionary outcomes, while special training fails to offset these effects. The magnitudes of the law enforcement credentials estimates are consistently higher, with statistically significant increases in racial gaps, while special training policies remain statistically insignificant. One explanation for the lack of effects of special training on school exclusionary discipline is that the training fails to teach SROs how to distinguish between typical child and adolescent behavior and criminal behavior, and thus, SRO behavior does not change after completing special training.

However, given the history of racial access to education in the U.S., we should consider that the failure of special training policies to reduce exclusionary discipline in both majority and minority Black schools is likely further compounded by the need for complementary institutional changes across the education system (Dobbin and Kalev, 2018). Had these policies been paired with broader reforms addressing structural inequities—such as underfunded schools, segregated student bodies, and criminalization of Black behavior—their effects may have been more impactful (Kulik and Roberson, 2008). Instead, special training policies only operate on a surface level without addressing the deeper systemic issues that contribute to the criminalization and exclusion of Black students. The limitation underscores the ineffectiveness of focusing solely on individual-level interventions without tackling the structural and institutional factors that perpetuate racial disparities in school discipline.

In sum, while individual-level interventions like special training may offer modest changes, they are inadequate in addressing the systemic and structural factors driving racial disparities in school discipline. The significant increases in exclusion rates and racial gaps following the introduction of law enforcement credential policies in majority Black schools are likely the result of broader structural and institutional factors that disproportionately disadvantage Black students. By comparing the effects of law enforcement credential and special training policies across both majority and

minority Black schools, this analysis highlights the importance of moving beyond individual-level interventions to dismantle the broader systemic inequities that underlie racial disparities in school exclusionary practices.

7 Conclusion

In this paper, I used a national data source and variation in state statutes regulating law enforcement credentials for SROs to estimate the impact of credential requirements on Black-White gaps in exclusionary discipline in U.S. majority and minority Black middle and high schools. I used similar variations in SRO training requirements to estimate the impacts of SRO special training on Black-White exclusion gaps in U.S. majority and minority Black middle and high schools. SROs were first taken up as a school policy when schools were integrating Black and White students during the school desegregation era, and their use correlates with increased exclusion of Black and other marginalized students (A. Jackson, 2002; Crawford and Burns, 2016; Lynch, Gainey, and Chappell, 2016; Sorensen et al., 2023). This concern has led to a policy response to regulate SROs, which began in the 1990s but has expanded notably since 2010.

SRO statutes, including statutes requiring law enforcement credentials and statutes requiring special training, were implemented in different states at different periods. So, I leverage the staggered adoption setting to estimate group-time average treatment effects on the treated with a doubly robust difference-in-differences estimator. Conditioning on a set of baseline school characteristics, I find that law enforcement credential statutes more than double Black-White gaps in suspensions and law enforcement referrals in majority Black schools, but there are no significant effects of the policy in minority Black schools. SRO special training statutes are not significantly changing exclusion outcomes in either majority or minority Black schools. These findings are robust to several tests.

I also developed a conceptual framework to interpret the results of this analysis that expands how to view the relationships between SRO presence and racial gaps from an individualist lens, which focuses on individual SRO and student behaviors and characteristics, to a structuralist lens. This structuralist lens brings in factors of systemic discrimination, or structural racism, which are related to SRO presence, school exclusion practices, and differences in student behavior and school characteristics. The dichotomy between majority and minority Black schools highlights these differences. Using this framework, I incorporate the history of the institution of policing to

explain the harmful effects of policing majority Black schools. With the systemic discrimination framework, we can better understand why the detrimental impacts of SRO policies are isolated in majority Black schools.

The paper's limitations might affect the validity of the results. I have conducted robustness checks to support the estimates' validity, but some aspects of the data could be better for this analysis. First, there are threats to the external validity, mainly due to item non-response and data anomalies that led to the selection of certain schools out of the sample. However, the differences between the empirical and complete CRDC samples do not seem large enough to invalidate the generalizability of the findings after data imputation. There are also threats to internal validity stemming from differences in school characteristics between schools in treated states and schools in comparison states, which may connect to differences in the likelihood of treatment and trends in school exclusion rates. I have conducted a series of balancing regressions to test for significant differences in the distribution of observable characteristics between treatment and comparison groups and tested for statistical significance in pretreatment period estimates to assess the strength of this threat. Both tests suggest that my research design mitigates the most concerning internal validity threats.

Other limitations of this analysis include not observing: (1) individual characteristics of the SROs; (2) specific qualifications and training each officer has acquired before and after policy implementation; and (3) local measures of structural racism. I will apply this analysis to case studies of some of the largest school districts that have implemented local SRO qualification and training policies, where I can observe these factors and provide deeper insights. Despite these limitations, this paper makes significant contributions to SRO reform by demonstrating evidence of the harm to Black students when law enforcement is present in schools where they are the largest racial group and the ineffectiveness of existing SRO training requirements.

The findings of my analysis have significant policy implications. Reforms such as SRO training mandates aimed at reducing intergroup inequality by targeting changes in individual beliefs and behaviors are not structural reforms. Taking into account the histories of slavery, Jim Crow, and residential segregation in the U.S. policing and education systems, a policy reform at the intersection of these systems must be structural to be effective. Reforms such as restorative justice programs and funding non-police behavior resources are examples of how the education system can address differences in student behavior based on racial identity. My paper emphasizes this by demonstrating that SRO regulation fails to improve racial gaps in exclusion, particularly in Black schools, likely

because the regulation, like many color-blind policies, fails to consider the unique formation of these schools and spaces and how these differences impact SROs, school staff, and students.

My paper shows how current-state SRO regulation is related to persistent Black-White gaps in exclusionary discipline. Importantly, this paper offers a fundamental framework adaptable to other markets with persistent racial inequalities. I will refine this framework into a theoretical model and use the model to evaluate policies seeking to eliminate persistent racial gaps in education, criminal/legal, labor, health, and other racialized systems. Insights from this paper and future research can inform and influence evidence- and equity-based policymaking and improve socioeconomic outcomes for Black and other marginalized communities.

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8 Main Figures

Figure 1: Law Enforcement Credentials Statute

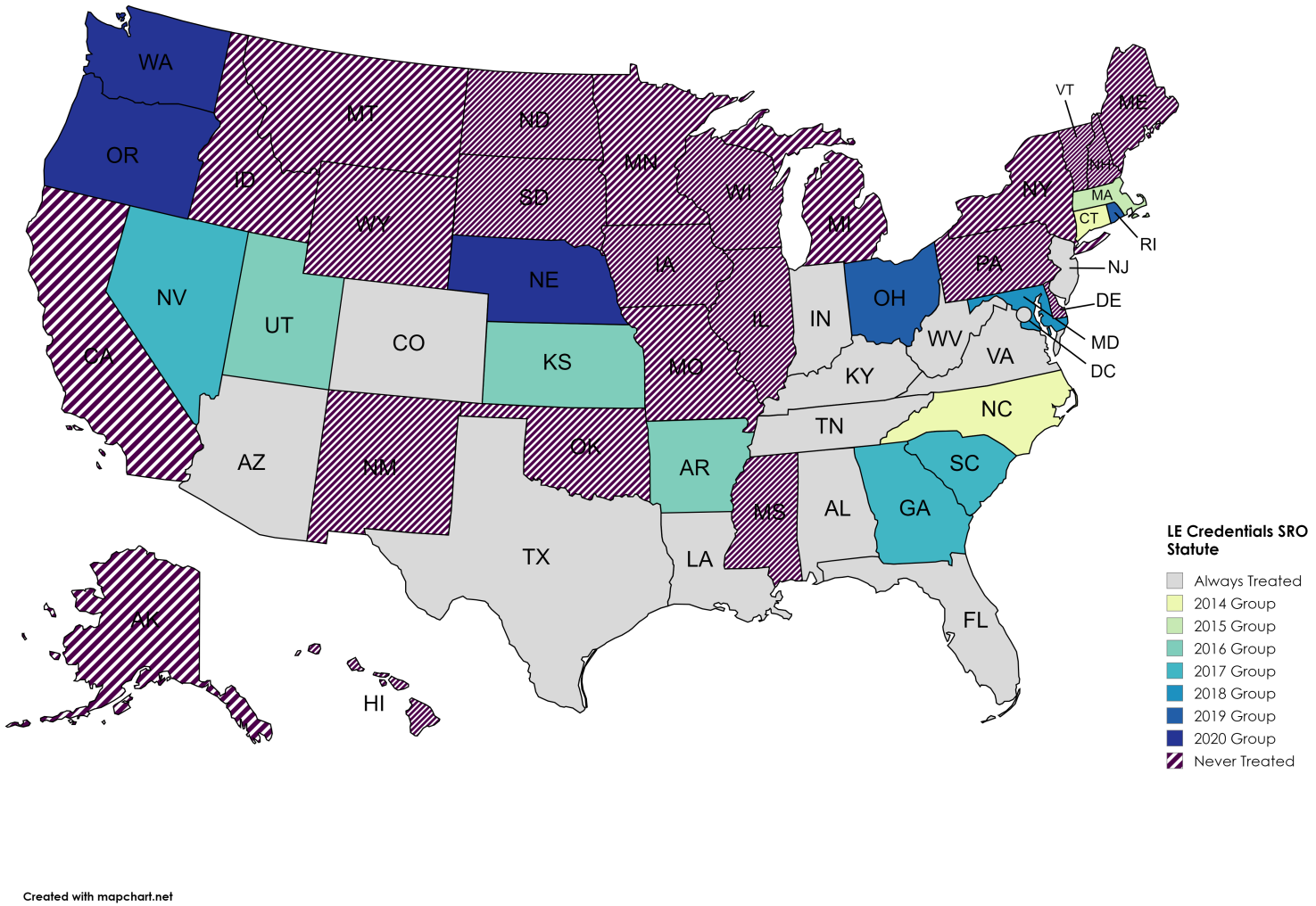


Figure 2: Special Training Statute

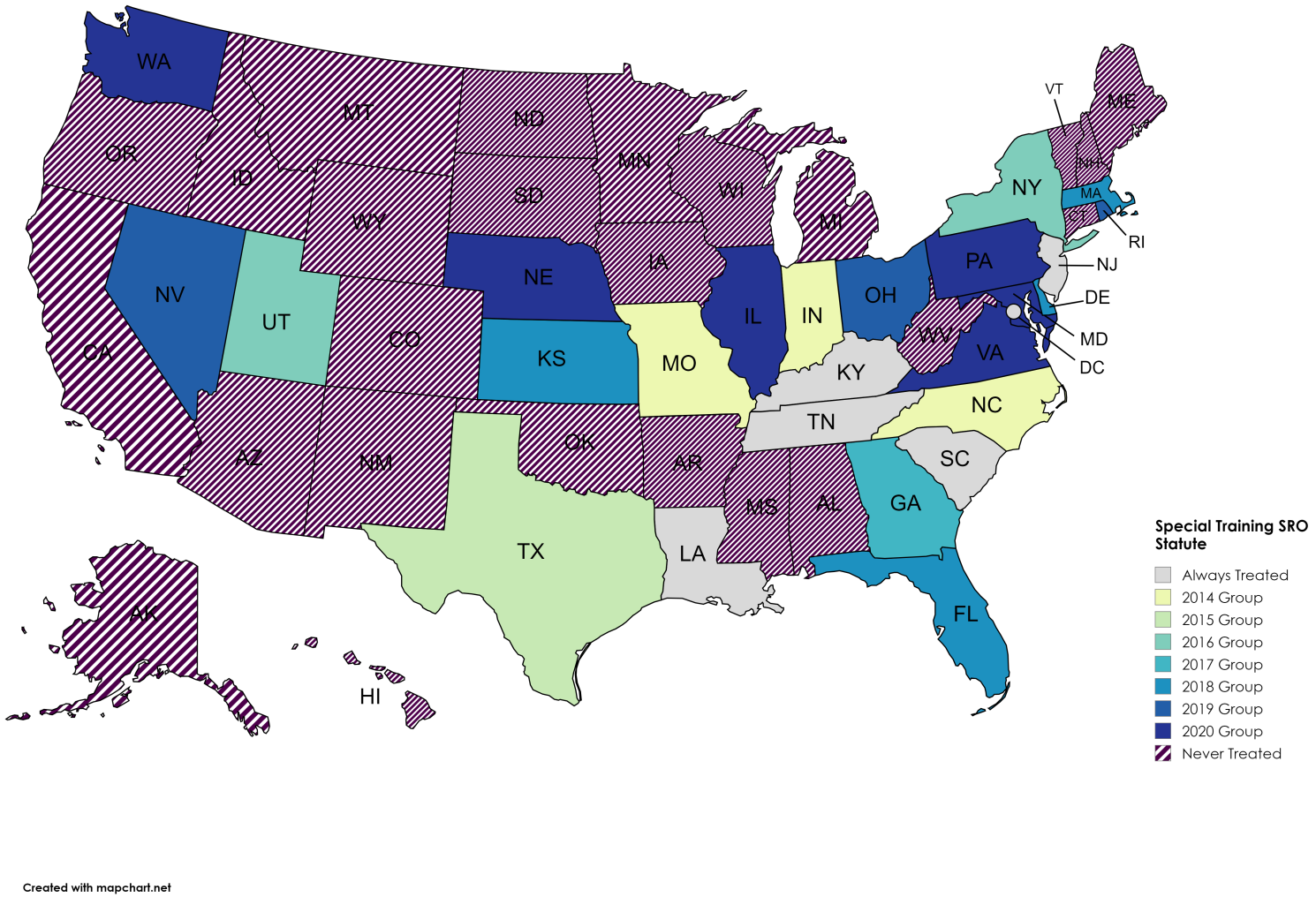
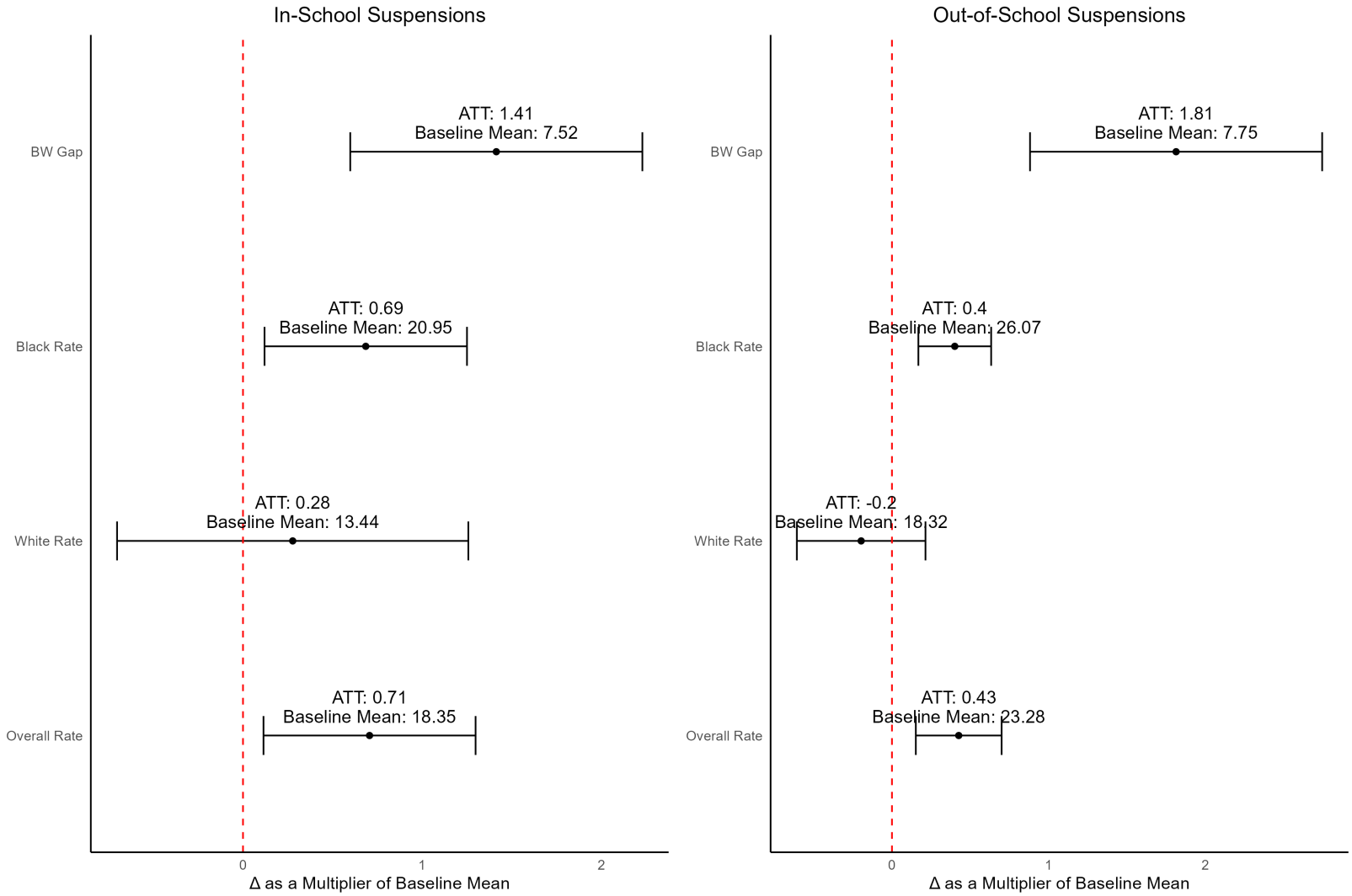


Figure 3: Aggregate ATT(g,t) Estimates of Law Enforcement Credentials on Suspensions in Majority Black Schools



Notes: Estimands shown: $\sum_g \left(\frac{1}{\tilde{\eta}-g+1} \sum_{t=g}^{\tilde{\eta}} ATT(g,t) \right) P(G=g|G \leq \tilde{\eta})$. Estimates were derived from the DRDID estimator and group aggregation using the Callaway and Sant'Anna 'did' package. Clustered, bootstrapped standard errors at the state level. Estimates are interpreted as the average change in the outcome measure as a multiplier of the baseline outcome mean (e.g., 1.41 is a 141% increase in the baseline average Black-White (BW) gap). All regressions include covariates for the Black share of enrollment, traditional school status, high school status, large city status, small city status, and fringe rural status. The BW gap is measured as the difference between the Black and White rates. The Black rate is measured as (number of Black students excluded / number of Black students enrolled) × 100. The White rate is measured as (number of White students excluded / number of White students enrolled) × 100. The overall rate is measured as (number of students excluded / number of students enrolled) × 100. Summary of estimates found in Table 7.

Figure 4: Aggregate ATT(g,t) Estimates of Law Enforcement Credentials on Suspensions in Minority Black Schools

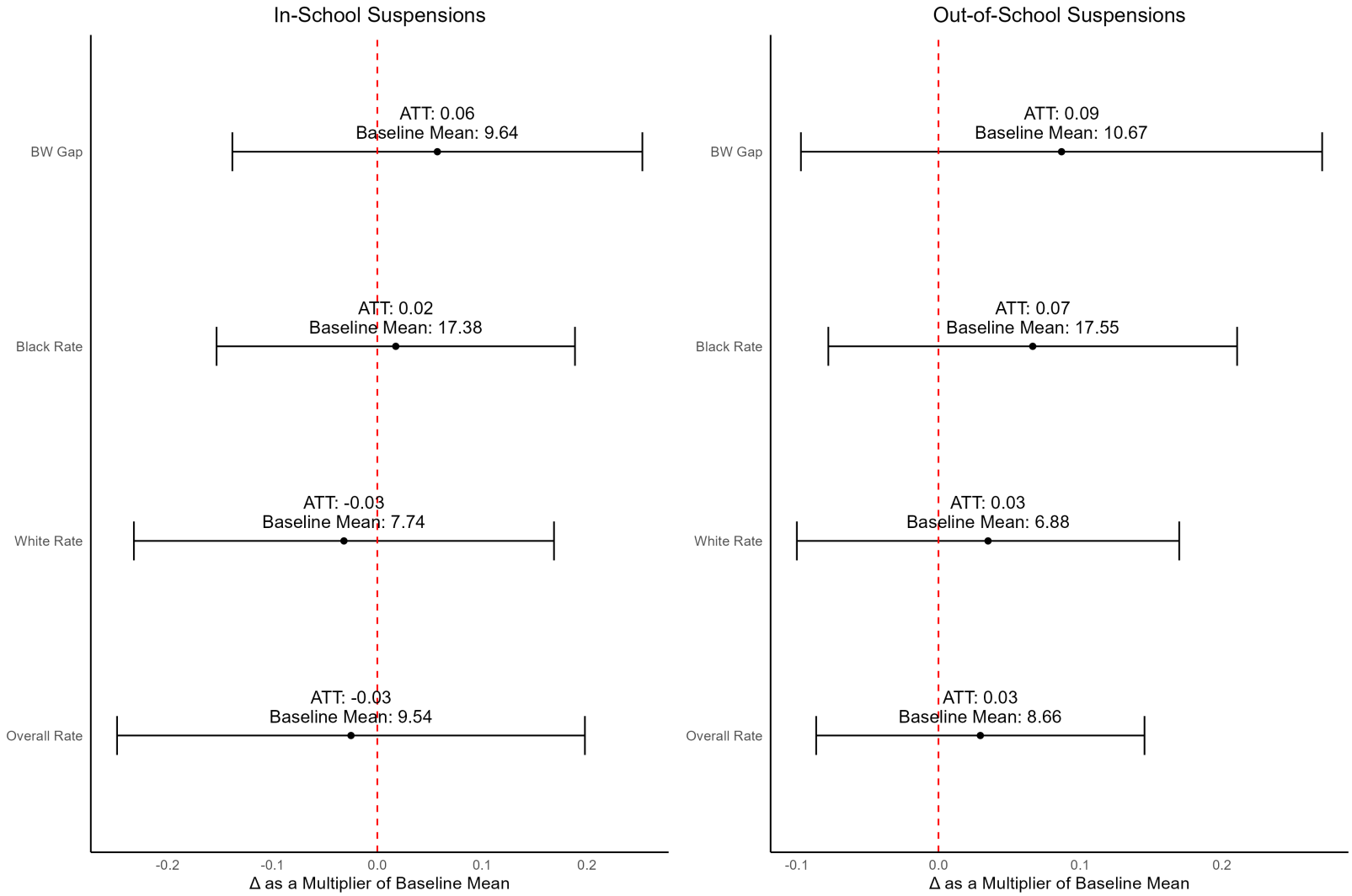


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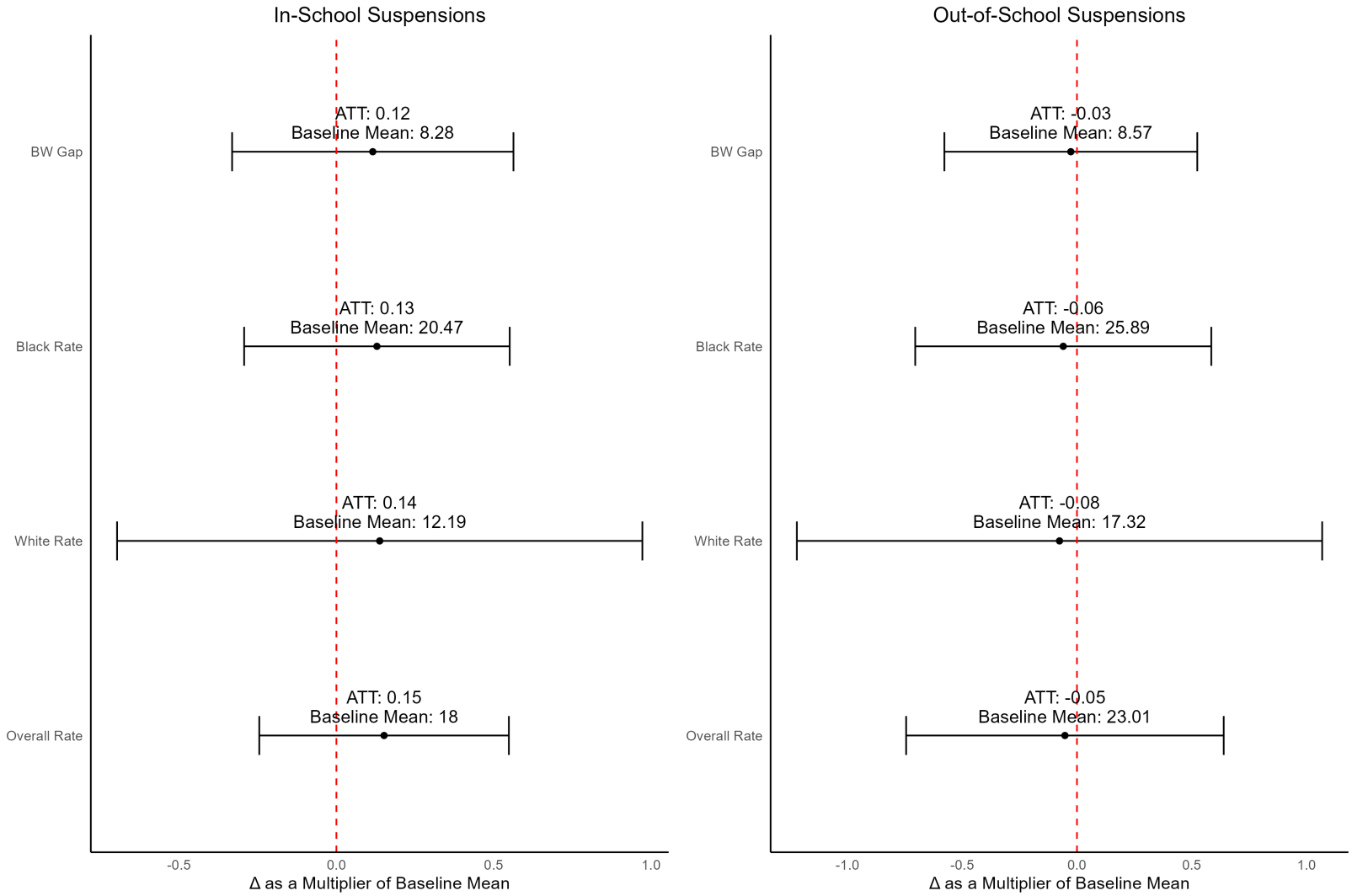
Figure 5: Aggregate ATT(g,t) Estimates of Special Training on Suspensions in Majority Black Schools



Notes: Estimands shown: $\sum_g \left(\frac{1}{\tilde{\eta}-g+1} \sum_{t=g}^{\tilde{\eta}} ATT(g,t) \right) P(G=g|G \leq \tilde{\eta})$. Estimates were derived from the DRDID estimator and group aggregation using the Callaway and Sant'Anna 'did' package. Clustered, bootstrapped standard errors at the state level. Estimates are interpreted as the average change in the outcome measure as a multiplier of the baseline outcome mean (e.g., 1.41 is a 141% increase in the baseline average Black-White (BW) gap). All regressions include covariates for the Black share of enrollment, traditional school status, high school status, large city status, small city status, and fringe rural status. The BW gap is measured as the difference between the Black and White rates. The Black rate is measured as (number of Black students excluded / number of Black students enrolled) × 100. The White rate is measured as (number of White students excluded / number of White students enrolled) × 100. The overall rate is measured as (number of students excluded / number of students enrolled) × 100. Summary of estimates found in Table 9.

Figure 6: Aggregate ATT(g,t) Estimates of Special Training on Suspensions in Minority Black Schools

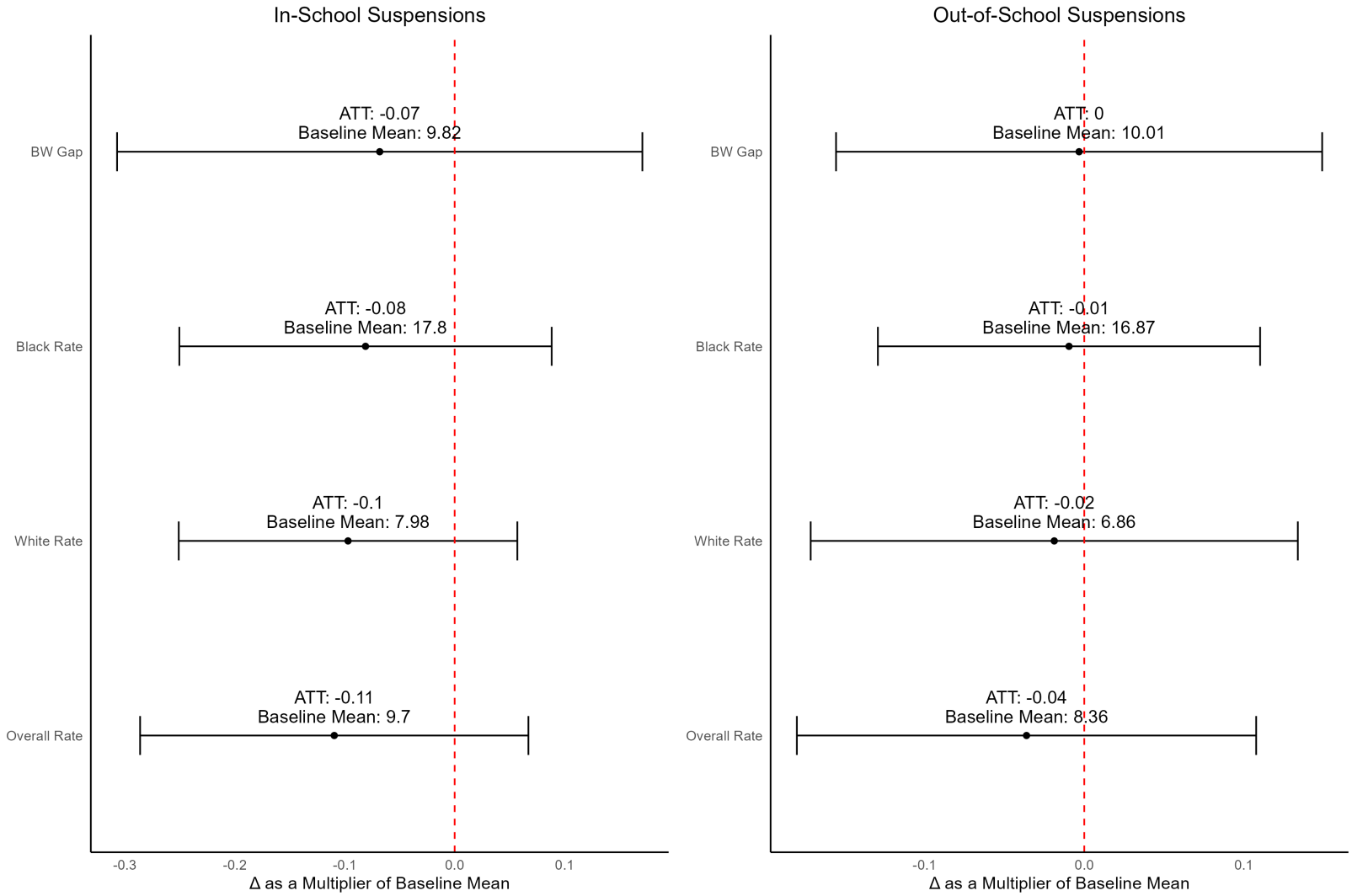


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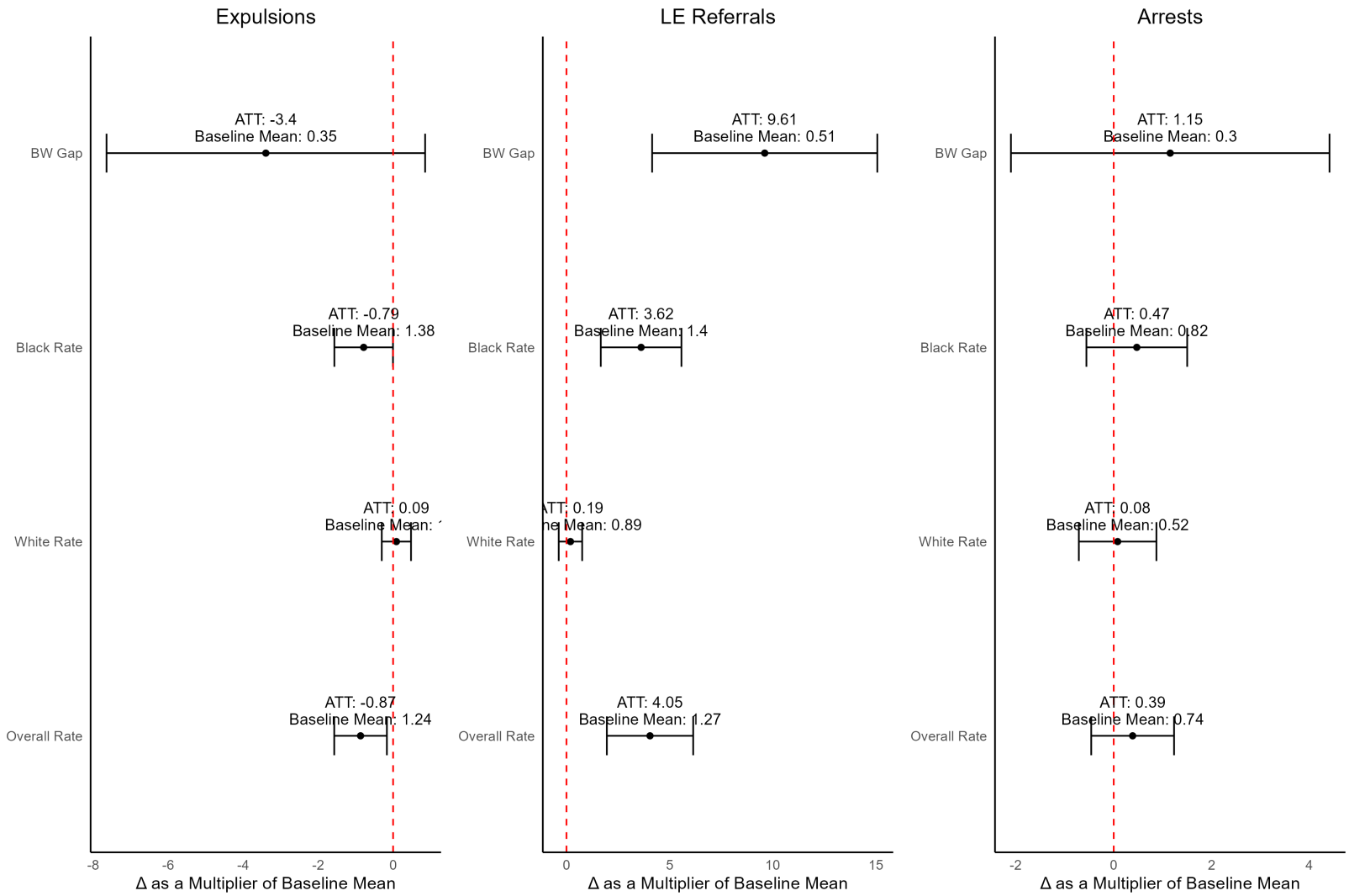
Figure 7: Aggregate ATT(g,t) Estimates of Law Enforcement Credentials on Other Exclusion in Majority Black Schools



Notes: Estimands shown: $\sum_g \left(\frac{1}{\tilde{\eta}-g+1} \sum_{t=g}^{\tilde{\eta}} ATT(g,t) \right) P(G=g|G \leq \tilde{\eta})$. Estimates were derived from the DRDID estimator and group aggregation using the Callaway and Sant'Anna 'did' package. Clustered, bootstrapped standard errors at the state level. Estimates are interpreted as the average change in the outcome measure as a multiplier of the baseline outcome mean (e.g., 1.41 is a 141% increase in the baseline average Black-White (BW) gap). All regressions include covariates for the Black share of enrollment, traditional school status, high school status, large city status, small city status, and fringe rural status. The BW gap is measured as the difference between the Black and White rates. The Black rate is measured as (number of Black students excluded / number of Black students enrolled) × 100. The White rate is measured as (number of White students excluded / number of White students enrolled) × 100. The overall rate is measured as (number of students excluded / number of students enrolled) × 100. Summary of estimates found in Table 7.

Figure 8: Aggregate ATT(g,t) Estimates of Law Enforcement Credentials on Other Exclusion in Minority Black Schools

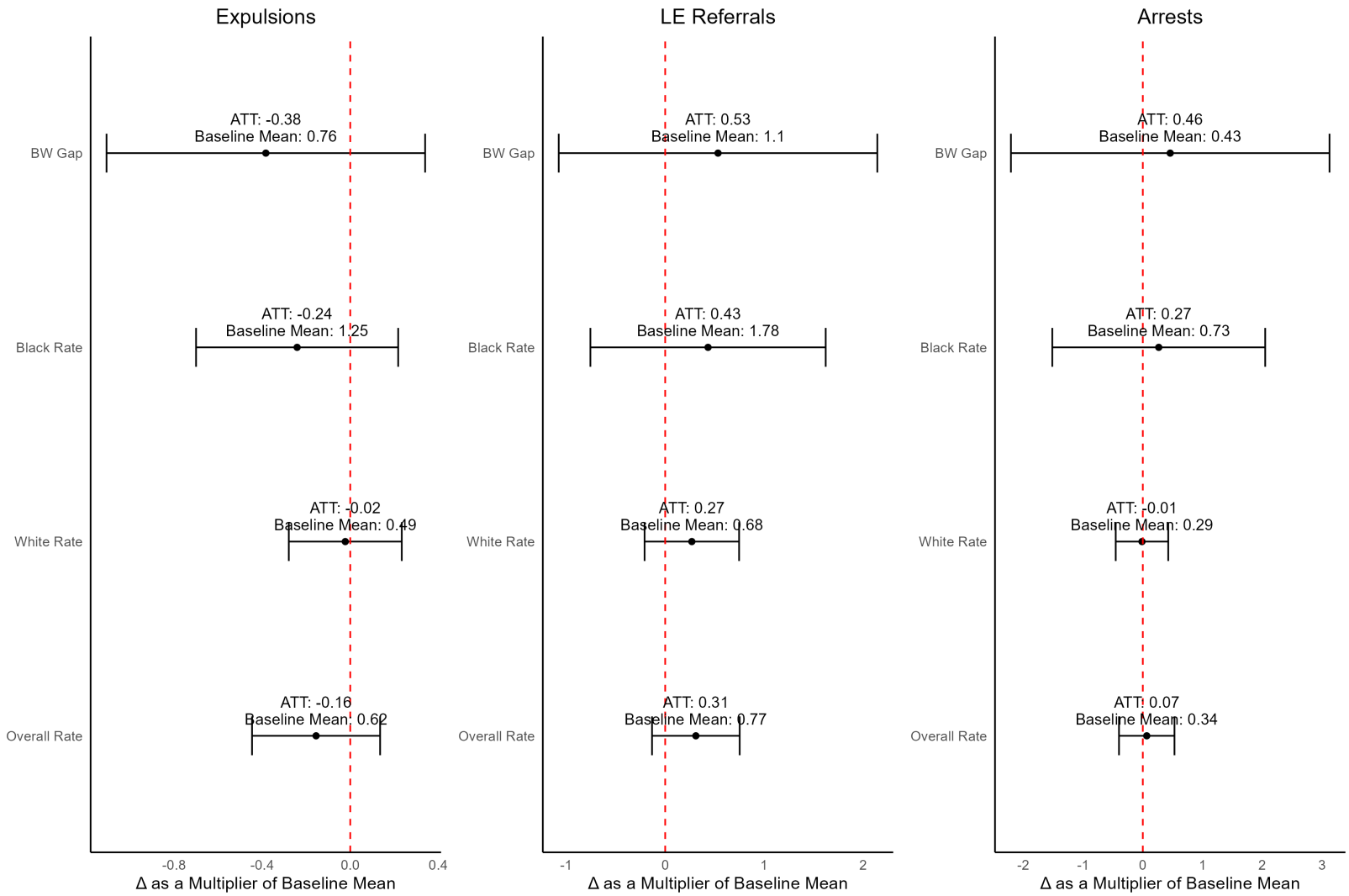


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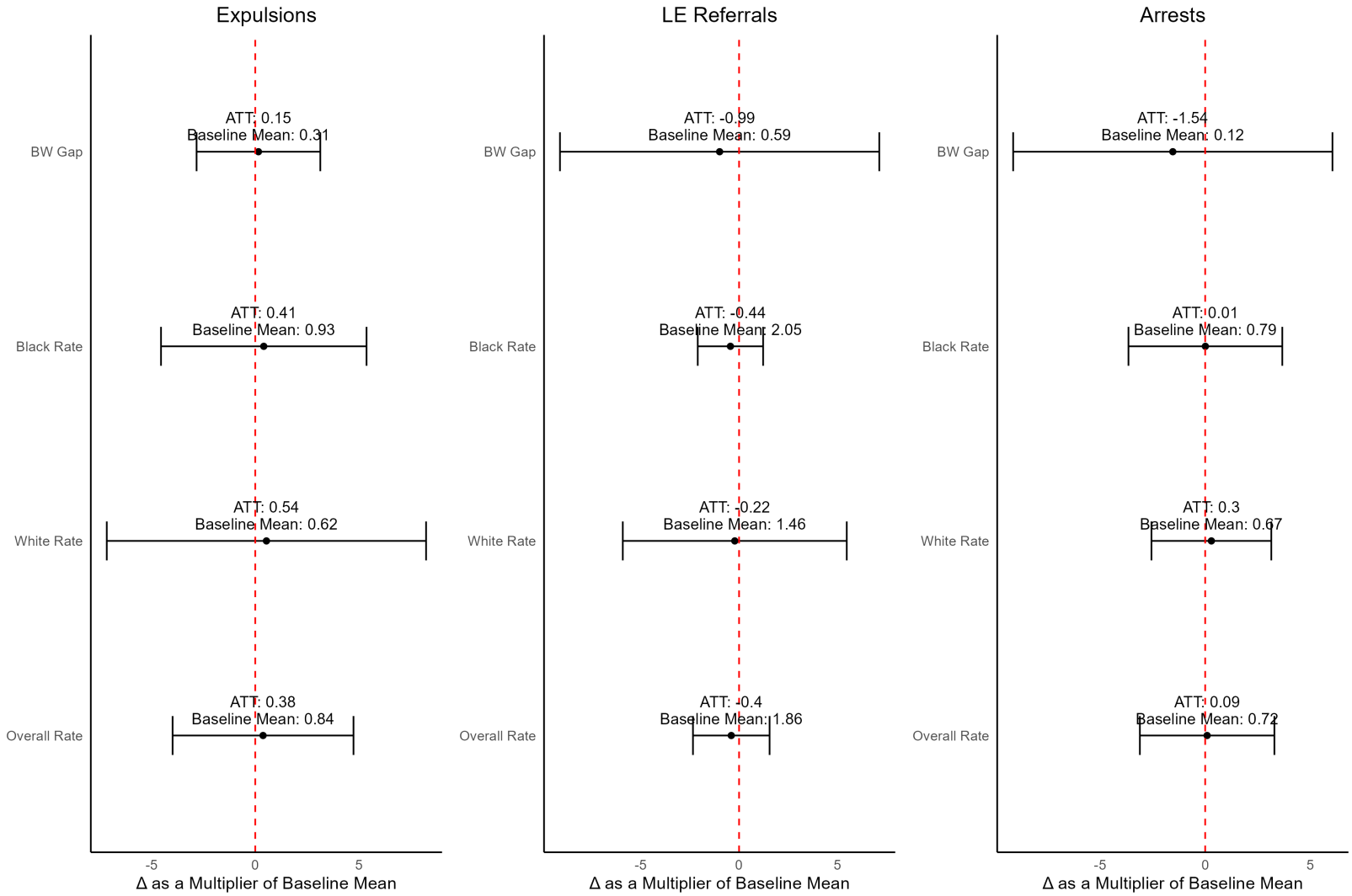
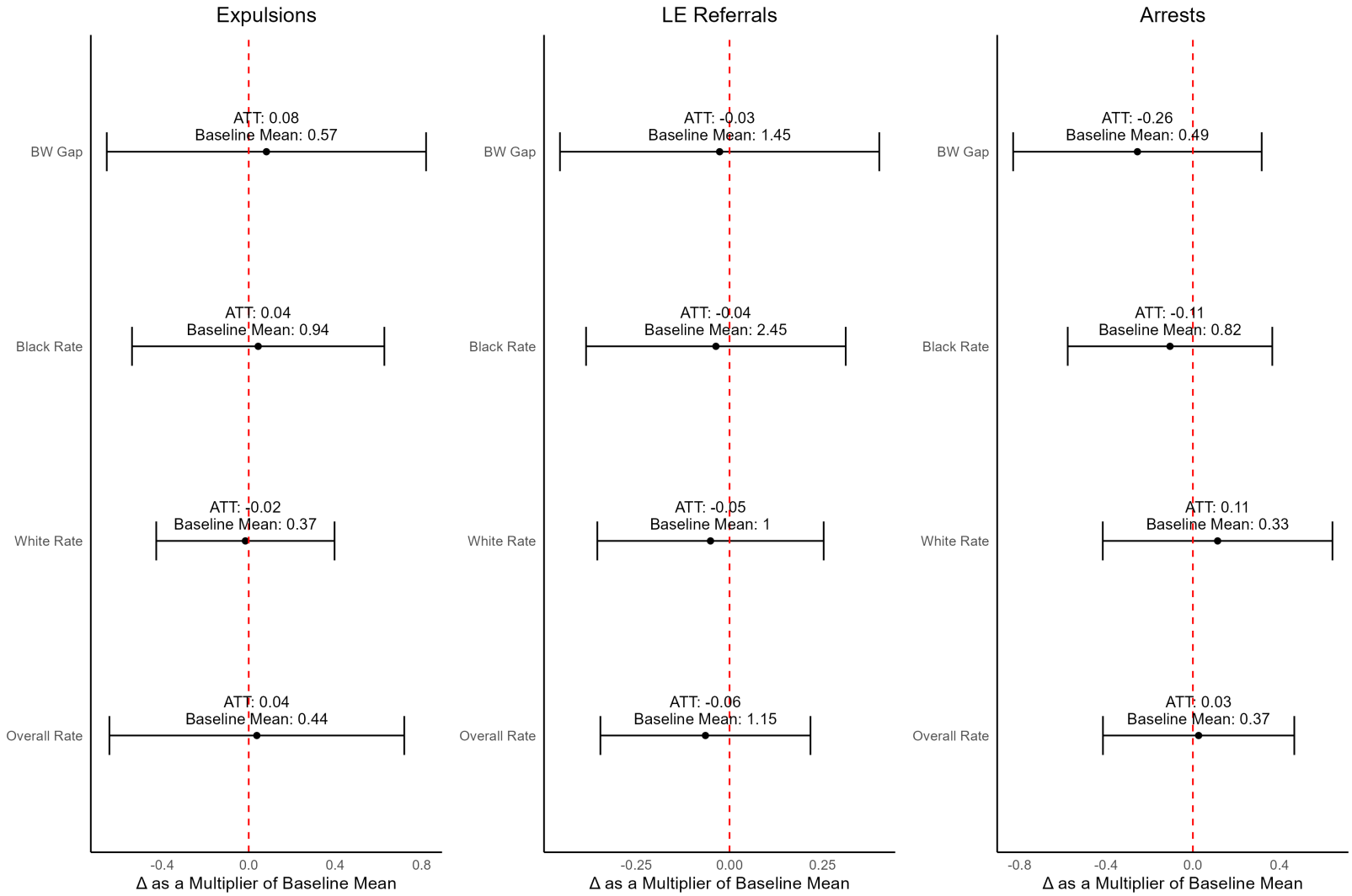
Figure 9: Aggregate ATT(g,t) Estimates of Special Training on Other Exclusion in Majority Black Schools



Notes: Estimands shown: $\sum_g \left(\frac{1}{\tilde{\eta}-g+1} \sum_{t=g}^{\tilde{\eta}} ATT(g,t) \right) P(G=g|G \leq \tilde{\eta})$. Estimates were derived from the DRDID estimator and group aggregation using the Callaway and Sant'Anna 'did' package. Clustered, bootstrapped standard errors at the state level. Estimates are interpreted as the average change in the outcome measure as a multiplier of the baseline outcome mean (e.g., 1.41 is a 141% increase in the baseline average Black-White (BW) gap). All regressions include covariates for the Black share of enrollment, traditional school status, high school status, large city status, small city status, and fringe rural status. The BW gap is measured as the difference between the Black and White rates. The Black rate is measured as (number of Black students excluded / number of Black students enrolled) × 100. The White rate is measured as (number of White students excluded / number of White students enrolled) × 100. The overall rate is measured as (number of students excluded / number of students enrolled) × 100. Summary of estimates found in Table 9.

Figure 10: Aggregate ATT(g,t) Estimates of Special Training on Other Exclusion in Minority Black Schools



Notes: Estimands shown: $\sum_g \left(\frac{1}{\tilde{\eta}-g+1} \sum_{t=g}^{\tilde{\eta}} ATT(g,t) \right) P(G=g|G \leq \tilde{\eta})$. Estimates were derived from the DRDID estimator and group aggregation using the Callaway and Sant'Anna 'did' package. Clustered, bootstrapped standard errors at the state level. Estimates are interpreted as the average change in the outcome measure as a multiplier of the baseline outcome mean (e.g., 1.41 is a 141% increase in the baseline average Black-White (BW) gap). All regressions include covariates for the Black share of enrollment, traditional school status, high school status, large city status, small city status, and fringe rural status. The BW gap is measured as the difference between the Black and White rates. The Black rate is measured as (number of Black students excluded / number of Black students enrolled) × 100. The White rate is measured as (number of White students excluded / number of White students enrolled) × 100. The overall rate is measured as (number of students excluded / number of students enrolled) × 100. Summary of estimates found in Table 10.

9 Main Tables

Table 1: Law Enforcement Credentials Statute and SROs in Majority Black Schools

	SRO Presence	SRO Presence	SRO FTE	SRO FTE
Active LE Cred. Statute	0.43***		0.50***	
	(0.03)		(0.09)	
New LE Cred. Statute		0.17		0.01
		(0.11)		(0.06)
N (school x year)	7,853	2,448	4,397	1,599
R^2	0.30	0.27	0.05	0.23
All States + DC	X		X	
In-scope States Only		X		X
2013-14 thru 2020-21 CRDCs	X			
Excl. 2015-16 CRDC		X		
2017-18 & 2020-21 CRDCs			X	X
State Fixed Effects	X	X	X	X
Academic Year Fixed Effects	X	X	X	X

Notes: *** p<0.01 In-scope states: AK, CT, GA, KS, MD, MA, NE, NV, NC, OH, OR, RI, SC, UT, WA. Cluster-robust standard errors in parentheses. Specifications control for school characteristics: total enrollment, grades 6-8 enrolled indicator, grades 9-12 enrolled indicator, special education school indicator, magnet school/program indicator, charter school indicator, alternative school indicator; student demographic composition characteristics: proportion of Black, White, Hispanic, Asian, American Indian/Alaskan Native (AIAN), Native Hawaiian/Pacific Islander (NHPI), multiracial, female, English language learner, Section 504 disability, and IDEA disability students, and the Simpson's diversity index; staff characteristics: inverse pupil-to-teacher and pupil-to-counselor ratios; and geographic locale subclassifications: large city, midsize city, small city, large suburban locale, midsize suburban locale, small suburban locale, distant town, fringe town, remote town, distant rural locale, fringe rural locale, and remote rural locale indicators. Geographic local subclassifications are sourced from the National Center for Education Statistics - Common Core of Data; all other data are sourced from the Civil Rights Data Collection.

Table 2: Law Enforcement Credentials Statute and SROs in Minority Black Schools

	SRO Presence	SRO Presence	SRO FTE	SRO FTE
Active LE Cred. Statute	0.06**		0.11***	
	(0.01)		(0.03)	
New LE Cred. Statute		0.01		-0.01
		(0.05)		(0.02)
N (school x year)	82,591	18,097	47,962	12,112
R^2	0.26	0.24	0.10	0.21
All States + DC	X		X	
In-scope States Only		X		X
2013-14 thru 2020-21 CRDCs	X			
Excl. 2015-16 CRDC		X		
2017-18 & 2020-21 CRDCs			X	X
State Fixed Effects	X	X	X	X
Academic Year Fixed Effects	X	X	X	X

Notes: *** p<0.01 In-scope states: AK, CT, GA, KS, MD, MA, NE, NV, NC, OH, OR, RI, SC, UT, WA. Cluster-robust standard errors in parentheses. Specifications control for school characteristics: total enrollment, grades 6-8 enrolled indicator, grades 9-12 enrolled indicator, special education school indicator, magnet school/program indicator, charter school indicator, alternative school indicator; student demographic composition characteristics: proportion of Black, White, Hispanic, Asian, American Indian/Alaskan Native (AIAN), Native Hawaiian/Pacific Islander (NHPI), multiracial, female, English language learner, Section 504 disability, and IDEA disability students, and the Simpson's diversity index; staff characteristics: inverse pupil-to-teacher and pupil-to-counselor ratios; and geographic locale subclassifications: large city, midsize city, small city, large suburban locale, midsize suburban locale, small suburban locale, distant town, fringe town, remote town, distant rural locale, fringe rural locale, and remote rural locale indicators. Geographic local subclassifications are sourced from the National Center for Education Statistics - Common Core of Data; all other data are sourced from the Civil Rights Data Collection.

Table 3: Special Training Statute and SROs in Majority Black Schools

	SRO Presence	SRO Presence	SRO FTE	SRO FTE
Active Spec. Train. Statute	-0.38***		-0.33***	
	(0.06)		(0.12)	
New Spec. Train. Statute		0.08		0.32
		(0.07)		(0.27)
N (school x year)	7,853	3,642	4,397	2,362
R^2	0.30	0.27	0.05	0.07
All States + DC	X		X	
In-scope States Only		X		X
2013-14 thru 2020-21 CRDCs	X			
Excl. 2015-16 CRDC		X		
2017-18 & 2020-21 CRDCs			X	X
State Fixed Effects	X	X	X	X
Academic Year Fixed Effects	X	X	X	X

Notes: *** p<0.01 In-scope states: DE, FL, GA, IL, IN, KS, MD, MA, MO, NE, NV, NY, NC, OH, PA, RI, TX, UT, VA, WA. Cluster-robust standard errors in parentheses. Specifications control for school characteristics: total enrollment, grades 6-8 enrolled indicator, grades 9-12 enrolled indicator, special education school indicator, magnet school/program indicator, charter school indicator, alternative school indicator; student demographic composition characteristics: proportion of Black, White, Hispanic, Asian, American Indian/Alaskan Native (AIAN), Native Hawaiian/Pacific Islander (NHPI), multiracial, female, English language learner, Section 504 disability, and IDEA disability students, and the Simpson's diversity index; staff characteristics: inverse pupil-to-teacher and pupil-to-counselor ratios; and geographic locale subclassifications: large city, midsize city, small city, large suburban locale, midsize suburban locale, small suburban locale, distant town, fringe town, remote town, distant rural locale, fringe rural locale, and remote rural locale indicators. Geographic local subclassifications are sourced from the National Center for Education Statistics - Common Core of Data; all other data are sourced from the Civil Rights Data Collection.

Table 4: Special Training Statute and SROs in Minority Black Schools

	SRO Presence	SRO Presence	SRO FTE	SRO FTE
Active Spec. Train. Statute	-0.25***		-0.36***	
	(0.02)		(0.02)	
New Spec. Train. Statute		0.02		0.04**
		(0.05)		(0.02)
N (school x year)	82,591	35,583	47,962	23,711
R^2	0.26	0.20	0.10	0.11
All States + DC	X		X	
In-scope States Only		X		X
2013-14 thru 2020-21 CRDCs	X			
Excl. 2015-16 CRDC		X		
2017-18 & 2020-21 CRDCs			X	X
State Fixed Effects	X	X	X	X
Academic Year Fixed Effects	X	X	X	X

Notes: ** p<0.05; *** p<0.01 In-scope states: DE, FL, GA, IL, IN, KS, MD, MA, MO, NE, NV, NY, NC, OH, PA, RI, TX, UT, VA, WA. Cluster-robust standard errors in parentheses. Specifications control for school characteristics: total enrollment, grades 6-8 enrolled indicator, grades 9-12 enrolled indicator, special education school indicator, magnet school/program indicator, charter school indicator, alternative school indicator; student demographic composition characteristics: proportion of Black, White, Hispanic, Asian, American Indian/Alaskan Native (AIAN), Native Hawaiian/Pacific Islander (NHPI), multiracial, female, English language learner, Section 504 disability, and IDEA disability students, and the Simpson's diversity index; staff characteristics: inverse pupil-to-teacher and pupil-to-counselor ratios; and geographic locale subclassifications: large city, midsize city, small city, large suburban locale, midsize suburban locale, small suburban locale, distant town, fringe town, remote town, distant rural locale, fringe rural locale, and remote rural locale indicators. Geographic local subclassifications are sourced from the National Center for Education Statistics - Common Core of Data; all other data are sourced from the Civil Rights Data Collection.

Table 5: CRDC Descriptive Statistics - Covariates

Descriptive Statistics	Full CRDC (n = 123,022)	Analytic Sample (n = 101,703)	SRO (n = 48,886)	No SRO (n = 52,817)	Mean Difference (Clstrd Std. Error)
Student Characteristics					
% Black	0.17 (0.23)	0.15 (0.22)	0.16 (0.22)	0.13 (0.21)	0.03* (0.01)
% White	0.52 (0.32)	0.56 (0.31)	0.56 (0.30)	0.56 (0.32)	0.00 (0.02)
% Hispanic	0.22 (0.25)	0.21 (0.25)	0.20 (0.24)	0.22 (0.25)	-0.02 (0.02)
% Asian	0.04 (0.08)	0.04 (0.07)	0.03 (0.06)	0.04 (0.08)	-0.00 (0.00)
% AIAN	0.01 (0.05)	0.01 (0.05)	0.01 (0.04)	0.02 (0.06)	-0.01 (0.00)
% NHPI	0.00 (0.03)	0.00 (0.02)	0.00 (0.01)	0.00 (0.02)	-0.00 (0.00)
% Multiracial	0.03 (0.03)	0.03 (0.03)	0.03 (0.03)	0.03 (0.04)	-0.00 (0.00)
Diversity Index	0.42 (0.20)	0.41 (0.20)	0.41 (0.20)	0.40 (0.21)	0.01 (0.01)
% Female	0.48 (0.09)	0.48 (0.06)	0.48 (0.05)	0.48 (0.08)	0.00** (0.00)
% ELL	0.06 (0.10)	0.06 (0.09)	0.06 (0.09)	0.06 (0.10)	-0.00 (0.01)
% Section 504 Disability	0.03 (0.04)	0.03 (0.04)	0.03 (0.03)	0.03 (0.04)	0.00 (0.00)
% IDEA Disability	0.15 (0.12)	0.14 (0.11)	0.13 (0.08)	0.15 (0.13)	-0.02*** (0.00)
% FRPL Eligible	0.51 (0.29)	0.50 (0.27)	0.50 (0.26)	0.50 (0.28)	0.00 (0.01)
Staff Characteristics					
Teacher:Pupil	0.08 (0.08)	0.07 (0.07)	0.07 (0.06)	0.08 (0.08)	-0.01*** (0.00)
Counselor:Pupil	0.00 (0.02)	0.00 (0.01)	0.00 (0.01)	0.00 (0.01)	-0.00** (0.00)
School Characteristics					
Total Enrolled	721.42 (622.39)	749.24 (610.95)	935.43 (648.34)	576.91 (517.59)	358.53*** (31.37)
6th thru 8th Grade	0.53 (0.50)	0.53 (0.50)	0.48 (0.50)	0.57 (0.49)	-0.10*** (0.02)
9th thru 12th Grade	0.62 (0.48)	0.61 (0.49)	0.61 (0.49)	0.60 (0.49)	0.01 (0.02)
Special Education School	0.01 (0.12)	0.01 (0.12)	0.01 (0.08)	0.02 (0.14)	-0.01*** (0.00)
Magnet School/Program	0.06 (0.23)	0.05 (0.22)	0.06 (0.23)	0.04 (0.20)	0.02* (0.01)
Charter School	0.07 (0.25)	0.06 (0.24)	0.02 (0.13)	0.10 (0.30)	-0.09*** (0.01)
Alternative School	0.07 (0.25)	0.05 (0.21)	0.03 (0.17)	0.07 (0.25)	-0.03*** (0.01)
Geographic Locale					
Large City	0.12 (0.32)	0.10 (0.30)	0.09 (0.28)	0.11 (0.32)	-0.03^{+} (0.02)
Midsize City	0.06 (0.24)	0.06 (0.23)	0.06 (0.25)	0.05 (0.22)	0.01^{+} (0.01)
Small City	0.07 (0.25)	0.07 (0.25)	0.08 (0.27)	0.06 (0.24)	0.02* (0.01)
Large Suburban	0.21 (0.40)	0.20 (0.40)	0.20 (0.40)	0.20 (0.40)	0.01 (0.02)
Midsize Suburban	0.03 (0.16)	0.03 (0.16)	0.03 (0.17)	0.02 (0.15)	0.01** (0.00)
Small Suburban	0.02 (0.12)	0.02 (0.12)	0.02 (0.13)	0.01 (0.12)	0.00 (0.00)
Fringe Town	0.03 (0.18)	0.04 (0.19)	0.04 (0.19)	0.04 (0.19)	0.00 (0.00)
Distant Town	0.07 (0.26)	0.08 (0.27)	0.08 (0.28)	0.07 (0.26)	0.01* (0.01)
Remote Town	0.04 (0.20)	0.05 (0.21)	0.04 (0.21)	0.05 (0.21)	-0.00 (0.00)
Fringe Rural	0.13 (0.34)	0.14 (0.34)	0.16 (0.37)	0.11 (0.32)	0.05*** (0.01)
Distant Rural	0.10 (0.29)	0.10 (0.30)	0.08 (0.27)	0.12 (0.33)	-0.05*** (0.01)
Remote Rural	0.04 (0.20)	0.04 (0.21)	0.02 (0.14)	0.07 (0.25)	-0.05*** (0.01)

Notes: $^{+}$ $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$. Standard deviations are in parentheses unless otherwise noted. Full CRDC represents approximately 91.2% of the 42,113 U.S. public middle and high schools. The Analytical Sample is the result of excluding observations out-of-scope of the study population of interest and listwise deletion (removal of all data for a school-year observation with one or more missing values for variables used in analysis) of the Full CRDC study population to adjust for item non-response, non-applicable survey questions, and data anomaly issues (post-imputation); this represents 91.2% of all U.S. public schools in the Full CRDC study population. The SRO column represents the Analytic Sample schools with at least one SRO present in a given academic period. The No SRO column represents the schools in the Analytic Sample that had no SROs in a given academic period. The Mean Difference column is the average difference between the SRO and No SRO schools.

Table 6: CRDC Descriptive Statistics - Outcomes

Descriptive Statistics	Full CRDC (n = 123,022)	Analytic Sample (n = 101,703)	SRO (n = 48,886)	No SRO (n = 52,817)	Mean Difference (Clstrd Std. Error)
Discipline Outcomes (per 100 students)					
Total ISS	7.78 (12.07)	7.79 (11.15)	9.25 (11.62)	6.45 (10.52)	2.79*** (0.44)
Black ISS	12.84 (21.63)	13.19 (21.37)	15.38 (20.83)	11.16 (21.67)	4.22*** (0.56)
White ISS	6.55 (11.50)	6.55 (10.34)	7.58 (10.65)	5.60 (9.95)	1.98*** (0.35)
Total OSS	8.05 (13.71)	7.67 (11.38)	8.24 (11.21)	7.15 (11.51)	1.09*** (0.31)
Black OSS	13.67 (23.46)	13.58 (21.68)	14.63 (20.25)	12.61 (22.87)	2.02*** (0.40)
White OSS	6.93 (14.51)	6.55 (12.04)	6.80 (11.56)	6.31 (12.46)	0.50^{+} (0.26)
Total Expulsions	0.52 (3.74)	0.43 (2.27)	0.48 (2.33)	0.39 (2.21)	0.09* (0.04)
Black Expulsions	0.81 (5.94)	0.78 (5.44)	0.86 (4.88)	0.71 (5.91)	0.14 (0.09)
White Expulsions	0.40 (3.28)	0.37 (2.56)	0.40 (2.67)	0.34 (2.45)	0.06 (0.04)
Total LE Referrals	0.88 (3.81)	0.77 (2.67)	0.92 (2.82)	0.63 (2.52)	0.29*** (0.07)
Black LE Referrals	1.54 (7.08)	1.50 (6.89)	1.84 (7.06)	1.18 (6.72)	0.66*** (0.14)
White LE Referrals	0.76 (3.92)	0.69 (3.21)	0.82 (3.33)	0.58 (3.09)	0.24** (0.07)
Total Arrests	0.30 (2.93)	0.22 (1.52)	0.29 (1.60)	0.16 (1.42)	0.14*** (0.02)
Black Arrests	0.46 (3.58)	0.43 (3.31)	0.58 (3.53)	0.29 (3.09)	0.29*** (0.05)
White Arrests	0.22 (2.59)	0.20 (2.26)	0.25 (1.86)	0.15 (2.58)	0.10*** (0.02)
Black-to-White Discipline Rate Ratios					
ISS	2.67 (6.15)	2.71 (6.33)	2.70 (5.73)	2.72 (6.95)	-0.02 (0.08)
OSS	2.94 (5.90)	2.99 (5.90)	3.04 (5.10)	2.93 (6.68)	0.10 (0.07)
Expulsion	2.33 (9.02)	2.39 (9.26)	2.56 (9.51)	2.14 (8.88)	0.42* (0.17)
LE Referral	2.85 (9.73)	2.91 (9.92)	3.10 (10.07)	2.61 (9.67)	0.49** (0.17)
Arrest	2.71 (10.13)	2.76 (10.28)	2.97 (11.23)	2.30 (7.81)	0.68** (0.21)

Notes: $^{+}$ $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$. Standard deviations are in parentheses unless otherwise noted. Full CRDC represents approximately 91.2% of the 42,113 U.S. public middle and high schools. The Analytical Sample is the result of excluding observations out-of-scope of the study population of interest and listwise deletion (removal of all data for a school-year observation with one or more missing values for variables used in analysis) of the Full CRDC study population to adjust for item non-response, non-applicable survey questions, and data anomaly issues (post-imputation); this represents 91.2% of all U.S. public schools in the Full CRDC study population. The SRO column represents the Analytic Sample schools with at least one SRO present in a given academic period. The No SRO column represents the schools in the Analytic Sample that had no SROs in a given academic period. The Mean Difference column is the average difference between the SRO schools and No SRO schools.

Table 7: Robustness Test Summary - Law Enforcement Credentials in Majority Black Schools

Measure	**Main**	**No SRO Schools**	**Not Yet Treated**	**One Year Anticipation**	**Multiple Hypothesis Testing**
In-School Suspension					
Black-White Gap	1.41***	-0.55	0.99**	1.61***	1.41*
	(0.41)	(0.38)	(0.41)	(0.43)	(0.82)
Black Rate	0.69**	-0.43	0.64**	0.75**	0.69
	(0.30)	(0.40)	(0.30)	(0.31)	(0.56)
White Rate	0.28	-0.35	0.44	0.28	0.28
	(0.50)	(0.43)	(0.43)	(0.52)	(1.03)
Overall Rate	0.71**	-0.44	0.65**	0.78***	0.71
	(0.33)	(0.38)	(0.31)	(0.29)	(0.63)
Out-of-School Suspension					
Black-White Gap	1.81***	-0.71	1.60***	2.11***	1.81*
	(0.49)	(0.47)	(0.39)	(0.61)	(1.02)
Black Rate	0.40***	0.01	0.40***	0.44***	0.40*
	(0.12)	(0.13)	(0.12)	(0.13)	(0.24)
White Rate	-0.20	0.30**	-0.10	-0.27	-0.20
	(0.21)	(0.13)	(0.15)	(0.22)	(0.41)
Overall Rate	0.43***	0.02	0.42***	0.47***	0.43
	(0.13)	(0.13)	(0.13)	(0.13)	(0.29)
Expulsion					
Black-White Gap	-3.40*	0.94	0.17	-4.04*	-3.40
	(2.05)	(6.17)	(2.01)	(2.11)	(4.30)
Black Rate	-0.79*	-0.38	0.09	-0.87*	-0.79
	(0.40)	(1.40)	(0.41)	(0.51)	(0.82)
White Rate	0.09	-1.02	0.06	0.18	0.09
	(0.19)	(0.80)	(0.16)	(0.18)	(0.40)
Overall Rate	-0.87**	-0.49	-0.02	-0.95**	-0.87
	(0.36)	(1.19)	(0.40)	(0.45)	(0.73)
Law Enforcement Referral					
Black-White Gap	9.61***	-0.01	6.63**	11.64***	9.61*
	(2.99)	(0.85)	(2.71)	(3.32)	(5.68)
Black Rate	3.62***	0.68**	2.61***	4.27***	3.62*
	(1.10)	(0.27)	(0.91)	(1.10)	(2.01)
White Rate	0.19	1.15**	0.31	0.05	0.19
	(0.30)	(0.51)	(0.29)	(0.26)	(0.61)
Overall Rate	4.05***	0.74**	2.96***	4.83***	4.05*
	(1.13)	(0.35)	(1.02)	(1.24)	(2.31)
School-Related Arrest					
Black-White Gap	1.15	0.20	0.79	0.98	1.15
	(1.71)	(1.05)	(1.25)	(1.67)	(3.62)
Black Rate	0.47	0.10	0.44	0.39	0.47

Table 7 continued from previous page

Measure	Main	No SRO Schools	Not Yet Treated	One Year Anticipation	Multiple Hypothesis Testing
	(0.56)	(0.51)	(0.43)	(0.37)	(1.07)
White Rate	0.08	0.01	0.24	0.05	0.08
	(0.40)	(0.05)	(0.44)	(0.40)	(0.84)
Overall Rate	0.39	0.19	0.36	0.34	0.39
	(0.42)	(0.93)	(0.39)	(0.39)	(0.83)

Notes: * p<0.1; ** p<0.05; *** p<0.01. Estimates were derived from the DRDID estimator and group aggregation using the Callaway and Sant'Anna 'did' package. Clustered, bootstrapped standard errors at the state level. Estimates are interpreted as the average change in the outcome measure as a multiplier of the baseline outcome mean (e.g., 1.41 is a 141% increase in the baseline average Black-White (BW) gap). All regressions include covariates for the Black share of enrollment, traditional school status, high school status, large city status, small city status, and fringe rural status. The BW gap is measured as the difference between the Black and White rates. The Black rate is measured as (number of Black students excluded / number of Black students enrolled) × 100. The White rate is measured as (number of White students excluded / number of White students enrolled) × 100. The overall rate is measured as (number of students excluded / number of students enrolled) × 100. The second column contains the estimates from the preferred specification. The third column contains estimates on the sample of schools with no SROs present. The fourth column contains estimates using the not-yet-treated group as the counterfactual. The fifth column contains estimates based on schools making changes in anticipation of the policy going into effect one year in advance. The last column contains estimates with Bonferroni corrected, clustered, bootstrapped standard errors at the state level.

Table 8: Robustness Test Summary - Law Enforcement Credentials in Minority Black Schools

Measure	**Main**	**No SRO Schools**	**Not Yet Treated**	**One Year Anticipation**	**Multiple Hypothesis Testing**
In-School Suspension					
Black-White Gap	0.06	0.07	0.07	0.08	0.06
	(0.10)	(0.19)	(0.09)	(0.11)	(0.20)
Black Rate	0.02	-0.04	0.03	0.01	0.02
	(0.08)	(0.15)	(0.09)	(0.11)	(0.18)
White Rate	-0.03	-0.17	-0.01	-0.07	-0.03
	(0.10)	(0.32)	(0.10)	(0.12)	(0.21)
Overall Rate	-0.03	-0.12	0.00	-0.06	-0.03
	(0.11)	(0.25)	(0.11)	(0.13)	(0.21)
Out-of-School Suspension					
Black-White Gap	0.09	0.12	0.09	0.10	0.09
	(0.09)	(0.27)	(0.09)	(0.10)	(0.19)
Black Rate	0.07	0.04	0.07	0.06	0.07
	(0.07)	(0.13)	(0.06)	(0.08)	(0.13)
White Rate	0.03	-0.06	0.04	-0.01	0.03
	(0.07)	(0.15)	(0.07)	(0.08)	(0.13)
Overall Rate	0.03	-0.03	0.04	0.00	0.03
	(0.06)	(0.13)	(0.06)	(0.06)	(0.12)
Expulsion					
Black-White Gap	-0.38	0.15	-0.32	-0.23	-0.38
	(0.32)	(0.28)	(0.38)	(0.41)	(0.71)
Black Rate	-0.24	0.10	-0.16	-0.11	-0.24
	(0.25)	(0.17)	(0.26)	(0.27)	(0.48)
White Rate	-0.02	0.03	0.10	0.08	-0.02
	(0.13)	(0.12)	(0.16)	(0.13)	(0.24)
Overall Rate	-0.16	0.05	-0.03	-0.08	-0.16
	(0.15)	(0.10)	(0.20)	(0.15)	(0.30)
Law Enforcement Referral					
Black-White Gap	0.53	0.68	0.51	0.08	0.53
	(0.84)	(1.20)	(0.85)	(0.92)	(1.62)
Black Rate	0.43	0.45	0.41	0.15	0.43
	(0.61)	(0.78)	(0.61)	(0.72)	(1.18)
White Rate	0.27	0.20	0.23	0.27	0.27
	(0.28)	(0.49)	(0.26)	(0.30)	(0.52)
Overall Rate	0.31	0.23	0.26	0.33	0.31
	(0.24)	(0.73)	(0.22)	(0.25)	(0.47)
School-Related Arrest					
Black-White Gap	0.46	-0.25	0.39	0.54	0.46
	(1.33)	(1.34)	(1.41)	(1.63)	(2.83)
Black Rate	0.27	-0.48	0.20	0.24	0.27

Table 8 continued from previous page

Measure	Main	No SRO Schools	Not Yet Treated	One Year Anticipation	Multiple Hypothesis Testing
	(0.87)	(0.57)	(0.90)	(1.04)	(1.77)
White Rate	-0.01	-0.76	-0.06	-0.20	-0.01
	(0.22)	(0.89)	(0.24)	(0.37)	(0.45)
Overall Rate	0.07	-0.57	0.00	-0.06	0.07
	(0.22)	(0.66)	(0.23)	(0.28)	(0.47)

Notes: Estimates were derived from the DRDID estimator and group aggregation using the Callaway and Sant'Anna 'did' package. Clustered, bootstrapped standard errors at the state level. Estimates are interpreted as the average change in the outcome measure as a multiplier of the baseline outcome mean (e.g., 1.41 is a 141% increase in the baseline average Black-White (BW) gap). All regressions include covariates for the Black share of enrollment, traditional school status, high school status, large city status, small city status, and fringe rural status. The BW gap is measured as the difference between the Black and White rates. The Black rate is measured as (number of Black students excluded / number of Black students enrolled) $\times$ 100. The White rate is measured as (number of White students excluded / number of White students enrolled) $\times$ 100. The overall rate is measured as (number of students excluded / number of students enrolled) $\times$ 100. The second column contains the estimates from the preferred specification. The third column contains estimates on the sample of schools with no SROs present. The fourth column contains estimates using the not-yet-treated group as the counterfactual. The fifth column contains estimates based on schools making changes in anticipation of the policy going into effect one year in advance. The last column contains estimates with Bonferroni corrected, clustered, bootstrapped standard errors at the state level.

Table 9: Robustness Test Summary - Special Training in Majority Black Schools

Measure	**Main**	**No SRO Schools**	**Not Yet Treated**	**One Year Anticipation**	**Multiple Hypothesis Testing**
In-School Suspension					
Black-White Gap	0.12	-0.39	0.07	0.02	0.12
	(0.24)	(0.38)	(0.25)	(0.34)	(0.48)
Black Rate	0.13	-0.28	0.11	0.05	0.13
	(0.21)	(0.33)	(0.28)	(0.26)	(0.40)
White Rate	0.14	-0.20	0.14	0.07	0.14
	(0.45)	(0.32)	(0.62)	(0.51)	(0.85)
Overall Rate	0.15	-0.29	0.13	0.07	0.15
	(0.19)	(0.31)	(0.30)	(0.26)	(0.40)
Out-of-School Suspension					
Black-White Gap	-0.03	-0.62	0.05	-0.10	-0.03
	(0.27)	(0.68)	(0.25)	(0.26)	(0.53)
Black Rate	-0.06	-0.03	-0.06	-0.09	-0.06
	(0.32)	(0.43)	(0.31)	(0.38)	(0.67)
White Rate	-0.08	0.24	-0.11	-0.08	-0.08
	(0.59)	(0.50)	(0.57)	(0.70)	(1.13)
Overall Rate	-0.05	-0.03	-0.05	-0.08	-0.05
	(0.35)	(0.43)	(0.34)	(0.42)	(0.70)
Expulsion					
Black-White Gap	0.15	0.24	0.10	-0.20	0.15
	(1.66)	(1.76)	(2.26)	(1.88)	(3.12)
Black Rate	0.41	0.09	0.23	0.39	0.41
	(2.54)	(0.71)	(2.05)	(3.06)	(5.21)
White Rate	0.54	-0.02	0.29	0.69	0.54
	(3.94)	(0.41)	(3.96)	(4.94)	(9.28)
Overall Rate	0.38	-0.02	0.17	0.38	0.38
	(2.31)	(0.74)	(1.87)	(2.81)	(4.18)
Law Enforcement Referral					
Black-White Gap	-0.99	-0.43	-0.97	-1.09	-0.99
	(4.13)	(0.98)	(5.00)	(5.15)	(8.26)
Black Rate	-0.44	-0.25	-0.50	-0.60	-0.44
	(0.89)	(0.33)	(1.09)	(1.03)	(1.73)
White Rate	-0.22	-0.15	-0.31	-0.40	-0.22
	(2.89)	(0.55)	(3.52)	(3.55)	(5.79)
Overall Rate	-0.40	-0.23	-0.45	-0.55	-0.40
	(1.01)	(0.35)	(1.26)	(1.29)	(2.10)
School-Related Arrest					
Black-White Gap	-1.54	-0.72	-1.56	-1.98	-1.54
	(3.94)	(1.25)	(4.43)	(5.10)	(8.02)
Black Rate	0.01	-0.51	0.01	-0.08	0.01

Table 9 continued from previous page

Measure	Main	No SRO Schools	Not Yet Treated	One Year Anticipation	Multiple Hypothesis Testing
	(1.83)	(0.96)	(2.28)	(2.26)	(3.71)
White Rate	0.30	-0.30	0.30	0.27	0.30
	(1.47)	(0.51)	(1.83)	(1.80)	(2.90)
Overall Rate	0.09	-0.51	0.08	0.03	0.09
	(1.66)	(0.95)	(2.06)	(2.02)	(3.28)

Notes: Estimates were derived from the DRDID estimator and group aggregation using the Callaway and Sant'Anna 'did' package. Clustered, bootstrapped standard errors at the state level. Estimates are interpreted as the average change in the outcome measure as a multiplier of the baseline outcome mean (e.g., 1.41 is a 141% increase in the baseline average Black-White (BW) gap). All regressions include covariates for the Black share of enrollment, traditional school status, high school status, large city status, small city status, and fringe rural status. The BW gap is measured as the difference between the Black and White rates. The Black rate is measured as (number of Black students excluded / number of Black students enrolled) $\times$ 100. The White rate is measured as (number of White students excluded / number of White students enrolled) $\times$ 100. The overall rate is measured as (number of students excluded / number of students enrolled) $\times$ 100. The second column contains the estimates from the preferred specification. The third column contains estimates on the sample of schools with no SROs present. The fourth column contains estimates using the not-yet-treated group as the counterfactual. The fifth column contains estimates based on schools making changes in anticipation of the policy going into effect one year in advance. The last column contains estimates with Bonferroni corrected, clustered, bootstrapped standard errors at the state level.

Table 10: Robustness Test Summary - Special Training in Minority Black Schools

Measure	**Main**	**No SRO Schools**	**Not Yet Treated**	**One Year Anticipation**	**Multiple Hypothesis Testing**
In-School Suspension					
Black-White Gap	-0.07	-0.26*	-0.07	-0.07	-0.07
	(0.12)	(0.13)	(0.11)	(0.14)	(0.24)
Black Rate	-0.08	-0.17	-0.08	-0.08	-0.08
	(0.09)	(0.11)	(0.08)	(0.10)	(0.17)
White Rate	-0.10	-0.05	-0.09	-0.10	-0.10
	(0.08)	(0.20)	(0.08)	(0.10)	(0.15)
Overall Rate	-0.11	-0.09	-0.11	-0.11	-0.11
	(0.09)	(0.15)	(0.08)	(0.10)	(0.16)
Out-of-School Suspension					
Black-White Gap	0.00	0.04	0.01	0.01	0.00
	(0.08)	(0.14)	(0.07)	(0.10)	(0.15)
Black Rate	-0.01	0.10	0.00	-0.01	-0.01
	(0.06)	(0.11)	(0.06)	(0.07)	(0.13)
White Rate	-0.02	0.17	-0.01	-0.05	-0.02
	(0.08)	(0.12)	(0.08)	(0.09)	(0.15)
Overall Rate	-0.04	0.11	-0.03	-0.05	-0.04
	(0.07)	(0.12)	(0.07)	(0.08)	(0.14)
Expulsion					
Black-White Gap	0.08	0.52**	0.19	0.19	0.08
	(0.35)	(0.26)	(0.31)	(0.43)	(0.78)
Black Rate	0.04	0.44**	0.17	0.17	0.04
	(0.30)	(0.17)	(0.23)	(0.34)	(0.59)
White Rate	-0.02	0.31	0.13	0.15	-0.02
	(0.21)	(0.41)	(0.17)	(0.23)	(0.39)
Overall Rate	0.04	0.31	0.17	0.19	0.04
	(0.34)	(0.26)	(0.22)	(0.37)	(0.70)
Law Enforcement Referral					
Black-White Gap	-0.03	0.33	0.01	-0.11	-0.03
	(0.22)	(0.72)	(0.23)	(0.25)	(0.44)
Black Rate	-0.04	0.29	-0.03	-0.11	-0.04
	(0.17)	(0.45)	(0.18)	(0.19)	(0.35)
White Rate	-0.05	0.23	-0.07	-0.11	-0.05
	(0.16)	(0.19)	(0.17)	(0.18)	(0.31)
Overall Rate	-0.06	0.21	-0.09	-0.13	-0.06
	(0.14)	(0.36)	(0.14)	(0.15)	(0.30)
School-Related Arrest					
Black-White Gap	-0.26	0.20	-0.28	0.05	-0.26
	(0.30)	(0.43)	(0.32)	(0.31)	(0.57)
Black Rate	-0.11	0.25	-0.14	0.04	-0.11

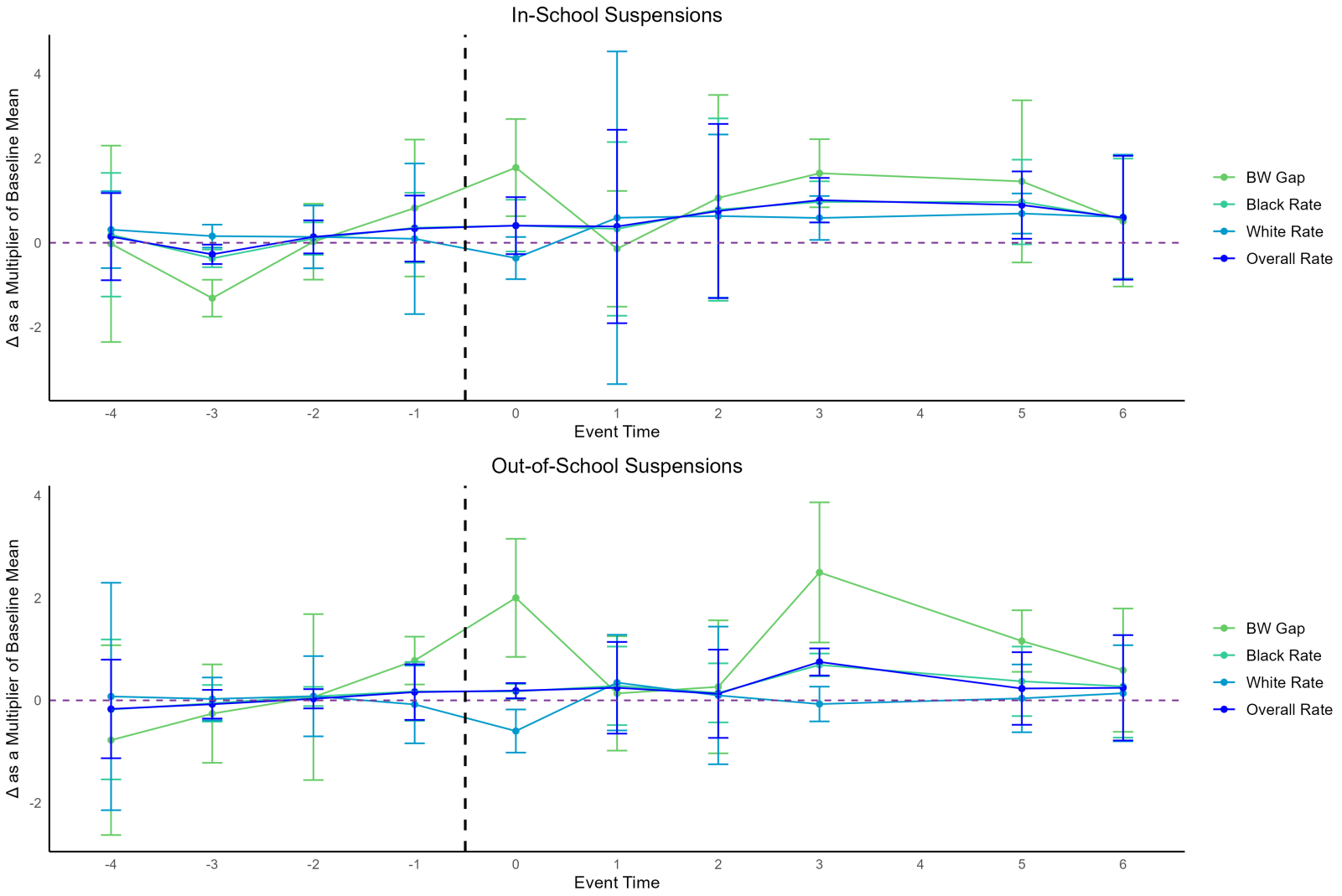
Table 10 continued from previous page

Measure	Main	No SRO Schools	Not Yet Treated	One Year Anticipation	Multiple Hypothesis Testing
	(0.24)	(0.28)	(0.25)	(0.27)	(0.50)
White Rate	0.11	0.31	0.07	0.04	0.11
	(0.25)	(0.19)	(0.24)	(0.35)	(0.53)
Overall Rate	0.03	0.24	-0.03	-0.03	0.03
	(0.23)	(0.19)	(0.20)	(0.27)	(0.47)

Notes: * p<0.1; ** p<0.05. Estimates were derived from the DRDID estimator and group aggregation using the Callaway and Sant'Anna 'did' package. Clustered, bootstrapped standard errors at the state level. Estimates are interpreted as the average change in the outcome measure as a multiplier of the baseline outcome mean (e.g., 1.41 is a 141% increase in the baseline average Black-White (BW) gap). All regressions include covariates for the Black share of enrollment, traditional school status, high school status, large city status, small city status, and fringe rural status. The BW gap is measured as the difference between the Black and White rates. The Black rate is measured as (number of Black students excluded / number of Black students enrolled) × 100. The White rate is measured as (number of White students excluded / number of White students enrolled) × 100. The overall rate is measured as (number of students excluded / number of students enrolled) × 100. The second column contains the estimates from the preferred specification. The third column contains estimates on the sample of schools with no SROs present. The fourth column contains estimates using the not-yet-treated group as the counterfactual. The fifth column contains estimates based on schools making changes in anticipation of the policy going into effect one year in advance. The last column contains estimates with Bonferroni corrected, clustered, bootstrapped standard errors at the state level.

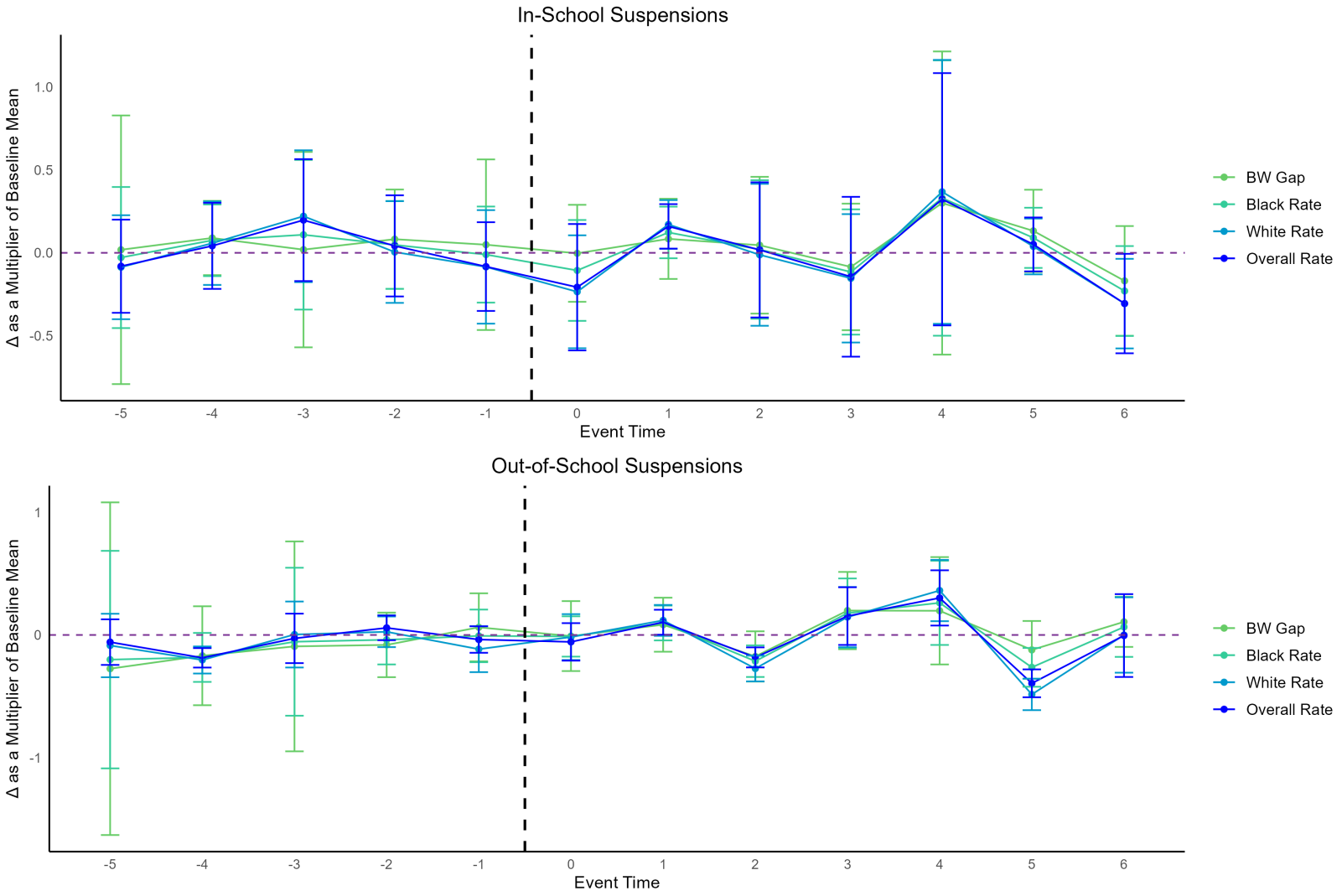
Appendix A. Supplemental Figures and Tables

Figure A1: Event-Time ATT(g,t) Estimates of Law Enforcement Credentials on Suspensions in Majority Black Schools



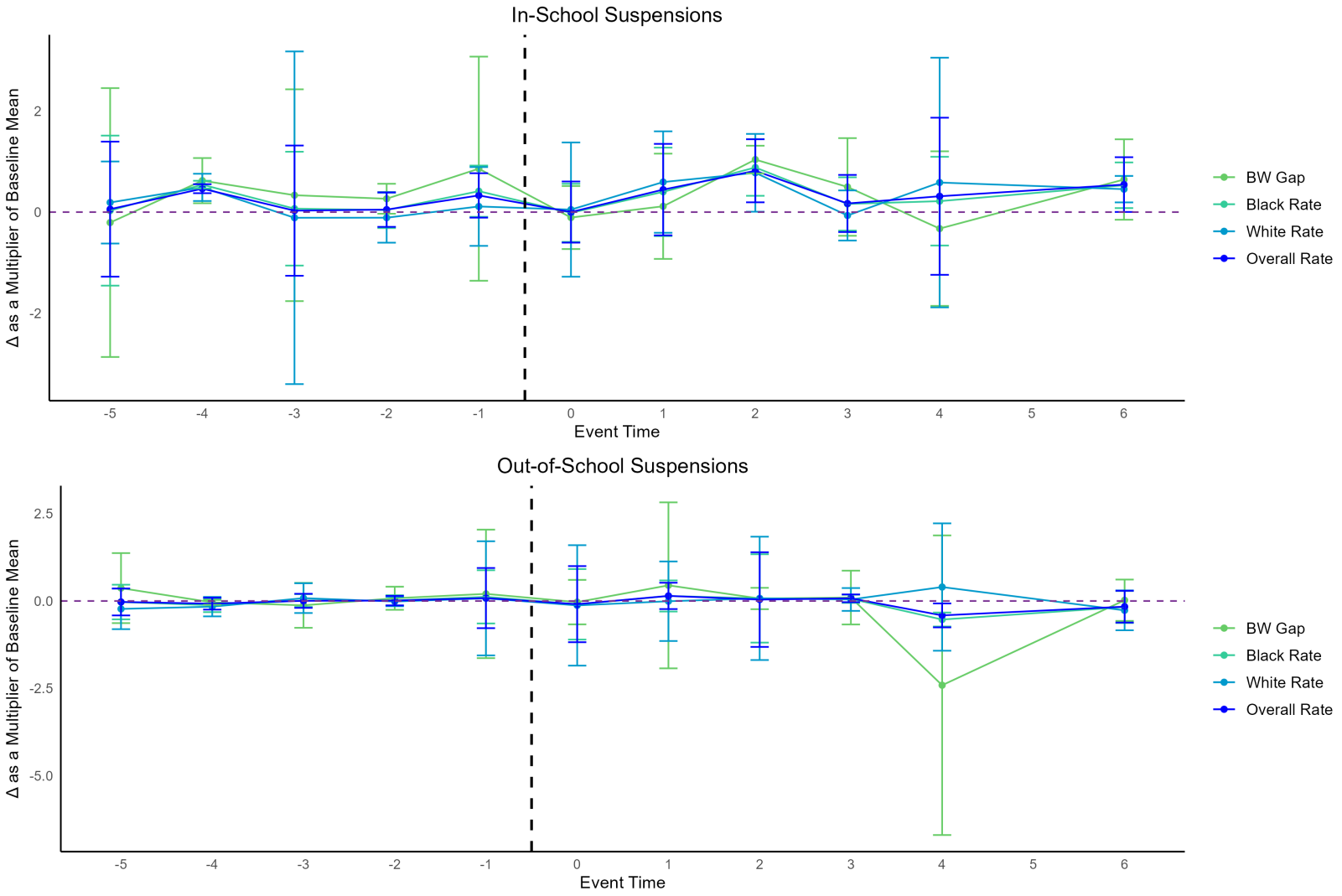
Notes: Estimands shown: $\sum_g \mathbf{1}\{g+e \leq \mathcal{T}\}P(G=g|G+e \leq \mathcal{T})ATT(g,g+e)$. Estimates were derived from the DRDID estimator and event time-aggregation using the Callaway and Sant'Anna 'did' package. Event Time represents the observed period relative to the first treatment period (e = 0). Clustered, bootstrapped standard errors at the state level. Estimates are interpreted as the average change in the outcome measure as a multiplier of the baseline outcome mean (e.g., 1.41 is a 141% increase in the baseline average Black-White (BW) gap). All regressions include covariates for the Black share of enrollment, traditional school status, high school status, large city status, small city status, and fringe rural status. The BW gap is measured as the difference between the Black and White rates. The Black rate is measured as (number of Black students excluded / number of Black students enrolled) × 100. The White rate is measured as (number of White students excluded / number of White students enrolled) × 100. The overall rate is measured as (number of students excluded / number of students enrolled) × 100.

Figure A2: Event-Time ATT(g,t) Estimates of Law Enforcement Credentials on Suspensions in Minority Black Schools



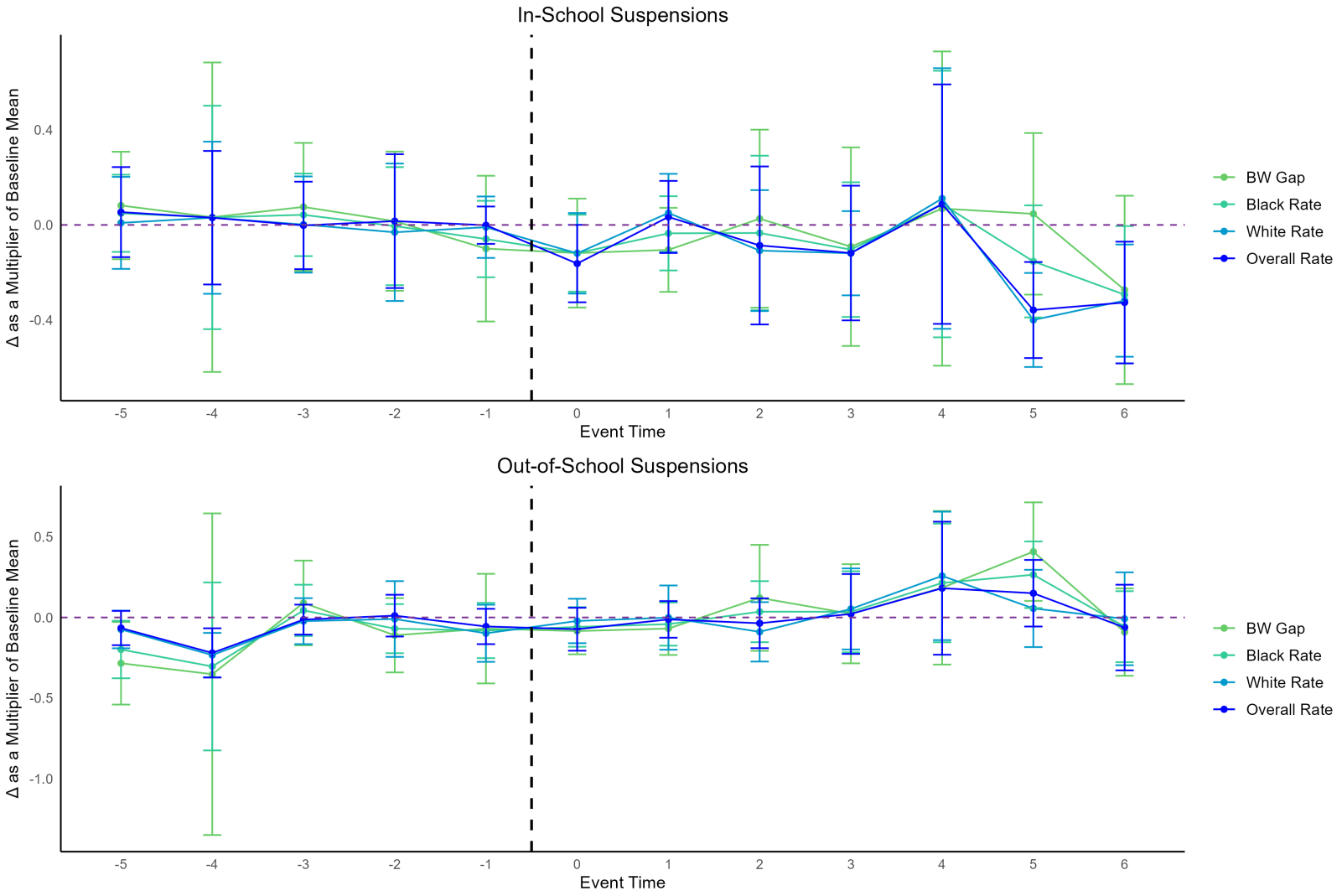
Notes: Estimands shown: $\sum_g \mathbf{1}\{g+e \leq \mathcal{T}\}P(G=g|G+e \leq \mathcal{T})ATT(g,g+e)$. Estimates were derived from the DRDID estimator and event time-aggregation using the Callaway and Sant'Anna 'did' package. Event Time represents the observed period relative to the first treatment period (e = 0). Clustered, bootstrapped standard errors at the state level. Estimates are interpreted as the average change in the outcome measure as a multiplier of the baseline outcome mean (e.g., 1.41 is a 141% increase in the baseline average Black-White (BW) gap). All regressions include covariates for the Black share of enrollment, traditional school status, high school status, large city status, small city status, and fringe rural status. The BW gap is measured as the difference between the Black and White rates. The Black rate is measured as (number of Black students excluded / number of Black students enrolled) × 100. The White rate is measured as (number of White students excluded / number of White students enrolled) × 100. The overall rate is measured as (number of students excluded / number of students enrolled) × 100.

Figure A3: Event-Time ATT(g,t) Estimates of Special Training on Suspensions in Majority Black Schools



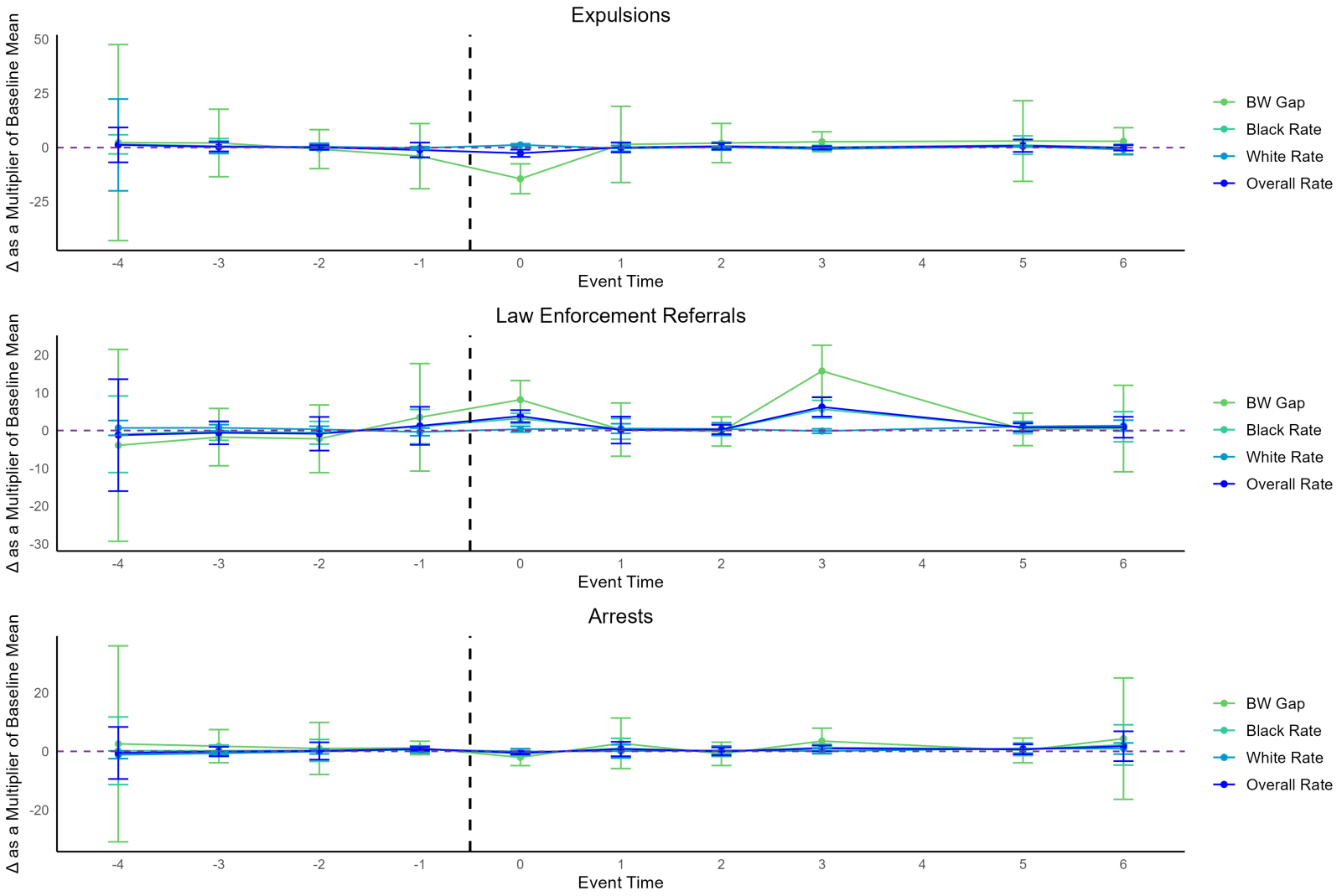
Notes: Estimands shown: $\sum_g \mathbf{1}\{g+e \leq \mathcal{T}\}P(G=g|G+e \leq \mathcal{T})ATT(g,g+e)$. Estimates were derived from the DRDID estimator and event time-aggregation using the Callaway and Sant'Anna 'did' package. Event Time represents the observed period relative to the first treatment period (e = 0). Clustered, bootstrapped standard errors at the state level. Estimates are interpreted as the average change in the outcome measure as a multiplier of the baseline outcome mean (e.g., 1.41 is a 141% increase in the baseline average Black-White (BW) gap). All regressions include covariates for the Black share of enrollment, traditional school status, high school status, large city status, small city status, and fringe rural status. The BW gap is measured as the difference between the Black and White rates. The Black rate is measured as (number of Black students excluded / number of Black students enrolled) × 100. The White rate is measured as (number of White students excluded / number of White students enrolled) × 100. The overall rate is measured as (number of students excluded / number of students enrolled) × 100.

Figure A4: Event-Time ATT(g,t) Estimates of Special Training on Suspensions in Minority Black Schools



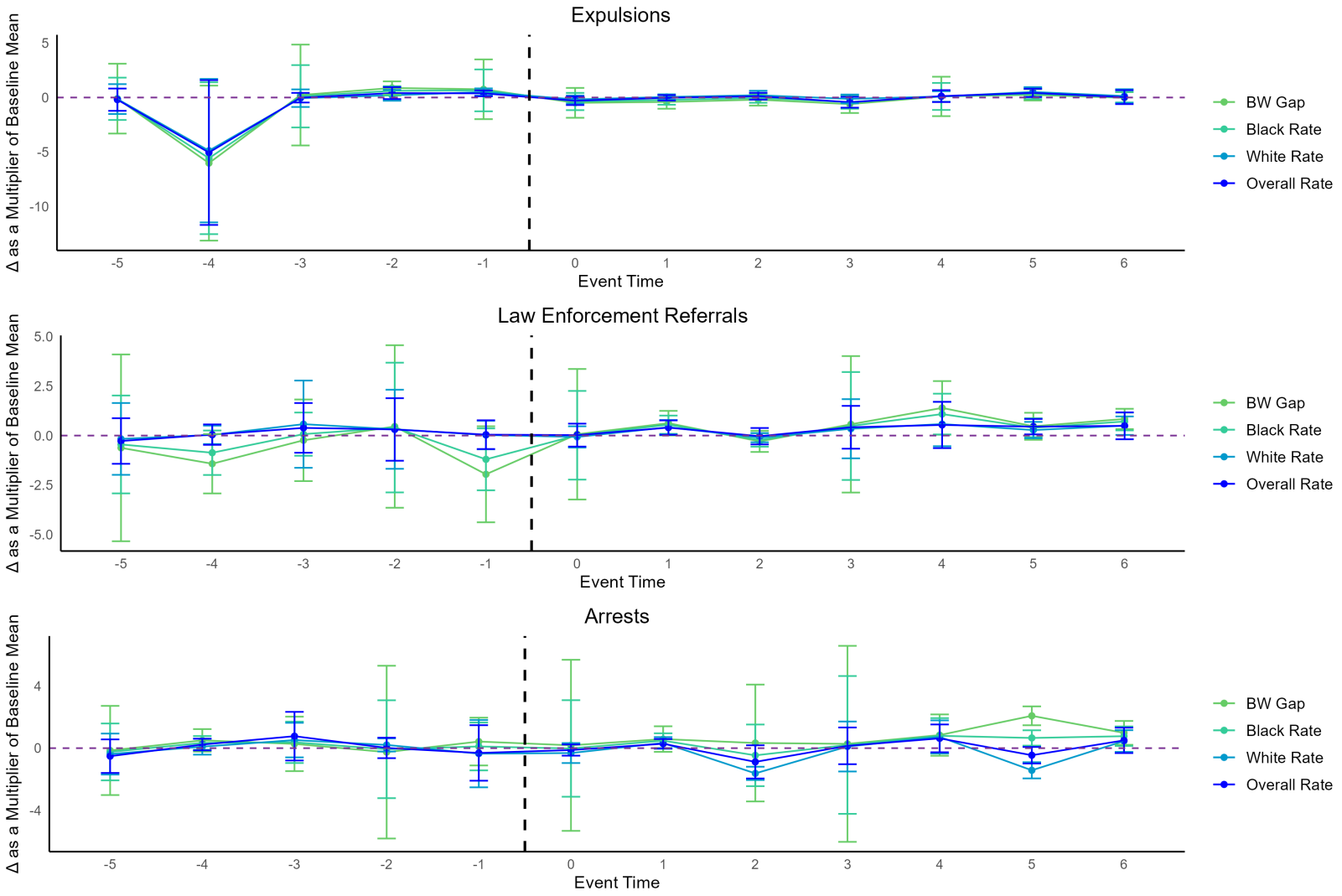
Notes: Estimands shown: $\sum_g \mathbf{1}\{g+e \leq \mathcal{T}\}P(G=g|G+e \leq \mathcal{T})ATT(g,g+e)$. Estimates were derived from the DRDID estimator and event time-aggregation using the Callaway and Sant'Anna 'did' package. Event Time represents the observed period relative to the first treatment period (e = 0). Clustered, bootstrapped standard errors at the state level. Estimates are interpreted as the average change in the outcome measure as a multiplier of the baseline outcome mean (e.g., 1.41 is a 141% increase in the baseline average Black-White (BW) gap). All regressions include covariates for the Black share of enrollment, traditional school status, high school status, large city status, small city status, and fringe rural status. The BW gap is measured as the difference between the Black and White rates. The Black rate is measured as (number of Black students excluded / number of Black students enrolled) × 100. The White rate is measured as (number of White students excluded / number of White students enrolled) × 100. The overall rate is measured as (number of students excluded / number of students enrolled) × 100.

Figure A5: Event-Time ATT(g,t) Estimates of Law Enforcement Credentials on Other Exclusion in Majority Black Schools



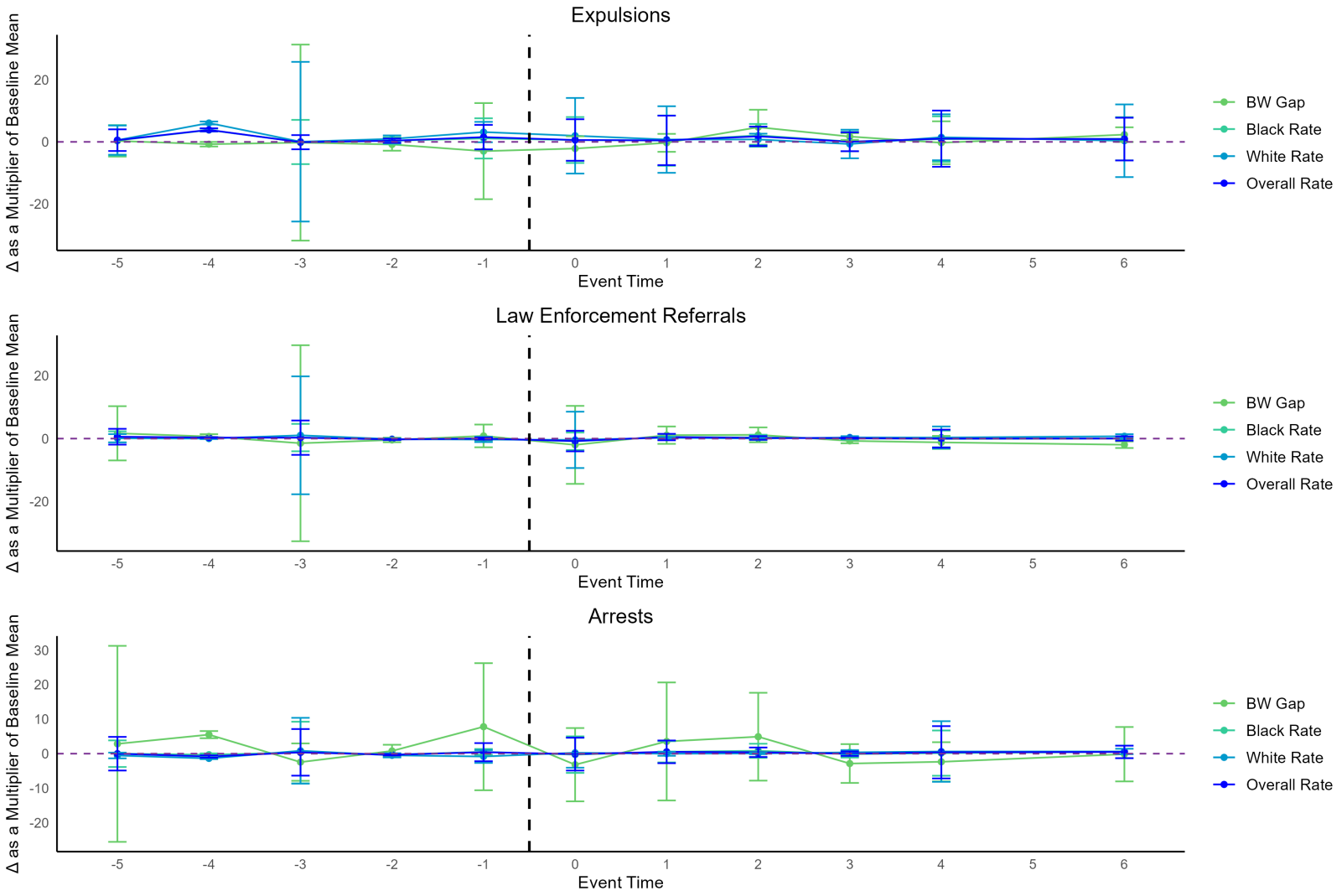
Notes: Estimands shown: $\sum_g \mathbf{1}\{g+e \leq \mathcal{T}\}P(G=g|G+e \leq \mathcal{T})ATT(g,g+e)$. Estimates were derived from the DRDID estimator and event time-aggregation using the Callaway and Sant'Anna 'did' package. Event Time represents the observed period relative to the first treatment period (e = 0). Clustered, bootstrapped standard errors at the state level. Estimates are interpreted as the average change in the outcome measure as a multiplier of the baseline outcome mean (e.g., 1.41 is a 141% increase in the baseline average Black-White (BW) gap). All regressions include covariates for the Black share of enrollment, traditional school status, high school status, large city status, small city status, and fringe rural status. The BW gap is measured as the difference between the Black and White rates. The Black rate is measured as (number of Black students excluded / number of Black students enrolled) × 100. The White rate is measured as (number of White students excluded / number of White students enrolled) × 100. The overall rate is measured as (number of students excluded / number of students enrolled) × 100.

Figure A6: Event-Time ATT(g,t) Estimates of Law Enforcement Credentials on Other Exclusion in Minority Black Schools



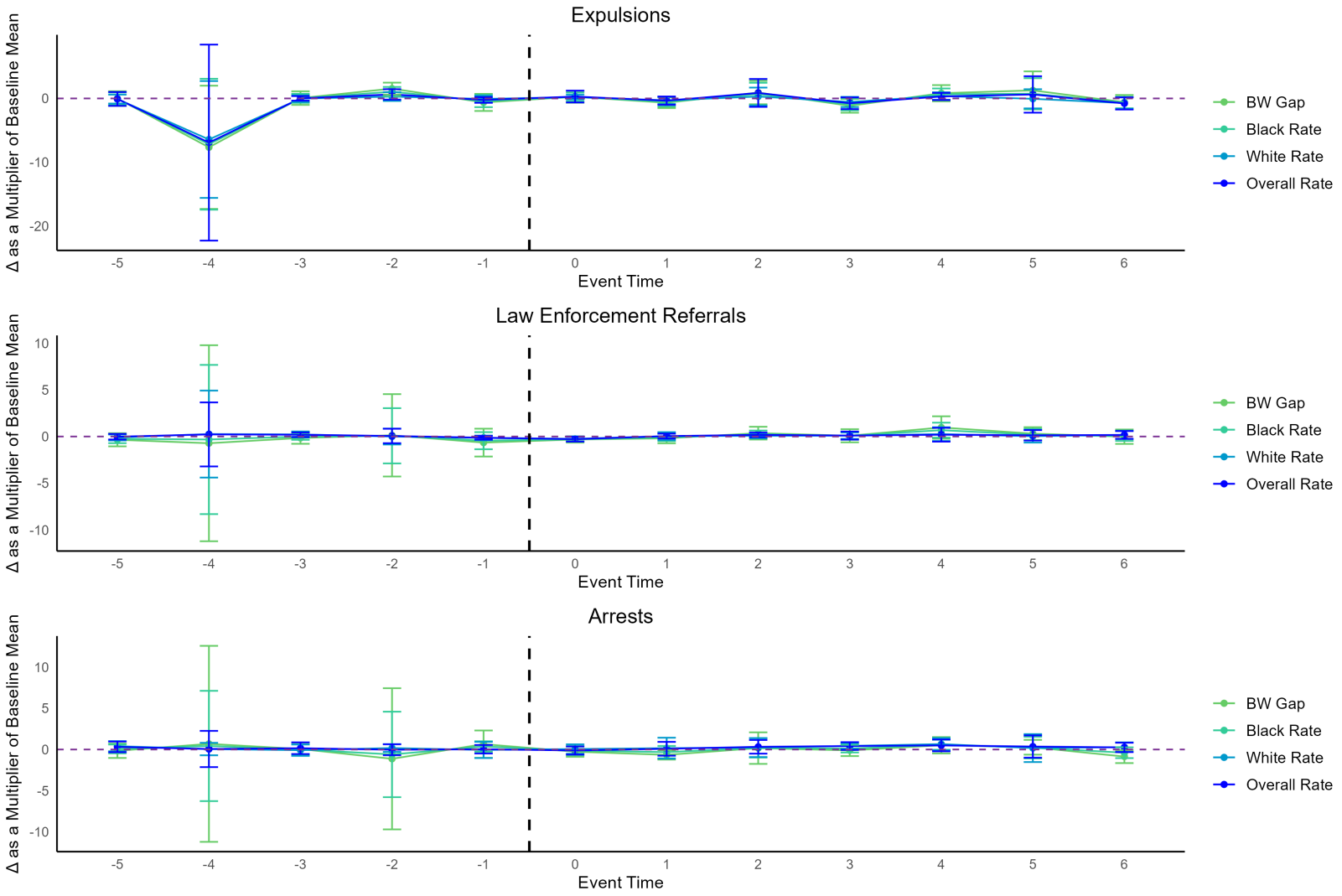
Notes: Estimands shown: $\sum_g \mathbf{1}\{g+e \leq \mathcal{T}\}P(G=g|G+e \leq \mathcal{T})ATT(g,g+e)$. Estimates were derived from the DRDID estimator and event time-aggregation using the Callaway and Sant'Anna 'did' package. Event Time represents the observed period relative to the first treatment period (e = 0). Clustered, bootstrapped standard errors at the state level. Estimates are interpreted as the average change in the outcome measure as a multiplier of the baseline outcome mean (e.g., 1.41 is a 141% increase in the baseline average Black-White (BW) gap). All regressions include covariates for the Black share of enrollment, traditional school status, high school status, large city status, small city status, and fringe rural status. The BW gap is measured as the difference between the Black and White rates. The Black rate is measured as (number of Black students excluded / number of Black students enrolled) × 100. The White rate is measured as (number of White students excluded / number of White students enrolled) × 100. The overall rate is measured as (number of students excluded / number of students enrolled) × 100.

Figure A7: Event-Time ATT(g,t) Estimates of Special Training on Other Exclusion in Majority Black Schools



Notes: Estimands shown: $\sum_g \mathbf{1}\{g+e \leq \mathcal{T}\}P(G=g|G+e \leq \mathcal{T})ATT(g,g+e)$. Estimates were derived from the DRDID estimator and event time-aggregation using the Callaway and Sant'Anna 'did' package. Event Time represents the observed period relative to the first treatment period (e = 0). Clustered, bootstrapped standard errors at the state level. Estimates are interpreted as the average change in the outcome measure as a multiplier of the baseline outcome mean (e.g., 1.41 is a 141% increase in the baseline average Black-White (BW) gap). All regressions include covariates for the Black share of enrollment, traditional school status, high school status, large city status, small city status, and fringe rural status. The BW gap is measured as the difference between the Black and White rates. The Black rate is measured as (number of Black students excluded / number of Black students enrolled) × 100. The White rate is measured as (number of White students excluded / number of White students enrolled) × 100. The overall rate is measured as (number of students excluded / number of students enrolled) × 100.

Figure A8: Event-Time ATT(g,t) Estimates of Special Training on Other Exclusion in Minority Black Schools



Notes: Estimands shown: $\sum_g \mathbf{1}\{g+e \leq \mathcal{T}\}P(G=g|G+e \leq \mathcal{T})ATT(g,g+e)$. Estimates were derived from the DRDID estimator and event time-aggregation using the Callaway and Sant'Anna 'did' package. Event Time represents the observed period relative to the first treatment period (e = 0). Clustered, bootstrapped standard errors at the state level. Estimates are interpreted as the average change in the outcome measure as a multiplier of the baseline outcome mean (e.g., 1.41 is a 141% increase in the baseline average Black-White (BW) gap). All regressions include covariates for the Black share of enrollment, traditional school status, high school status, large city status, small city status, and fringe rural status. The BW gap is measured as the difference between the Black and White rates. The Black rate is measured as (number of Black students excluded / number of Black students enrolled) × 100. The White rate is measured as (number of White students excluded / number of White students enrolled) × 100. The overall rate is measured as (number of students excluded / number of students enrolled) × 100.

Table A1: State School Resource Officer Statute Citations

State	Citation	Effective Start	Effective End
AK	N/A	N/A	N/A
AL	Ala. Code §16-1-44.1	5/22/2013	Current
AR	Ark. Code Ann. §6-10-128	7/22/2015	Current
	Ark. Code Ann. §17-40-330	9/1/2015	Current
	Ark. Code Ann. §16-81-118	7/22/2015	Current
AZ	Ariz. Rev. Stat. Ann. §15-154	6/30/2014	Current
	Ariz. Rev. Stat. Ann. §15-155	4/17/2017	Current
CA	Cal. Educ. Code §38001.5	7/22/2015	Current
CO	Colo. Rev. Stat. Ann. §22-32-109.1	6/2/2000	Current
	Colo. Rev. Stat. Ann. §24-31-312	5/19/2012	Current
CT	Conn. Gen. Stat. Ann. §10-233m	7/1/2015	Current
	Conn. Gen. Stat. Ann. §10-244a	7/1/2014	Current
	Conn. Gen. Stat. Ann. §7-294x	12/31/2020	Current
DC	D.C. Code §5-132.01	4/13/2005	Current
	D.C. Code §5-132.03	4/13/2005	Current
DE	Del. Code Ann. tit. 14, §4112F	7/1/2014	Current
	Del. Code Ann. tit. 14, §601	12/31/1953	Current
FL	Fla. Stat. Ann. §1006.12	3/9/2018	Current
GA	Ga. Code Ann. §35-8-2	5/1/2012	Current
HI	Haw. Rev. Stat. §88-21	3/14/2011	Current
	Haw. Code R. §8-19-2	9/1/1982	Current
IA	N/A	N/A	N/A
ID	N/A	N/A	N/A
IL	50 Ill. Comp. Stat. Ann. 705/10.22	1/1/2019	Current
	105 Ill. Comp. Stat. Ann. 5/10-20.68	1/1/2019	Current
IN	Ind. Code Ann. §20-26-18.2-1	5/7/2013	Current
	Ind. Code Ann. §20-26-18.2-3	5/7/2013	Current
KS	Kan. Stat. Ann. §72-6152	6/4/2015	Current
	Kan. Stat. Ann. §72-6146	7/1/2017	Current
	Kan. Admin. Regs. §16-16-2	12/16/2016	Current
	Kan. Admin. Regs. §16-16-3	12/16/2016	Current
KY	Ky. Rev. Stat. Ann. §158.441	4/10/1998	Current
LA	La. Rev. Stat. Ann. 17:416.19	8/15/2005	Current
MA	Mass. Gen. Laws Ann. 71 §37P	7/1/2015	Current
MD	Md. Code Ann., Educ. §7-1501	7/1/2013	Current
	Md. Code Ann., Educ. §7-1508	6/1/2018	Current
ME	Me. Rev. Stat. tit. 20-A, §6556	10/18/2021	Current
MI	N/A	N/A	N/A
MN	N/A	N/A	N/A
MO	Mo. Ann. Stat. §160.665	12/20/2014	Current
	Mo. Ann. Stat. §168.450	12/31/2013	Current
MS	Miss. Code Ann. §37-7-321	7/1/2006	Current
	Miss. Code Ann. §45-6-7	4/15/2009	Current
MT	N/A	N/A	N/A

Table A1 continued from previous page

State	Citation	Effective Start	Effective End
NC	N.C. Gen. Stat. Ann. §162-26	12/1/2013	Current
ND	N/A	N/A	N/A
NE	Neb.Rev.St. §79-2701	9/1/2019	Current
	Neb.Rev.St. §79-2702	9/1/2019	Current
	Neb.Rev.St. §79-2703	9/1/2019	Current
	Neb.Rev.St. §79-2704	9/1/2019	Current
NH	N.H. Rev. Stat. Ann. §186:11	7/26/2014	Current
NJ	N.J. Stat. Ann. §18A:17-43.1	1/6/2006	Current
NM	N.M. Stat. Ann§29-7-14	12/31/2020	Current
NV	Nev. Rev. Stat. Ann. §388.2358	7/1/2017	Current
	Nev. Rev. Stat. Ann. 388.2565	7/1/2019	Current
NY	N.Y. Educ. Law §2801-a	7/1/2016	Current
OH	Ohio Rev. Code Ann. §3313.951	11/2/2018	Current
OK	Okla. Stat. Ann. tit. 74, §360.18	9/1/1991	Current
OR	Or. Rev. Stat. Ann. §133.402	12/31/2019	Current
PA	24 Pa. Cons. Stat. Ann. §13-1313-C	6/22/2018	Current
	24 Pa. Cons. Stat. Ann. §13-1314-C	6/22/2018	Current
RI	R.I. Gen. Laws Ann. §16-7.2-6	6/22/2018	Current
SC	S.C. Code Ann. Regs. 43-210	5/26/2017	Current
	S.C. Code Ann. §5-7-12	6/4/2008	Current
SD	S.D. Codified Laws §13-64-1	12/31/2013	Current
	S.D. Codified Laws §13-64-3	12/31/2013	Current
	S.D. Codified Laws §23-3-35	12/31/1966	Current
TN	Tenn. Code Ann. §49-6-4217	12/31/2007	Current
	Tenn. Code Ann. §49-6-4206	4/27/2017	Current
	Tenn. Code Ann. §49-6-4202	12/31/1981	Current
TX	Tex. Occ. Code Ann. §1701.262	6/20/2015	Current
	Tex. Occ. Code Ann. §1701.601	9/1/2001	Current
	Tex. Educ. Code Ann. §37.081	5/30/1995	Current
	Tex. Educ. Code Ann. §§37.082	5/30/1995	Current
	Tex. Occ. Code Ann. §1701.263	6/20/2015	Current
UT	Utah Code Ann. §53G-8-701	5/10/2016	Current
	Utah Code Ann. §53A-11-1604: (Renumbered as 53G-8-703)	5/10/2016	Current
	Utah Code Ann. §53G-8-702	5/10/2016	Current
VA	Va. Code Ann. §9.1-101	7/1/2014	Current
	6 Va. Admin. Code 20-240-20	3/8/2006	Current
	Va. Code Ann. §22.1-280.2:1	7/1/2017	Current
	Va. Code Ann. §9.1-102	7/1/2014	Current
	Va. Code Ann. §9.1-184	7/1/2013	Current
	Va. Code Ann. §9.1-114.1	7/1/2019	Current
VT	Vt. Stat. Ann. tit. 16, §1167	5/4/2012	Current
WA	Wash. Rev. Code Ann. §28A.320.124	7/28/2019	Current
	Wash. Rev. Code Ann. §28A.310.515	7/25/2021	Current
WI	N/A	N/A	N/A

Table A1 continued from previous page

State	Citation	Effective Start	Effective End
WV	W. Va. Code R. §126-99	7/1/2019	Current
WY	N/A	N/A	N/A

Table A2: Variable Descriptions - Covariates

Student Characteristics	
% Black	Proportion of male and female Black students on the rolls of the school out of total student enrollment
% White	Proportion of male and female White students on the rolls of the school out of total student enrollment
% Hispanic	Proportion of male and female Hispanic students on the rolls of the school out of total student enrollment
% Asian	Proportion of male and female Asian students on the rolls of the school out of total student enrollment
% AIAN	Proportion of male and female American Indian or Alaskan Native students on the rolls of the school out of total student enrollment
% NHPI	Proportion of male and female Native Hawaiian or other Pacific Islander students on the rolls of the school out of total student enrollment
% Multiracial	Proportion of male and female multiracial students on the rolls of the school out of total student enrollment
Diversity Index	0-to-1 measure of the level of racial/ethnic richness (amount of group representation) and evenness (distribution of group representation) in a school
% Female	Proportion of female students on the rolls of the school out of total student enrollment
% ELL	Proportion of male and female English language learner students on the rolls of the school out of total student enrollment
% Section 504 Disability	Proportion of male and female students with a disability who receive related aids and services solely under Section 504 of the Rehabilitation Act of 1973 (Section 504) on the rolls of the school out of total student enrollment
% IDEA Disability	Proportion of male and female students with disabilities who receive special education and related services under the Individuals with Disabilities Act (IDEA) on the rolls of the school out of total student enrollment
% FRPL Eligible	Proportion of Free Lunch Program or Reduced-price Lunch Program under the National School Lunch Act of 1946 eligible students on the rolls of the school out of total student enrollment
Staff Characteristics	
Teacher:Pupil	Inverse of the pupil-to-teacher FTE ratio
Counselor:Pupil	Inverse of the pupil-to-counselor FTE ratio
School Characteristics	
Total Enrolled	Count of students on the rolls of the school
6th through 8th Grade	Binary indicator for whether the school has at least one student enrolled in grades 6 through 8
9th through 12th Grade	Binary indicator for whether the school has at least one student enrolled in grades 9 through 12
Special Education School	Binary indicator for whether the school can be characterized as a special education school

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Magnet School/Program	Binary indicator for whether the school can be characterized as either a magnet school or a school operating a magnet program within the school
Charter School	Binary indicator for whether the school can be characterized as a charter school
Alternative School	Binary indicator for whether the school can be characterized as an alternative school
Geographic Locale	
Large City	Binary indicator for whether the school is located in a territory inside an urbanized area and inside a principal city with a population of 250,000 or more
Midsize City	Binary indicator for whether the school is located in a territory inside an urbanized area and inside a principal city with a population less than 250,000 and greater than or equal to 100,000
Small City	Binary indicator for whether the school is located in a territory inside an urbanized area and inside a principal city with a population less than 100,000
Large Suburban	Binary indicator for whether the school is located in a territory outside a principal city and inside an urbanized area with a population of 250,000 or more
Midsize Suburban	Binary indicator for whether the school is located in a territory outside a principal city and inside an urbanized area with a population less than 250,000 and greater than or equal to 100,000
Small Suburban	Binary indicator for whether the school is located in a territory outside a principal city and inside an urbanized area with a population less than 100,000
Fringe Town	Binary indicator for whether the school is located in a territory inside an urban cluster that is less than or equal to 10 miles from an urbanized area
Distant Town	Binary indicator for whether the school is located in a territory inside an urban cluster that is more than 10 miles and less than or equal to 35 miles from an urbanized area
Remote Town	Binary indicator for whether the school is located in a territory inside an urban cluster that is more than 35 miles from an urbanized area
Fringe Rural	Binary indicator for whether the school is located in a Census-defined rural territory that is less than or equal to 5 miles from an urbanized area, as well as rural territory that is less than or equal to 2.5 miles from an urban cluster
Distant Rural	Binary indicator for whether the school is located in a Census-defined rural territory that is more than 5 miles but less than or equal to 25 miles from an urbanized area, as well as rural territory that is more than 2.5 miles but less than or equal to 10 miles from an urban cluster
Remote Rural	Binary indicator for whether the school is located in a Census-defined rural territory that is more than 25 miles from an urbanized area and is also more than 10 miles from an urban cluster

Table A2 continued from previous page

State School Exclusion Statutes	
Requires Exclusions	Ordinal ranking of the state exclusionary statutes requiring exclusionary discipline: (10: requires most/strictest actions; 1: no required actions)
Permits Exclusions	Ordinal ranking of the state exclusionary statutes permitting exclusionary discipline: (4: permits most/strictest actions; 1: permits fewest/most lenient actions)
Prohibits Exclusions	Ordinal ranking of the state exclusionary statutes prohibiting exclusionary discipline: (4: prohibits most/strictest actions; 1: no prohibited actions)
Exclusion Alternatives	Ordinal ranking of the state exclusionary statutes requiring or encouraging alternatives to exclusionary discipline: (3: requires alternatives; 1: neither requires or encourages alternatives)
Juvenile Residential Placement	
Juvenile Placement	The number of youth placed in a juvenile residential facility per 100,000 youth ages 10 through upper age of original juvenile court jurisdiction in each state

Notes: Student demographic proportions (Demographics: Black, White, Hispanic, Asian, AIAN, NHPI, Multiracial, female, English language learners, Section 504 disability, IDEA disability, and FRPL eligibility): respective demographic student enrollment / total student enrollment. All enrollment counts are an aggregation of respective male and female students. FRPL eligibility is derived from counts of aggregated Free Lunch Program and Reduced-price Program eligible students in each school from the NCES-CCD. Racial/ethnic diversity index using Simpson's Diversity Index formula: $D = 1 - \frac{\sum n(n-1)}{N(N-1)}$ where n represents the number of enrolled students of each race/ethnicity, N represents the total number of enrolled students of all races/ethnicities, and D ranges between 0 and 1. Inverse pupil-to-staff ratios (Staff: Teachers and counselors) derived from respective FTE staff variable / total student enrollment. The school's geographic locale is derived from the designated geographic locale of each school from the NCES-CCD. State school exclusion statutes are sourced from the PSP. Juvenile residential placement rates are sourced from the EZACJRP.

Table A3: Variable Descriptions - Outcomes

School Resource Officers	
SRO Presence	Binary indicator for whether the school has any sworn law enforcement officer with arrest authority assigned to the school
Exclusionary Discipline Outcomes	
In-School Suspensions (ISS)	Temporary removal from student's regular classroom(s) for at least half a day for disciplinary purposes, but remains under the direct supervision of school personnel
Out-of-School Suspensions (OSS)	Temporary removal from student's regular school for at least half a day, but less than the remainder of the school year, for disciplinary purposes to another setting
Expulsions	Includes: (1) Expulsion with educational services (removal from student's regular school for disciplinary purposes and providing educational services to the student for the remainder of the school year or longer); (2) Expulsion without educational services (removal from student's regular school for disciplinary purposes and not providing educational services to the child for the remainder of the school year or longer). Excludes: (3) Expulsions under zero-tolerance policies (removal from student's regular school for disciplinary purposes for the remainder of the school year or longer because of zero-tolerance policies– policies that result in mandatory expulsion of any student who commits one or more specified offenses) because category (3) may be counted in either category (1) or (2)
Law Enforcement (LE) Referrals	Report student to any law enforcement agency or official for an incident that occurs on school grounds, during school-related events, or while taking school transportation, regardless of whether official action is taken. Includes citations, tickets, court referrals, and school-related arrests
School-Related Arrests (Arrests)	Arrest student for an incident that occurs on school grounds, during school-related events, or while taking school transportation, or due to a referral by any school official.
Exclusion Rates (per 100 students)	
Total ISS	The total number of students receiving one or more ISS per 100 students enrolled
Black ISS	The total number of students identifying as Black receiving one or more ISS per 100 Black students enrolled
White ISS	The total number of students identifying as White receiving one or more ISS per 100 White students enrolled
Total OSS	The total number of students receiving one or more OSS per 100 students enrolled
Black OSS	The total number of students identifying as Black receiving one or more OSS per 100 Black students enrolled
White OSS	The total number of students identifying as White receiving one or more OSS per 100 White students enrolled

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Total Expulsions	The total number of students receiving an expulsion per 100 students enrolled
Black Expulsions	The total number of students identifying as Black receiving an expulsion per 100 Black students enrolled
White Expulsions	The total number of students identifying as White receiving an expulsion per 100 White students enrolled
Total LE Referrals	The total number of students referred to a law enforcement agency or official per 100 students enrolled
Black LE Referrals	The total number of students identifying as Black referred to a law enforcement agency or official per 100 Black students enrolled
White LE Referrals	The total number of students identifying as White referred to a law enforcement agency or official per 100 White students enrolled
Total Arrests	The total number of students receiving a school-related arrest per 100 students enrolled
Black Arrests	The total number of students identifying as Black receiving a school-related arrest per 100 Black students enrolled
White Arrests	The total number of students identifying as White receiving a school-related arrest per 100 White students enrolled
Black-to-White Discipline Rate Gaps	
ISS	The difference between Black ISS and White ISS
OSS	The difference between Black OSS and White OSS
Expulsion	The difference between Black expulsions and White expulsions
LE Referral	The difference between Black LE referrals and White LE referrals
Arrest	The difference between Black arrests and White arrests

Notes: Binary SRO indicator for 2015-16 through 2020-21 academic years derived from FTE SRO variable. Count of students receiving disciplinary action per 100 student rates (Disciplinary Action: ISS, OSS, expulsions, LE referrals, and arrests) derived from (Unique count of students receiving respective disciplinary action / total student enrollment) * 100. Count of Black students receiving disciplinary action per 100 Black student rates derived from (Unique count of Black students receiving respective disciplinary action / Black student enrollment) * 100. Count of White students receiving disciplinary action per 100 Black student rates derived from (Unique count of Black students receiving respective disciplinary action / Black student enrollment) * 100. All counts of students receiving disciplinary action are an aggregation of respective male and female students, with or without a disability under IDEA.

Table A6: Balance in Characteristics Between Treatment and Comparison Groups

	LE Credentials		Special Training	
Covariate	*Majority Black*	*Minority Black*	*Majority Black*	*Minority Black*
Proportion Black	-0.004	-0.001	-0.004	-0.002
	(0.021)	(0.001)	(0.010)	(0.002)
Proportion White	-0.006	-0.002	-0.004	0.001
	(0.015)	(0.003)	(0.012)	(0.004)
Proportion Hispanic	0.008	0.006**	0.005	0.002
	(0.010)	(0.003)	(0.007)	(0.003)
Proportion Asian	0.001	0.000	0.000	0.001
	(0.005)	(0.001)	(0.003)	(0.001)
Proportion AIAN	0.000	0.000	-0.001	0.000
	(0.004)	(0.001)	(0.002)	(0.002)
Proportion NHPI	-0.001	0.000	0.000	0.000
	(0.001)	(0.001)	(0.000)	(0.001)
Proportion Multiracial	0.002	-0.003**	0.003	-0.001
	(0.005)	(0.001)	(0.005)	(0.002)
Diversity Index	0.007	0.003	0.004	0.001
	(0.021)	(0.004)	(0.011)	(0.006)
Proportion Female	-0.006	0.000	-0.006	0.000
	(0.018)	(0.001)	(0.008)	(0.001)
Proportion ELL	0.004	0.000	-0.001	0.006
	(0.014)	(0.003)	(0.010)	(0.004)
Proportion Section 504	-0.002	0.002	0.001	0.004*
	(0.005)	(0.002)	(0.007)	(0.002)
Proportion IDEA	0.008	-0.001	0.000	-0.002
	(0.031)	(0.002)	(0.010)	(0.002)
Proportion FRPL Eligible	0.003	-0.005	-0.010	-0.003
	(0.094)	(0.023)	(0.089)	(0.025)
Pupil:Teacher Ratio	0.195	-0.232	-0.120	-0.051
	(2.077)	(0.309)	(1.068)	(0.218)
Pupil:Counselor Ratio	16.368	16.597	30.264	9.244
	(25.533)	(10.129)	(29.809)	(8.263)
Total Enrolled	30.286	2.795	18.665	13.293
	(49.859)	(13.128)	(30.344)	(10.702)
Middle School	–	0.003	–	0.000
	–	(0.004)	–	(0.003)
High School	0.009*	0.000	0.013	-0.010**
	(0.005)	(0.005)	(0.018)	(0.004)
Middle & High School	-0.009*	-0.003	-0.013	0.010*
	(0.005)	(0.007)	(0.017)	(0.005)
Special Education School	-0.004	0.002	0.012	0.001
	(0.010)	(0.009)	(0.009)	(0.015)
Magnet School/Program	-0.020	-0.018	-0.005	-0.011
	(0.058)	(0.026)	(0.031)	(0.037)
Charter School	–	-0.003	–	-0.002

Table A6 continued from previous page

	LE Credentials		Special Training	
Covariate	*Majority Black*	*Minority Black*	*Majority Black*	*Minority Black*
	–	(0.003)	–	(0.001)
Alternative School	-0.004	0.001	0.012	0.003
	(0.010)	(0.002)	(0.009)	(0.002)
Traditional School	0.025	0.018	0.003	0.010
	(0.058)	(0.026)	(0.032)	(0.026)
Large City	0.024*	0.007	0.024	0.004
	(0.014)	(0.013)	(0.017)	(0.015)
Midsize City	-0.021	-0.002	-0.021	-0.005
	(0.015)	(0.014)	(0.017)	(0.015)
Small City	-0.003*	-0.004	-0.003**	-0.005
	(0.002)	(0.005)	(0.001)	(0.005)
Large Suburb	-0.012	0.012	0.003	-0.016
	(0.089)	(0.044)	(0.072)	(0.025)
Midsize Suburb	–	0.018	–	-0.010
	–	(0.014)	–	(0.013)
Small Suburb	-0.006	-0.013	-0.006	-0.011
	(0.008)	(0.008)	(0.008)	(0.010)
Fringe Town	–	0.002**	–	0.001
	–	(0.001)	–	(0.001)
Distant Town	-0.003	-0.001	-0.003	0.001
	(0.004)	(0.001)	(0.004)	(0.001)
Remote Town	0.003	0.002	0.003	0.001
	(0.004)	(0.002)	(0.004)	(0.002)
Fringe Rural	0.007**	0.002	0.007**	-0.001
	(0.003)	(0.004)	(0.003)	(0.004)
Distant Rural	–	0.000	–	-0.001
	–	(0.001)	–	(0.001)
Remote Rural	-0.004*	0.000	-0.004	0.000
	(0.002)	(0.000)	(0.003)	(0.001)
Juvenile Placement Rate	2.848	11.732	-2.805	4.918
	(26.186)	(9.864)	(11.552)	(9.992)
Requires Exclusion	–	0.002	–	–
	–	(0.047)	–	–
Permits Exclusion	0.024	0.109	–	–
	(0.140)	(0.076)	–	–
Prohibits Exclusion	-0.044	-0.198	–	-0.019
	(0.995)	(0.124)	–	(0.072)
Exclusion Alternatives	-0.113	0.129	-0.044	-0.028
	(0.344)	(0.138)	(0.159)	(0.038)

Table A6 continued from previous page

	LE Credentials		Special Training	
Covariate	*Majority Black*	*Minority Black*	*Majority Black*	*Minority Black*

Notes: * p<0.1; ** p<0.05. State clustered standard errors in parentheses. Estimates are the aggregated doubly-robust average treatment effects on the treated of a policy on a school or state characteristic and represent the unconditional change in a characteristic after a policy goes into effect. AIAN: American Indian or Alaskan Native. NHPI: Native Hawaiian or Pacific Islander. ELL: English Language Learner. Section 504: Section 504 of the Rehabilitation Act of 1973. IDEA: Individuals with Disabilities Act. FRPL: Free or Reduced-Price Lunch.

Table A4: CRDC Sample Comparison - Covariates

Descriptive Statistics	Full vs. Analytic Overall Difference	Full vs. Analytic SRO Difference	Full vs. Analytic No SRO Difference
Student Characteristics			
% Black	-0.02*** (0.00)	-0.01* (0.00)	-0.01*** (0.00)
% White	0.03** (0.01)	0.02^{+} (0.01)	0.02*** (0.01)
% Hispanic	-0.01* (0.01)	-0.01 (0.01)	-0.01* (0.00)
% Asian	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)
% AIAN	-0.00 (0.00)	-0.00^{+} (0.00)	-0.00 (0.00)
% NHPI	-0.00 (0.00)	-0.00* (0.00)	-0.00 (0.00)
% Multiracial	0.00 (0.00)	0.00 (0.00)	-0.00 (0.00)
Diversity Index	-0.01*** (0.00)	-0.01* (0.00)	-0.01*** (0.00)
% Female	0.01*** (0.00)	0.00** (0.00)	0.00*** (0.00)
% ELL	-0.01** (0.00)	-0.00* (0.00)	-0.00** (0.00)
% Section 504 Disability	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
% IDEA Disability	-0.00* (0.00)	-0.00 (0.00)	-0.00*** (0.00)
% FRPL Eligible	-0.01*** (0.00)	-0.01*** (0.00)	-0.01*** (0.00)
Staff Characteristics			
Teacher:Pupil	-0.00*** (0.00)	-0.00*** (0.00)	-0.00** (0.00)
Counselor:Pupil	-0.00*** (0.00)	-0.00*** (0.00)	-0.00*** (0.00)
School Characteristics			
Total Enrolled	27.82*** (5.41)	16.74^{+} (9.02)	17.49** (5.32)
6th thru 8th Grade	0.00 (0.00)	0.00* (0.00)	0.01* (0.00)
9th thru 12th Grade	-0.02*** (0.00)	-0.01*** (0.00)	-0.02*** (0.00)
Special Education School	-0.00* (0.00)	-0.00 (0.00)	0.00** (0.00)
Magnet School/Program	-0.01* (0.00)	-0.00* (0.00)	-0.01* (0.00)
Charter School	-0.00* (0.00)	-0.00 (0.00)	-0.00 (0.00)
Alternative School	-0.02*** (0.00)	-0.01*** (0.00)	-0.02*** (0.00)
Geographic Locale			
Large City	-0.02*** (0.00)	-0.01*** (0.00)	-0.01*** (0.00)
Midsize City	-0.00*** (0.00)	-0.00* (0.00)	-0.00* (0.00)
Small City	-0.00 (0.00)	0.00 (0.00)	-0.00 (0.00)
Large Suburban	-0.00 (0.00)	-0.00 (0.00)	0.00 (0.00)
Midsize Suburban	0.00 (0.00)	0.00 (0.00)	0.00** (0.00)
Small Suburban	0.00* (0.00)	0.00 (0.00)	0.00*** (0.00)
Fringe Town	0.00*** (0.00)	0.00*** (0.00)	0.00** (0.00)
Distant Town	0.00*** (0.00)	0.00** (0.00)	0.00*** (0.00)
Remote Town	0.00* (0.00)	0.00^{+} (0.00)	0.00 (0.00)
Fringe Rural	0.00*** (0.00)	0.00*** (0.00)	0.00** (0.00)
Distant Rural	0.01*** (0.00)	0.00** (0.00)	0.01** (0.00)
Remote Rural	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)

Notes: $^{+}$ $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$. Clustered standard errors in parentheses. Full CRDC represents approximately 91.2% of the 42,113 U.S. public middle and high schools. The Analytical Sample is the result of excluding observations out-of-scope of the study population of interest and listwise deletion (removal of all data for a school-year observation with one or more missing values for variables used in analysis) of the Full CRDC study population to adjust for item non-response, non-applicable survey questions, and data anomaly issues (post-imputation); this represents 91.2% of all U.S. public schools in the Full CRDC study population.

Table A5: CRDC Sample Comparison - Outcomes

Descriptive Statistics	Full vs. Analytic Overall Difference	Full vs. Analytic SRO Difference	Full vs. Analytic No SRO Difference
Discipline Outcomes (per 100 students)			
Total ISS	0.02 (0.11)	0.04 (0.05)	-0.02 (0.09)
Black ISS	0.34* (0.15)	0.26** (0.10)	0.26*** (0.08)
White ISS	-0.00 (0.08)	-0.01 (0.03)	0.01 (0.05)
Total OSS	-0.38* (0.17)	-0.26* (0.12)	-0.40*** (0.12)
Black OSS	-0.09 (0.25)	-0.08 (0.19)	-0.15 (0.13)
White OSS	-0.38* (0.15)	-0.26* (0.11)	-0.35*** (0.10)
Total Expulsions	-0.09* (0.04)	-0.07*** (0.02)	-0.13^{+} (0.08)
Black Expulsions	-0.02 (0.02)	-0.03 (0.02)	-0.03^{+} (0.02)
White Expulsions	-0.04* (0.01)	-0.04** (0.02)	-0.04** (0.01)
Total LE Referrals	-0.11** (0.04)	-0.08*** (0.02)	-0.13^{+} (0.07)
Black LE Referrals	-0.04* (0.02)	-0.04* (0.02)	-0.03 (0.02)
White LE Referrals	-0.07*** (0.01)	-0.06*** (0.01)	-0.06** (0.02)
Total Arrests	-0.08* (0.04)	-0.05*** (0.01)	-0.10 (0.08)
Black Arrests	-0.02** (0.01)	-0.02* (0.01)	-0.02** (0.01)
White Arrests	-0.03*** (0.01)	-0.03** (0.01)	-0.02** (0.01)
Black-to-White Discipline Rate Ratios			
ISS	0.04*** (0.01)	0.03*** (0.01)	0.03*** (0.01)
OSS	0.05*** (0.01)	0.03** (0.01)	0.06*** (0.01)
Expulsion	0.06*** (0.01)	0.04*** (0.01)	0.02* (0.01)
LE Referral	0.05** (0.02)	0.04*** (0.01)	0.06*** (0.01)
Arrest	0.05* (0.02)	0.05*** (0.01)	0.03 (0.02)

Notes: $^{+}$ $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$. Clustered standard errors in parentheses. Full CRDC represents approximately 91.2% of the 42,113 U.S. public middle and high schools. The Analytical Sample is the result of excluding observations out-of-scope of the study population of interest and listwise deletion (removal of all data for a school-year observation with one or more missing values for variables used in analysis) of the Full CRDC study population to adjust for item non-response, non-applicable survey questions, and data anomaly issues (post-imputation); this represents 91.2% of all U.S. public schools in the Full CRDC study population.

Appendix B. Brief History of Policing and Education Racialized Systems

History of Race and Policing

- Police Origins (17th-19th centuries):
  - The first forms of policing in this country were largely based on the regions they were located, but they shared commonality in their roles of maintaining order and controlling then "non-White" populations
  - In the South, these forces were primarily slave patrols, capturing runaway slaves, monitoring any movements of enslaved people, and enforcing Slave Codes. (Durr, 2015; Parks and Kirby, 2022)
  - In the North, depending on the local population, watchmen and constables were organized to manage public disorder often as a response to increasing European immigrant populations (Parks and Kirby, 2022; The Massachusetts spy and Worcester County advertiser, 1831; The Herald, 1837a, 1837b, 1837c, 1837d)
  - The Texas Rangers, established around the 1820s, enforced dispossession of Native and Mexicano land and property in support of an "Anglo Texas" (Weiss Jr., 1994)
- Modern Policing (19th-21st centuries):
  - In the 1830s and 1840s, the first police forces were established in major cities where immigrant populations were largely located (Durr, 2015; Parks and Kirby, 2022)
  - The end of slavery ended slave patrols, but transformed into informal groups like the Ku Klux Klan, which were left unchecked by, and in some cases involved, the local police (Durr, 2015)
  - Formal police forces in the South are also enforcing Black Codes and Jim Crow laws (Durr, 2015)
  - As the Great Migration saw millions of Black people moving to the North and West, and the Civil Rights Movement expanded throughout the country, police forces were used to push back against civil unrest (Durr, 2015; Derenoncourt, 2022; Parks and Kirby, 2022)
  - Today, we continue to see racial profiling in policing and more resources diverted from social programming and community investments to local policing in racially marginalized and low-income communities (Knowles, Persico, and Todd, 2001; Close and Mason, 2007; Goncalves and Mello, 2021)

History of Race and Education

- The South Carolina Slave Code, passed in 1740, was the first to include prohibitions on enslaved people learning to read or write (Mitchell, 2008; Boutte et al., 2023)
- In the 1830s, being caught *teaching* slaves to read or write was criminally punished (Span, 2005)
- Reconstruction (1865-1877) through the 1890s saw efforts to educate the formerly enslaved populations (Butchart and Rolleri, 2004)
- Plessy v. Ferguson 1896 U.S. Supreme Court decision leads to the diminishing of these efforts (Brook, 1997)
- De jure racial segregation in the South and de facto segregation in the North paired with under-funding of Black schools through the Civil Rights Movement in the mid-20th century restrict access to quality education by Black students (Shertzer and Walsh, 2019; Smith, 2020)
- Brown v. Board of Education 1954 U.S. Supreme Court decision rolled back "separate but equal", but reluctant compliance and phenomena like "White flight" from the cities to suburbs impede the progress towards educational equity (Webb, 2004; Shertzer and Walsh, 2019)
- Today, we continue to see Black children more likely to attend lower quality schools and experience worse educational outcomes, and racial segregation in schools is as high as it ever was in many parts of the country (Shores, Kim, and Still, 2020; Weathers and Sosina, 2022)