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Breaking the school-to-prison pipeline: Implications of removing police from schools for racial and ethnic disparities in the justice system

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Abstract

Momentum toward removing school-based law enforcement (SBLE) intensified in the summer of 2020. Central to the calls to remove SBLE are issues of equity, with the hope that removing SBLE will reduce existing racial and ethnic disparities in the criminal justice system. However, almost no research to date examines the extent to which removing SBLE might shape outcomes related to criminal justice system contact or the attendant racial and ethnic disparities. The purpose of this study is to examine the impact of removing SBLE on racial and ethnic disparities in criminal justice system contact. To achieve the study's goal, we drew on two secondary data sources: 1) The School Survey on Crime and Safety, which is a biennial nationally representative sample of school administrators; 2) The Civil Rights Data Collection, which is a biennial census of U.S. public schools. Each of these data sources were used to construct a two-wave longitudinal dataset that identified schools that removed or did not remove SBLE. Using a difference-in-differences approach, this study compared changes in three measures of criminal justice contact (i.e., arrests, referrals to law enforcement, and crimes reported to police) in schools that removed SBLE relative to the changes in schools that did not remove SBLE. Using the SSOCS data, we found that removing police was associated with reductions in reporting nearly all types of school-based crime to the police, and that these findings were largely invariant across school racial/ethnic composition. Using the CRDC data, we found that removing police was largely unrelated to rates of arrest and referrals to law enforcement, with observed increases for some racial/ethnic groups. These findings were mostly consistent across school racial/ethnic composition. Together, these results indicate that for schools to improve racial and ethnic equity in their use of law enforcement, they must use strategies beyond simply removing police from schools.

Breaking the school-to-prison pipeline: Implications of removing police from schools for racial and ethnic disparities in the justice system

In the United States, public schools are the point of entrance into the criminal justice system for thousands of young people every year. Recent national-level evidence indicates that 54,321 students received school-based arrests and 229,470 were referred to law enforcement in the 2017-18 school year (CRDC, n.d.). Although these statistics are striking on their own, the dramatic racial and ethnic differences are perhaps even more striking. Specifically, although Black students only constituted 7.4% of the population of public school students in 2017-18, they received 31.6% of all arrests and 28.7% of all referrals to law enforcement (CRDC, n.d.). Similarly, although only 13.3% of students nationwide were identified as Hispanic, they received 26.4% of all arrests and 25.7% of all referrals to law enforcement (CRDC, n.d.). And although Native American students make up a smaller proportion of the overall population of students (1.0%), they received 1.6% of all arrests and 1.7% of all referrals to law enforcement. Colloquially called the "school-to-prison pipeline," this process of funneling young people from schools into the criminal justice system disproportionately affects students of color, particularly Black, Hispanic, and Native American students.

Unfortunately, these experiences of arrest and referral to law enforcement do not act as a course correction for young people—instead, criminal justice system contact tends to amplify future criminal behavior and increase the likelihood of subsequent criminal justice system contact (Liberman et al., 2014; Wiley et al., 2013; Wiley & Esbensen, 2016). Some evidence suggests that criminal justice system contact is particularly likely to lead to future system contact among Black youth (McGlynn-Wright et al., 2021). As such, finding ways to decrease racial and ethnic disparities in youth contact with the criminal justice system is likely to both reduce the

burden on the criminal justice system as a whole and reduce the racial and ethnic disparities that have characterized the system for decades. Because schools are so frequently the site of initiation of young people's contact with the criminal justice system—and a clear source of the racial and ethnic disparities that characterize the criminal justice system—schools are likely to be a particularly high-leverage point for intervention.

One mechanism that has been implicated in the school-to-prison pipeline is the presence of school-based law enforcement (SBLE). SBLE refers to sworn law enforcement stationed in schools on either a part- or full-time basis. Some SBLE are known as school resource officers, who often receive special training in juvenile law and interacting with students in schools, although this varies from state to state. Other SBLE do not receive any special training in working with young people. In recent decades, the presence of SBLE has grown dramatically. In 1999, 54.4% of students ages 12-18 nationwide reported the presence of security staff and/or assigned law enforcement officers at school; by 2017 this increased to 70.9% (Wang et al., 2020). Interestingly, the expansion of SBLE has seen bipartisan support at the federal level. Presidents Biden, Trump, and Obama have all been supporters of SBLE, overseeing budgets that spent millions of dollars to hire and maintain SBLE (Blad, 2020; Department of Justice, 2013). However, amid a groundswell of nationwide protests in 2020 following the police killings of George Floyd, Breonna Taylor, and other Black Americans, several school districts nationwide have ended their contracts with law enforcement agencies to provide SBLE. For example, school districts in Denver, Milwaukee, Minneapolis, Oakland, San Francisco, and Seattle decided to remove SBLE. Many more districts have made or are considering making similar decisions.

Considerations about equity are central to the conversation about removing SBLE, particularly for racial and ethnic minority students who experience school-based arrests and

referrals to law enforcement at disproportionately high rates. Policymakers have explicitly cited concerns with racial equity as justification for removing SBLE. For example, the superintendent of Portland, Maine's public school system explained that he supported removing SBLE in light of "the backdrop of the movement to recognize the role of law enforcement as an institution perpetuating white supremacist structures in our institutions, including our schools and larger society" (Schroeder, 2020).

Although the move toward removing SBLE may have intuitive appeal to some districts, no empirical evidence exists regarding what happens to students' frequency of contact with the criminal justice system after schools remove SBLE. Similarly, no research has it examined the impacts on the attendant racial and ethnic disparities. To date, there has only been one study that has examined the impact of removing SBLE, and it examined the frequency of bullying as its outcome, not criminal justice system contact (Devlin et al., 2018). The existing literature on the effects of SBLE is built on (a) cross-sectional studies comparing schools with and without SBLE, and (b) longitudinal studies that focus on the effects of adding SBLE. Neither of these approaches provides information specifically about removing SBLE. Thus, the rapidly changing landscape around public attitudes toward and policy decisions about the use of SBLE is largely being guided without empirical evidence that addresses the question of removing SBLE. As such, the proposed study will address the following research questions:

(1) How does removing SBLE relate to changes in school-based arrest rates, referrals to law enforcement, and reporting crimes to the police?

(2) How do these relationships differ by school racial and ethnic composition?

(3) How do these relationships differ by student race and ethnicity?

In their efforts to reduce racial and ethnic disparities in the criminal justice system, school districts nationwide are currently considering adopting policies that call for the removal of SBLE. This study provides timely evidence about what has happened when other schools have removed SBLE.

Background

Competing Theoretical Expectations

There are competing theoretical expectations for the expected outcomes following the removal of SBLE. On one hand, a crime deterrence perspective (Becker, 1968) suggests that removing SBLE may remove an important deterrent in schools—when SBLE are present, individuals may be less likely to commit crime in or around the school because they believe they are more likely to be caught by the SBLE. This would lead to lower rates of crime, which in turn would lead to lower rates of criminal justice contact. Similarly, opportunity theories of crime—in particular, routine activity theory (Cohen & Felson, 1979)—suggest that SBLE may offer spatial guardianship in schools that prevents crime from occurring. Routine activity theory posits that crime occurs where there is a confluence in time and space of a motivated offender, suitable target, and lack of capable guardianship. If SBLE provide that capable guardianship, then removing SBLE would be expected to increase the occurrence of crime and therefore increase the eventual contact with the criminal justice system.

On the other hand, the theoretical lens of school criminalization suggests that removing SBLE is likely to both reduce crime and contact with the criminal justice system. According to the school criminalization perspective, U.S. schools have become criminalized spaces as they have adopted many strategies of the criminal justice system, transforming American schooling (Kupchik & Monahan, 2006; Simon, 2007; Simmons, 2017), and shifting the focus from

education to obedience (Hirschfield, 2008; Kupchik, 2010). School criminalization encompasses the increased focus on controlling student behavior through techniques including school security measures, zero-tolerance policies, and SBLE. These trends have had disproportionately negative consequences for schools with larger proportions of Black and Hispanic students (Kupchik & Ward, 2014; Payne & Welch, 2010; Welch & Payne, 2018). Additionally, within schools, marginalized students (e.g., Black and Hispanic students and student with disabilities) have borne the brunt of these policies (Annamma, 2016; Bell, 2020; Hoffman, 2014; Losen, 2018; USDOE Office of Civil Rights, 2018).

From this perspective, SBLE is a particularly clear example of the criminalization of schools given that officers are literal representatives of the criminal justice system stationed inside schools. SBLE typically take on a variety of tasks in schools, including informal counseling and mentoring, teaching, and providing law-related training for students and school personnel (Canady et al., 2012; Fisher & Devlin, 2019). Important to the school criminalization perspective, SBLE are frequently involved in school discipline (Curran et al., 2019; Kupchik, 2010; Na & Gottfredson, 2013), potentially responding to rule violations with formal citation or arrest—particularly in cases involving marginalized students. This perspective suggests that schools' removal of SBLE would likely lead to decreased racial and ethnic disparities in referrals to the criminal justice system and has driven many school districts' recent decisions to remove SBLE.

Review of Existing Literature

As noted above, to our knowledge, only two studies to date have examined the impact of removing SBLE. One study examined the impact of removing SBLE on the frequency of bullying, finding no significant effect relative to schools that either (a) kept, (b) added, or (c)

never had SBLE (Devlin et al., 2018). The second study examined how schools' addition or removal of SBLE and school counselors shaped out-of-school suspension and expulsion rates, focusing on White, Black, and Hispanic students (Fisher & Devlin, 2023). Although these studies are valuable, they do not provide insight into the impacts of removing SBLE on young people's criminal justice system involvement. Furthermore, while the latter study examines differences among White, Black, and Hispanic students, the former study does not examine racial and ethnic disparities in any outcome, let alone criminal justice system involvement. Although there is no research on the criminal justice system impacts of removing SBLE, there are a handful of studies that have used rigorous quasi-experimental methods to examine the criminal justice impacts of the (a) *presence*, or (b) *addition* of SBLE. This research does not provide consistent evidence that either the presence or addition of SBLE reduces criminal justice system involvement, nor that it reduces racial and ethnic inequality. In fact, the evidence is to the contrary—schools' use of SBLE is linked to greater criminal justice system involvement, particularly for Black students (Homer & Fisher, 2019). Existing quantitative research has linked SBLE to two different outcomes related to criminal justice system involvement: arrests and reporting crime to police.

Arrests. There is strong evidence that there are more arrests when SBLE are present, as well as greater racial and ethnic disparities in arrest rates. A study by Homer and Fisher (2020) used national-level data from the 2013-14 school year to compare the arrest rates of schools with SBLE to those without SBLE, using propensity score matching to reduce the impact of selection bias. This study found that overall arrest rates were higher by 1.13 arrests per 1,000 students in schools with SBLE, and that the rate was over twice as large for Black students relative to White students. Related research within a single school district investigated the difference in arrest rates

between schools with and without SBLE for different types of offenses, finding that schools with SBLE had lower arrest rates for assault and weapon-related crime, but higher arrest rates for disorderly conduct, which is a highly subjective offense that allows officers ample discretion in how to address (Theriot, 2009). This study did not specifically examine racial and ethnic differences. Although these two studies provide some insight into the effects of SBLE on arrests, they are limited by the use of cross-sectional data, potentially masking time-based trends. One particularly strong study has used longitudinal data to address this concern. Using an instrumental variables approach, Owens (2017) found that schools that received funding to hire SBLE experienced increased school-based arrest rates, including a 21% increase in arrests among students under age 15. There were also increased arrest rates for drug-related crime in the community, suggesting that the effect of adding SBLE on arrests radiated beyond the school. Again, racial and ethnic differences were not examined in this study.

Reporting Crime to Police. In addition to arrests, prior research has examined the relationship between SBLE and schools' reporting of crime to police. The findings from this set of studies fairly consistently show that there is not a reduction in reporting crime to police as might be expected if SBLE had a deterrent effect. Indeed, research shows that there is often an increase in crime reported to police. For example, a study by Na and Gottfredson (2013) used two-wave longitudinal data from the School Survey on Crime and Safety to examine the change in reporting crime to the police in schools that either added or did not add SBLE. This study found that although there were not statistically significant differences in the changes observed between the treatment and comparison schools for most crime outcomes, schools that added SBLE had a greater increase in reporting nonserious violent crime to the police than schools that did not add SBLE. Studies with similar designs using similar data examined the extent to which

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these findings might be explained by the different roles played by SBLE, including their engagement in law enforcement and non-law enforcement activities. These studies showed mixed findings regarding reporting crimes to police, with inconsistent patterns across types of crime and officer roles (Devlin & Gottfredson, 2018; Fisher & Devlin, 2020).

Limitations of Existing Literature. Although the current body of literature provides evidence pertaining to the presence or addition of SBLE, it is unclear to what extent this research informs the *removal* of SBLE. This is an important consideration, because SBLE often take on roles in schools beyond their involvement with crime. For example, SBLE often report connecting students to resources in and outside the school (Higgins et al., 2019), acting as role models for students (McKenna et al., 2016), and acting as additional administrators that can help school staff accomplish a variety of tasks (Fisher et al., 2020). As such, simply removing SBLE may strip schools of a resource that is helpful for keeping the school running in good order in the absence of additional resources (e.g., additional administrators, counselors, social workers). The loss of this resource may have consequences for the level of disorder in the school, student behavior, and how teachers and staff respond to student behaviors. For example, consistent with a crime deterrence perspective, removing SBLE may provide students with greater opportunity to commit crime in school because they are less certain that they will be caught. Similarly, school personnel who are accustomed to having SBLE present may continue to rely on legal interventions to address student behaviors by referring student behaviors to external law enforcement rather than handling them internally. So, while the existing research evaluating the effects of SBLE is informative, the *removal* of SBLE is a distinct phenomenon that merits its own line of inquiry.

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Additionally, although public concerns about school criminalization and the school-to-prison pipeline are focused on the stark racial and ethnic disparities in the criminal justice system, many of the most rigorous studies examining the link between SBLE and criminal justice system contact do not examine variability by race and ethnicity. This variability might appear in two ways. First, there could be within-school differences whereby the impact of SBLE is experienced differently by students of different racial and ethnic groups. Second, there could be between-school differences in which the racial and ethnic composition of the school shapes the relationship between SBLE presence/absence and criminal justice system contact. Finally, although existing research has examined school-based arrest outcomes, it has not examined the link between SBLE and schools' rates of referring students to the police. Although these referrals may not culminate in an arrest, this is nevertheless a meaningful outcome for young people. Not only are referrals to law enforcement more common than arrests (CRDC, n.d.), but police contact among young people is associated with greater likelihood of later behavior problems (Wiley et al., 2013; Wiley & Esbensen, 2016), and this is especially likely to lead to future arrest among Black individuals (McGlynn-Wright et al., 2021). As such, attending to the relationship between SBLE and school-based referrals to law enforcement—including the attendant racial and ethnic disparities—is an overlooked but important line of inquiry that this project examines.

Study Hypotheses

This study sits at the intersection of long-standing concerns about racial and ethnic equity in the criminal justice system, pressing policy questions around removing SBLE, and an inability of existing research to speak directly to this issue. In an attempt to address these issues, this study makes three contributions to the literature on SBLE. First, it provides evidence pertaining

to outcomes related to criminal justice system contact when SBLE are removed. Second, it examines within-school differences by student race and ethnicity. Third, it examines differences across schools with different racial/ethnic compositions. Together, these findings can provide guidance about whether and to what extent removing SBLE might reduce racial and ethnic disparities in criminal justice system contact. In this vein, informed by both the school criminalization perspective and the existing empirical literature on *adding* SBLE, this study investigates the following hypotheses:

(1) Removing SBLE is associated with lower rates of criminal justice system contact.

(2) Removing SBLE is associated with particularly lower rates of criminal justice system contact in schools with larger proportions of Black, Hispanic, and Native American students.

(3) Removing SBLE is associated with particularly lower rates of criminal justice system contact among Black, Hispanic, and Native American students relative to their White peers in the same school.

Project Design and Implementation

Study Design

An ideal study examining the effects of removing SBLE would randomly assign schools to remove SBLE and compare the outcomes to schools that were randomly assigned to not remove SBLE. However, random assignment in this case was both unfeasible and perhaps unethical. Given the inability to use an experimental design, the current study used a quasi-experimental difference-in-differences design. A difference-in-differences design compares the difference between pre- and post-intervention measures (difference one) between treatment and

comparison units (difference two). In this study, the treatment units were schools that removed SBLE. The comparison units were schools that had SBLE at both waves.

One of the methodological shortcomings of difference-in-differences designs, including the study proposed here, is the threat of selection bias—that schools that removed SBLE are fundamentally different from the comparison schools. To address this issue, this study balanced treatment and comparison groups using entropy balancing, ensuring that the treatment and counterfactual groups are as similar as possible on a set of baseline characteristics. This is a pre-processing strategy that helps improve causal inferences in the absence of randomization by reducing the potential impact of selection bias (Hainmueller, 2012; Parish et al., 2018).

This difference-in-differences approach with entropy balancing was applied to two separate datasets (described further below) to both (a) triangulate findings across different data sources, and (b) examine differences by student race/ethnicity and school racial/ethnic composition. Both datasets included two-wave panel data that allowed for the identification of schools that removed SBLE between Wave 1 and 2.

As noted, differences by student race/ethnicity and school racial/ethnic composition are central to this study. The overall approach to studying these differences was informed by the QuantCrit perspective, which provides a framework for quantitatively analyzing racial and ethnic differences without pathologizing racial and ethnic groups (Gillborn et al., 2018). Principles of QuantCrit were integrated in multiple ways. First, racial/ethnic categories are understood and interpreted as approximations of the existing system of racial stratification rather than immutable characteristics of individuals. Second, differences across racial/ethnic groups are not attributed to deficits of certain groups, but to broader systems of racial stratification. In this sense, this study does not assume that race/ethnicity causes a given outcome, but that race/ethnicity may be an

indicator of broader structural conditions that lead to stratification. Third, racial/ethnic groups are neither naturally occurring, nor monolithic, and within-group variability is assumed to exist. Fourth, quantitative findings are neither value-neutral nor self-evident, but should be informed by critical perspectives of marginalized groups. In this vein, this study's findings are informed by critical qualitative work such as that by Annamma (2016), Bell (2021), Nolan (2011), Shedd (2015), and others.

Data

This study includes data from two federal data sources, including the School Survey on Crime and Safety (SSOCS) and the Civil Rights Data Collection (CRDC), which were analyzed independently.

SSOCS. The SSOCS, administered by the National Center for Education Statistics (NCES) is a nationally representative survey of public school administrators designed to provide national-level estimates about school crime, security, discipline, crime prevention programming, and a variety of related constructs. This study included the 2003-04, 2005-06, 2007-08, 2009-10, and 2015-16 SSOCS waves. The SSOCS includes a stratified random sample of U.S. public schools, stratified by school level, locale, and enrollment size. Once schools were selected, NCES mailed the questionnaires to school principals in the spring of the school year and followed up with nonrespondents by telephone and email, yielding weighted response rates ranging from 62.9% to 81.3%. These response rates yielded samples of 2,770 in 2003-04, 2,720 in 2005-06, 2,560 in 2007-08, 2,650 in 2009-10, and 2,090 in 2015-16 (rounded to nearest 10 per IES guidelines).

Although missing data were present in the survey responses that NCES received from school administrators, NCES imputed the missing data using three strategies before releasing the

data to the public. First, aggregate proportions were used for counts, using information about school enrollment to impute missing information. Second, NCES used hot deck imputation for categorical and continuous variables, drawing on data from schools with similar characteristics as those with missing data. Third, clerical imputation was used when missing data from the survey responses were available in the NCES Common Core of Data (CCD). These imputation strategies yielded datasets with no missing data.

CRDC. The CRDC is a federally mandated biennial school-level data collection program of the U.S. Department of Education Office for Civil Rights. In its most recent iterations, the CRDC includes data from all local education agencies and public schools nationwide on a variety of topics pertaining to students' civil rights, with a focus on differences by race/ethnicity, sex, and ability. This study used a two-wave dataset that includes the 2013-14 and 2017-18 CRDC waves. These are the only two waves of the CRDC that provide data on SBLE. These two waves include samples of 95,507 and 97,632 schools, respectively.

Missing data are present in the CRDC, indicated by missing data codes that indicate the reason for the missingness (reasons include (a) Skip Logic Failure, (b) Action Plan, (c) Force Certified, (d) EDFacts Missing Data, (e) Not Applicable / Skipped, and (f) Suppressed Data; for more information see section 5.1.1 of https://ocrdata.ed.gov/assets/downloads/2017-18%20CRDC%20Public-Use%20Data%20File%20Manual.pdf). Due to data irregularities in the reporting on SBLE in both the state of Florida and New York City schools, those schools were dropped from the analysis.

Measures

Criminal justice system contact. This study operationalized criminal justice system contact in three ways. First, this study examined outcomes related to schools *reporting crime to*

the police. The SSOCS includes measures of the number of incidents of 14 different types of crime reported to police or other law enforcement. As shown in Table 1 below, these 14 types of crime were collapsed into categories as has been done in prior research with these data (e.g., Fisher & Devlin, 2019; Na & Gottfredson, 2013).

Second, it examined school-based *arrest* outcomes. The CRDC includes school-level information on counts of students who received school-related arrests separately by student race and ethnicity. The racial/ethnic categories from the CRDC used here include: White, Black or African American, Hispanic or Latino of any race, and American Indian or Alaska Native. To standardize the counts of arrests across schools of different sizes, we used school enrollment information to calculate arrest rates per 1,000 students. As such, this study included four race/ethnicity-specific outcomes related to arrest: the arrest rate of (a) White, (b) Black, (c) Hispanic, and (d) Native American students. It also included three ratios as outcomes: the ratio of (a) Black to White arrest rates, (b) Hispanic to White, and (c) Native American to White arrest rates. These rates were calculated only for schools with at least 20 members of a given racial/ethnic group.

Third, this study examined school-based *referrals to law enforcement*. The CRDC includes information on counts of students referred to a law enforcement agency or official in a parallel fashion to the data on arrests. That is, school-level aggregates are provided separately by student race and ethnicity. As with the arrest variables, the outcomes were measured as the rate per 1,000 students for (a) White, (b) Black or African American, (c) Hispanic, and (d) Native American students as well as the ratio of (a) Black or African American to White referral rates, (b) Hispanic to White, and (c) Native American to White referral rates. These rates were calculated only for schools with at least 20 members of a given racial/ethnic group.

Removing SBLE. In the SSOCS, respondents were also asked "During the school year, did you have any sworn law enforcement officers, security guards, or security personnel present at your school on a regular basis?": (a) School Resource Officers (Include all career law enforcement officers with arrest authority, who are assigned to work in collaboration with school organizations); (b) Sworn law enforcement officers who are not School Resource Officers. Schools that reported SBLE presence at Wave 1 but not at Wave 2 were coded as having *removed SBLE*.

In the CRDC, respondents indicated the number of full-time equivalent sworn law enforcement officers. Schools that reported their presence at Wave 1 but not at Wave 2 were coded as having *removed SBLE*.

Across both datasets, schools that reported SBLE presence at both waves were the focal comparison group. As a sensitivity analysis, schools that reported SBLE presence at neither wave were also used as a comparison group.

School Racial/Ethnic Composition. In both the SSOCS and CRDC we measured school racial/ethnic composition in four ways: the percentage of (a) Black, non-Hispanic, (b) Hispanic, (c) Native American and (d) White, non-Hispanic students.

Covariates. Covariates from Wave 1 of each of the two data sources were used to conduct entropy balancing that was used to weight the analytic models (described further below). Because all the covariates are measured at Wave 1, before the removal of SBLE (which by definition occurred after Wave 1 and before Wave 2), proper time order is maintained between the covariates and the treatment variables. The variables selected as covariates pertain to various aspects of the school and students that may be linked to decisions to remove SBLE, including characteristics of the school, crime prevention strategies, demographic characteristics of the

student body, and measures of crime and behavior problems in and around the school. The covariates that were used from the CRDC are informed by prior research (e.g., Homer & Fisher, 2020; Na & Gottfredson, 2013; Swartz et al., 2016; Tanner-Smith & Fisher, 2016).

The first set of covariates in the SSOCS included descriptors of the school as a whole such as: (a) average daily attendance of the school, (b) school programming, an index of eight items indicating what sorts of programs are available at school, including items such as "Prevention curriculum, instruction, or training for students (e.g., social skills training)" and "Behavioral or behavior modification intervention for students"; (c) parental involvement, measured as the percent of parents who attended: open house or back-to-school night; regularly scheduled parent-teacher conferences; special subject-area events (e.g., science fair, concerts); and volunteered at school or served on a committee (0-25%; 26-50%; 51-7%; 76-100%; school does not offer); (d) community involvement in the school, measured as an index of eight organizations that may be involved in the school such as "Social service agencies" and "Mental health agencies"; and (e) school type, dummy coded as regular public school (reference category); charter school; have magnet program for part of school; totally a magnet school; Other (please specify).

The second set of covariates in the SSOCS included descriptors of the student body, including (a) percent limited English proficient; (b) percent special education students, (c) percent male, (d) the proportion of White students enrolled in the school; (e) the proportion of Black students enrolled in the school; (f) the proportion of Hispanic students enrolled in the school; (g) the proportion of Native American students enrolled in the school; (h) percentage of current students who are below the 15th percentile on standardized tests; (i) percentage of current

students who are likely to go to college after high school; and (j) percentage of current students who consider academic achievement to be very important.

The third set of covariates in the SSOCS included community-level covariates such as (a) "How would you describe the crime level in the area(s) in which your students live?" with the following response options: High level of crime; Moderate level of crime; Low level of crime; Students come from areas with very different levels of crime; and (b) "How would you describe the crime level in the area where your school is located?" with the following response options: High level of crime; Moderate level of crime; Low level of crime.

The fourth set of covariates in the SSOCS included measures of student behavior such as: (a) the total number of recorded incidents of the following crimes: Rape or attempted rape; Sexual assault other than rape (include threatened rape); Robbery (taking things by force) with a weapon; Robbery (taking things by force) without a weapon; Physical attack or fight with a weapon; Physical attack or fight without a weapon; Threats of physical attack with a weapon; Threats of physical attack without a weapon; Theft/larceny (taking things over $10 without personal confrontation); Vandalism; Possession of firearm/explosive device; Possession of knife or sharp object with intent to harm; Distribution, possession, or use of illegal drugs; Inappropriate distribution, possession, or use of prescription drugs (only in the 2009-10 and 2015-16 surveys); and Possession or use of alcohol or illegal drugs (b) counts of hate crimes, (c) how many times activities were disrupted by actions such as death threats, bomb threats, or chemical, biological, or radiological threats, (d) frequency of social disturbances including student racial tensions; student bullying; student sexual harassment of other students; widespread disorder in classrooms; student acts of disrespect for teachers; and gang activities (response options include: Happens daily; Happens at least once a week; Happens at least once a month;

Happens on occasion; Never happens); (e) number of students involved in committing each of five offenses (including use/possession of a firearm/explosive device; use/possession of a weapon other than a firearm; distribution, possession, or use of illegal drugs; distribution, possession, or use of alcohol; and physical attacks or fights); (f) the total number of student removals with no continuing services for at least the remainder of the school year; (g) the total number of student transfers to specialized schools for disciplinary reasons.

The first set of covariates in the CRDC included descriptors of the school as a whole such as: (a) the enrollment of the school; (b) whether the school was a special education school (0 = *No*, 1 = *Yes*); (c) whether the school was a magnet school (0 = *No*, 1 = *Yes*); (d) whether the school was a charter school (0 = *No*, 1 = *Yes*); (e) whether the school was an alternative school (0 = *No*, 1 = *Yes*); (f) the urbanicity of the school's setting, dummy coded as rural, town, suburban, or urban (reference category, (g) whether the school received Title 1 funding, an indicator of poverty (0 = *No*, 1 = *Yes*); (h) the student-teacher ratio; (i) whether the school served each grade from kindergarten through 12th grade (0 = *No*, 1 = *Yes*).

The second set of covariates in the CRDC included descriptors of the demographics of the student body such as: (a) the proportion of White students enrolled in the school; (b) the proportion of Black students enrolled in the school; (c) the proportion of Hispanic students enrolled in the school; (d) the proportion of Native American students enrolled in the school, (e) the proportion of students served under the Individuals with Disabilities Education Act enrolled in the school, and (f) the proportion of students eligible for free or reduced-price lunch.

The third set of covariates in the CRDC included measures of student behavior such as: (a) the absence rate of the school; (b) the rate per 1,000 students of bullying and harassment based on sex; (c) the rate per 1,000 students of bullying and harassment based on race; (d) the

rate per 1,000 students of bullying and harassment based on disability status; (e) count of single out-of-school suspensions, (f) count of two or more out-of-school suspensions, (g) count of at least one in-school suspension, (h) count of expulsions with continued services, (i) count of expulsions without continued services, (j) count of expulsions under zero tolerance policies in the academic year; (k) incidents of a variety of crimes (including rape or attempted rape; sexual assault (other than rape); robbery with a weapon; robbery without a weapon; physical attack or fight with a weapon; physical attack or fight with a firearm or explosive device; physical attack or fight without a weapon; threats of physical attack with a weapon; threats of physical attack with a firearm or explosive device; threats of physical attack without a weapon; possession of a firearm or explosive device); (l) Was there at least one incident at the school that involved a shooting (regardless of whether anyone was hurt)? (Yes/No); and (m) Did any of the school's students, faculty, or staff die as a result of a homicide committed at your school? (Yes/No).

Data Analysis

Before analyzing the data, we constructed two-wave longitudinal datasets from each of the two data sources. Although the SSOCS is not designed for longitudinal analyses, the restricted-use version of the data permits matching schools sampled in multiple waves, which yields a sample of schools that is not nationally representative. Then, in a pre-processing stage, we calculated entropy balancing weights using Wave 1 covariates to predict treatment. These weights were applied to all analytic models to reduce the potential impact of selection bias by weighting the data so that the schools in both treatment and control conditions had baseline characteristics that indicate a similar likelihood of removing SBLE. Additionally, one of the key assumptions of difference-in-difference studies is the parallel trends assumption. This assumption states that the pre-intervention trends in the treatment and control conditions must be

parallel. With two-wave data, calculating a pre-intervention trend is impossible because there is only one pre-intervention data point. Using entropy balancing was useful for equating the pre-intervention means, which likely improved the extent to which the pre-intervention trends are parallel, although this was ultimately untestable with these data.

After calculating the entropy balancing weights, we estimated the average treatment effect of removing SBLE relative to schools that had SBLE at both waves. To accomplish this, we used two-way fixed effects models in an ordinary least squares (OLS) regression framework to examine within-school changes associated with removing SBLE. The two-way fixed effects model is specified by the equation:

$$y_{it} = \mu_i + \mu_t + \tau D_{it} + \varepsilon_{it}$$

where Y_{it} is an observed outcome related to criminal justice system contact in school i and wave t, μ_i are school fixed effects, μ_t are wave fixed effects and D_{it} is an indicator of receiving treatment, and is ε_{it} is the error term. This approach controlling for all time-constant school characteristics and any secular trends in the outcomes. Conceptually, this allowed for a statistical test comparing the pre-post differences in both the treatment and comparison groups. Although two-way fixed effects models have come under criticism in recent years, particularly under conditions of heterogeneous treatment effects (de Chaisemartin & D'Haultfoeuille, 2020) and staggered adoption (Callaway & Sant'Anna, 2020; Goodman-Bacon, 2018), they are still viewed as a strong approach for analyzing data in the most basic difference-in-differences setting with only two treatment groups and two waves, as is the case in the proposed study.

This study also sought to understand how the effect of removing SBLE differs by student race/ethnicity and school racial/ethnic composition. To examine outcomes by student race and ethnicity, we estimated separate models for each category of student race/ethnicity as described

above (i.e., White, Black, and Hispanic) as well as the ratios described above (i.e., Black-to-White and Hispanic-to-White). To analyze the question about school racial/ethnic composition, we used multiplicative interaction terms between the indicator of treatment and the measure of schools' racial/ethnic composition. We plotted these interactions for ease of interpretation.

Sensitivity Analyses

To assess the extent to which the study's findings are sensitive to certain analytic choices, we estimated a series of sensitivity analyses. First, rather than transforming counts of the outcome variables into rates, we modeled the raw counts themselves using a series of poisson regression models (and OLS regression models using within-school ratios of counts by race/ethnicity). Second, rather than using schools with SBLE at both waves as the comparison group, we used schools with SBLE at neither wave as the comparison group.

Limitations of Data and Analyses

Although this study has been designed to understand the implications of removing police from schools for racial/ethnic disparities in school-based criminal justice system contact, there are limitations to the data and analyses that limit the causal inferences that can be made from the findings. First, both data sources only include two waves of data, each with multiple school years between waves. This limits the ability to test for multi-year trends in the outcome variables both before and after the removal of police from schools. It also limits our ability to know exactly which school year was the one in which police were removed; we only know they were removed sometime between the two waves. It is even possible they were removed, replaced, and removed again. Relatedly, we do not know how long the officers were stationed in the schools, which may have implications for how ready schools were to adjust following their removal. Second, we have no information about why police were removed or retained in schools. The reasons for their

removal may moderate the impact of their removal. For example, removing an officer because of budgetary restrictions may have different effects from removing an officer who had been harassing students. Third,

Results: School Survey on Crime and Safety

The results are presented separately for each dataset. The results from the SSOCS are presented first, followed by those from the CRDC.

SSOCS Descriptive Statistics

There were 190 schools that removed SBLE between Wave 1 and Wave 2, 970 schools that had SBLE at both waves, and 370 that had SBLE at neither wave (rounded to nearest 10 per IES guidelines). As shown in Table 2, nonserious violent crimes were the crimes most commonly reported to the police at both Wave 1 ($M = 1.07$, $SD = 1.94$) and Wave 2 ($M = 0.77$, $SD = 1.61$). Weapon-related crimes were the least common crime reported to police at both Wave 1 ($M = 0.13$, $SD = 0.23$) and Wave 2 ($M = 0.12$, $SD = 0.26$). Notably, the mean rates of reporting all five types of crime to the police were lower at Wave 2 than at Wave 1, mirroring national trends of declining school crime rates (Irwin et al., 2023).

Tables 3 shows descriptive statistics for the set of baseline variables used to balance treatment schools (i.e., schools that removed SBLE) and comparison schools (i.e., schools that either had SBLE at both waves or neither wave). As can be seen, applying entropy balancing yielded sets of treatment and comparison schools that were quite similar across the means, standard deviations, and skewness of all of the baseline variables.

SSOCS Crimes Reported to Police

Treatment effects. We applied the entropy balancing weights to a set of 2x2 difference-in-difference models estimating the treatment effect of removing SBLE (as compared to having

SBLE at both waves) on rates of all five types of crime. The findings from these models are presented in the top portion of Table 4. As shown, removing SBLE was associated with statistically significant reductions in rates of nonserious violent crime (b = -0.65, SE = 0.26, p = .013), serious violent crime (b = -0.23, SE = 0.10, p = .020), property crime (b = -0.36, SE = 0.11, p = .001), and weapon-related crime (b = -0.07, SE = 0.03, p = .021), and a non-significant reduction in substance-related crime (b = -0.20, SE = 0.24, p = .405). Notably, these reductions were small, on the scale of fewer than one crime reported to police per 100 students in the school.

Racial/ethnic composition as a moderator. Next we examined how these treatment effects might differ across school racial/ethnic composition, estimating treatment-by-wave-by-school racial/ethnic composition triple-difference models. The results of these models are presented in Table 4. To illustrate these differences by school racial/ethnic composition, we graphed the predicted means at selected values of the school racial/ethnic composition: the mean proportion of students of a given race/ethnicity in the student body, and 1 standard deviation above and below this mean value. In cases where 1 standard deviation below the mean enrollment rate was less than 0, we used the predicted mean when there were zero students of the given racial/ethnic group enrolled in the school.

Among the 20 models we estimated, only three indicated statistically significant three-way interaction terms. In the measure of serious violent crimes reported to police, the treatment effect varied according to schools' Hispanic student population (b = -1.26, SE = 0.59, p = .034). As shown in Figure 1, schools that had SBLE at both waves experienced no meaningful change in their rate of serious violent crime reported to police regardless of the proportion of the student population that was Hispanic. However, schools that removed SBLE between waves experienced

a reduction in the rate of serious crime reported to the police, and this reduction was greater in schools that enrolled a higher proportion of Hispanic students. Specifically, the model results indicate that among schools that removed SBLE, schools with the mean proportion of Hispanic students (i.e., 0.18) had a reduction of 0.22 serious crimes reported to the police per 100 students. This effect was even larger in schools with a greater proportion of Hispanic students. Among schools that removed SBLE, those with a Hispanic student proportion two standard deviations above the mean (i.e., 0.53) had a reduction of 0.63 serious crimes reported to police per 100 students.

The second significant three-way interaction was also in a model predicting serious violent crimes reported to the police; the treatment effect varied according to schools' White student population (b = 0.82, SE = 0.39, p = .038). As shown in Figure 2, schools that had SBLE at both waves experienced no meaningful change in their rate of serious violent crime reported to the police regardless of the proportion of the student population that was White, although their baseline levels were different. By contrast, schools that removed SBLE experienced reductions in the rate of serious crimes reported to the police, and this reduction was especially pronounced in schools with lower proportions of White students. Specifically, among schools that removed SBLE, those with a proportion of White students one standard deviation below the mean (i.e., 0.30) experienced a reduction of 0.51 serious crimes reported to police per 100 students, whereas those with a proportion of White students one standard deviation above the mean (i.e., 0.91) experienced a reduction of only 0.07 serious crimes reported to police per 100 students.

The final significant three-way interaction was in a model predicting substance-related crimes reported to the police; the treatment effect varied according to schools' White student population (b = -0.86, SE = 0.32, p = .007). As shown in Figure 3, among schools with SBLE at

both waves, there was a modest decrease in substance-related crimes reported to police that was similar in magnitude regardless of the school's proportion of White students. This reduction was smaller than 0.14 reported crimes per 100 students at all levels of schools' proportion of White students. By contrast, schools that removed SBLE experienced different changes in their rate of substance-related crimes reported to police depending on the proportion of White students in the school. Specifically, among schools that removed SBLE, those with a proportion of White students one standard deviation below the mean (i.e., 0.30) experienced a reduction of 0.29 substance-related crimes reported to SBLE per 100 students, whereas those with a proportion of White students one standard deviation above the mean (i.e., 0.91) experienced an *increase* of 0.41 substance-related crimes reported to SBLE per 100 students.

SSOCS Sensitivity Analyses

Count models. We re-estimated the treatment effects using poisson regression models with count outcomes. These models showed a similar pattern of results to the models that used rates as the outcome; the same four models showed statistically significant treatment effects in the same direction, and with similar magnitudes. Specifically, compared to having police at both waves, removing police was associated with statistically significant reductions in rates of reporting nonserious violent crime (b = -0.59, SE = 0.22, p = .009), serious violent crime (b = -0.88, SE = 0.32, p = .005), property crime (b = -1.02, SE = 0.20, p < .001), and weapon-related crime (b = -0.43, SE = 0.22, p = .048), and a non-significant reduction in reporting substance-related crime (b = -0.02, SE = 0.26, p = .927). These findings provide additional evidence supporting the relationship between removing police and small reductions in reporting school-based crimes to the SBLE.

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Schools with SBLE at neither wave as comparison group. As a sensitivity analysis, we also used an alternate comparison group – schools that did not have SBLE at either wave – to estimate treatment effects. The patterns of results was somewhat different. In the 2x2 models, the only statistically significant treatment effect was a reduction in nonserious violent crime reported to police (b = -0.65, SE = 0.32, p = .043); none of the other treatment effects were statistically significantly different from zero.

We also examined how these treatment effects might differ across school racial/ethnic composition when using schools with police at neither wave as the comparison group. As shown in Figures 4 and 5, the treatment effect in the models predicting nonserious violent crime and substance-related crime depended on the American Indian enrollment of the school. In the model predicting reporting of nonserious violent crime to the police, schools that removed SBLE experienced a small decrease in reports to the police that was consistent across the proportion of American Indian students in the school. By contrast, among schools that removed SBLE there was a small decrease in the rate of reporting substance-related crimes to the police if the proportion of American Indian students was small, but a small increase if the proportion of American Indian students was large. In the model predicting substance-related crimes reported to the police, schools that had no SBLE at either wave experiences small declines that were consistent regardless of the proportion of American Indian students in the school. However, among schools that removed SBLE, these decreases were only experiences by schools with the lowest proportions of American Indian students. Although these interactions were statistically significant, we note that these estimates were drawn from a fairly small sample of only 60 schools, meaning that these are perhaps not particularly robust or generalizable findings.

The treatment effect in the model predicting reports to the police of serious violent crime depended on the proportion of Hispanic student enrollment in the school (b = -1.32, SE = 0.59, p = .025; see Figure 6) Schools that had SBLE at neither wave experienced a small decrease in their rate of serious violent crime reported to police that was similar regardless of the proportion of the student population that was Hispanic. However, schools that removed SBLE between waves experienced a reduction in the rate of serious crime reported to the police that was magnified in schools that enrolled a higher proportion of Hispanic students.

The three final significant three-way interactions included schools' White racial/ethnic composition. As shown in Figure 7, among schools that did not have SBLE at either wave, there were negligible changes over time in the rate of reporting serious violent crimes to the police, with only a slight decrease among schools with the largest proportion of White students. By contrast, among schools that removed SBLE there were decreases in the rate of reporting serious violent crime to the police, especially among schools with lower proportions of white students. A highly similar pattern was evident in the model predicting property crime reports to the police (see Figure 8). The model predicting substance-related crime, however, showed a different pattern of results (see Figure 9). Whereas schools that had SBLE at neither wave experienced small declines in the rate of reporting substance-related crimes to the police (with schools with smaller proportions of White students experiencing the largest declines), the pattern differed among schools that removed SBLE between waves. Among schools that removed SBLE there was a small increase in the rate of reporting substance-related crimes to the police if the proportion of White students was small, but a small decrease if the proportion of White students was large.

Changes in Approach from Original Design

We made three meaningful changes to the original design. First, although we initially intended to include an additional comparison group—schools that added SBLE—we opted to no include this due to the inability to disentangle whether any differences were due to the removal of SBLE in the treatment group or the addition of SBLE in the comparison group. Second, we originally proposed to used propensity score weighting, but used entropy balancing instead due to its outperformance of propensity score weighting in prior research (Hainmueller, 2012). Third, we imposed a restriction on the calculation of rates of arrest and referrals to law enforcement in which we only calculated these rates when there were at least 20 students in a given racial/ethnic group in the school. This was done to minimize the potential that a small number of events could drastically shift the calculate rate with a small number of students (e.g., a 20 percentage point increase per arrest if there are only 5 students).

Results: Civil Rights Data Collection

CRDC Descriptive Statistics

Descriptive statistics for key variables in the CRDC are displayed in Table 5. Of 82,193 schools in our sample, 8,664 schools removed SBLE sometime between the 2013-2014 and 2017-2018 school year. 14,017 schools had SBLE during both years, and 51,338 schools didn't have SBLE during either of these years.

In wave 1, the average total rate of police referrals was 4.94 per 1,000 students with a standard deviation of 28.65. White students had the lowest average referral rate at 4.51 per 1,000 students (SD = 33.34), and Black students had the highest at 8.91 per 1,000 students (SD = 59.07). The average total rate of arrests was 1.66 per 1,000 students. Again, white students had

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the lowest average arrest rate at 1.42 per 1,000 students (*SD* = 18.99), and Black students had the highest at 2.90 per 1,000 students (*SD* = 29.31).

Overall arrest and referral rates decreased in wave 2, but patterns by racial/ethnic group looked similar. The average total rate of police referrals was 4.67 per 1,000 students with a standard deviation of 25.96. White students had the lowest average referral rate at 3.88 per 1,000 students (*SD* = 27.74), and Black students had the highest at 7.90 per 1,000 students (*SD* = 49.75). The average total rate of arrests was 1.14 per 1,000 students. Again, white students had the lowest average arrest rate at 0.86 per 1,000 students (*SD* = 13.28), and Black students had the highest at 1.99 per 1,000 students (*SD* = 23.50).

Descriptive statistics for the variables used in the entropy balancing with the CRDC data are displayed in Table 6.

CRDC Arrests and Referrals to Law Enforcement for Individual Racial/Ethnic Groups

Treatment effects. The results of the 2x2 difference-in-differences models with the CRDC data are presented in Table 7. We observed no significant two-way interaction effects predicting referral rates per 1,000 students by racial/ethnic group. We saw slight changes in arrest rates, however; for Black students there were on average 1.43 more arrests ($p = .030$) per 1,000 students, and for White students there were on average 0.51 more arrests ($p = .047$) per 1,000 students in schools where SBLE were removed compared to schools that had SBLE at both waves.

Racial/ethnic composition as a moderator. Additionally, we observed that some of the treatment effects depended on schools' racial/ethnic composition (see Table 8). To illustrate these differences by school racial/ethnic composition, we graphed the predicted means at selected values of the school racial/ethnic composition: the mean proportion of students of a

given race/ethnicity in the student body, and 1 standard deviation above and below this mean value. In cases where 1 standard deviation below the mean enrollment rate was less than 0, we used the predicted mean when there were zero students of the given racial/ethnic group enrolled in the school.

The model predicting the Hispanic student referral rate per 1,000 students indicated that the treatment effect depended on schools' enrollment of Black students (b = 9.68, SE = 3.16, p = .002; see Figure 10). The removal of SBLE was associated with 1.30 fewer Hispanic student referrals per 1,000 students in schools with no Black students enrolled. In contrast, in schools that had SBLE at both waves, we observed 0.31 more Hispanic referrals per 1,000 students over the same period in schools with a similar Black racial composition. Additionally, the negative change in Hispanic referral rates associated with removing SBLE shrunk as Black student enrollment rates increased, while the change in the comparison group became negative at mean Black enrollment and 1 standard deviation above mean Black enrollment (-0.62 and -2.09 referrals per 1,000 students, respectively).

We estimated multiple models predicting arrest rates that yielded statistically significant three-way interactions after including school racial/ethnic composition. The estimated treatment effect for White student arrest rates per 1,000 students was dependent on schools' enrollment of American Indian students (b = -6.75, SE = 3.20, p = .035; see Figure 11). In schools that removed SBLE with no American Indian enrollment, we observed an increase of 1.03 arrests per 1,000 White students. As American Indian student enrollment rates increased, the positive treatment effect shrunk. We observed the opposite pattern in schools with SBLE at both waves: arrests per 1,000 White students decreased by 1.47 for schools with no American Indian enrollment, and the rate of decrease shrunk as American Indian enrollment rate increased.

The model predicting the Hispanic student arrest rate per 1,000 students indicated that the treatment effect depended on schools' enrollment of Black students (b = 3.68, SE = 1.42, p = .009; see Figure 12). In schools that removed SBLE with no Black enrollment, we observed a decrease in Hispanic student arrests. Hispanic student arrests also decreased between the 2013-2014 school year and the 2017-2018 school year in schools with no Black enrollment that had SBLE at both waves. In schools that removed SBLE, the negative treatment effect shrunk as Black student enrollment rates increased. However, for the comparison group, the negative change in Hispanic arrests grew as Black enrollment increased.

The estimated treatment effect for overall arrest rates per 1,000 students was dependent on schools' enrollment rate of White students (b = -2.07, SE = 0.95, p = .030; see Figure 13). In both the treatment and comparison groups, we observed a decrease in overall student arrests at White enrollment rates 1 standard deviation below the mean. Also in both groups, the decrease in arrest rates shrunk as White enrollment increased. The decrease remained about the same across school racial/ethnic composition for schools that removed SBLE: we observed 0.52 fewer arrests per 1,000 students associated with SBLE removal at White enrollment rates 1 standard deviation below the mean, 0.47 fewer arrests per 1,000 students in schools with mean White enrollment, and 0.42 fewer arrests per 1,000 students in schools 1 standard deviation above mean White enrollment. In contrast, the negative change shrunk as White enrollment increased in schools with SBLE at both waves: we observed a decrease of 1.71 arrests per 1,000 students at White enrollment rates 1 standard deviation below the mean, 0.98 fewer arrests per 1,000 students in schools with mean White enrollment, and 0.25 fewer arrests per 1,000 students in schools 1 standard deviation above mean White enrollment.

The model predicting the Black student arrest rate per 1,000 students indicated that the treatment effect depended on schools' enrollment of White students (b = -5.06, SE = 1.96, p = .010; see Figure 14). In schools that removed SBLE, we observed a growing decrease in Black student arrests as White enrollment rates increased: results showed 0.52 fewer arrests per 1,000 students associated with SBLE removal at White enrollment rates 1 standard deviation below the mean, 0.87 fewer arrests per 1,000 students in schools with mean White enrollment, and 1.21 fewer arrests per 1,000 students in schools 1 standard deviation above mean White enrollment. In schools with SBLE at both waves, the negative change shrunk as White enrollment increased: we observed 3.02 fewer arrests per 1,000 students at White enrollment rates 1 standard deviation below the mean, 1.70 fewer arrests per 1,000 students in schools with mean White enrollment, and 0.38 fewer per 1,000 students arrests in schools 1 standard deviation above mean White enrollment.

Additionally, the estimated treatment effect for White arrest rates per 1,000 students was dependent on schools' enrollment rate of White students (b = -2.68, SE = 1.04, p = .010; see Figure 15). In schools that removed SBLE, the treatment effect decreased by about the same amount across levels of White enrollment (0.27 fewer arrests per 1,000 students associated with SBLE removal at White enrollment rates 1 standard deviation below the mean, 0.31 fewer arrests per 1,000 students at mean White enrollment, and 0.35 fewer arrests per 1,000 students at 1 standard deviation above mean White enrollment). For the control group, the decrease in White arrests shrunk as White enrollment increased (1.79 fewer arrests per 1,000 students at White enrollment rates 1 standard deviation below the mean, 0.95 fewer arrests per 1,000 students in schools with mean White enrollment, and 0.11 fewer arrests per 1,000 students in schools 1 standard deviation above mean White enrollment).

Interactions for Within-School Racial/Ethnic Disparities

Treatment effects. In addition to estimating two-way interactions predicting arrest and referral rates per 1,000 students by racial/ethnic group and three-way interactions predicting for whether arrest and referral rates per 1,000 students by racial/ethnic group was dependent on schools' racial/ethnic enrollment rates, we also estimated whether the ratios of within-school *disparities* in arrest and referral rates per 1,000 students were dependent on schools' racial/ethnic enrollment rates. As shown in Table 9, no models yielded statistically significant two-way interactions predicting disparities in racial/ethnic minority group-White arrest or referral rates per 1,000 students.

Racial/ethnic composition as a moderator. Next we estimated a series of models examining the extent to which the relationship between removing SBLE and within-school racial/ethnic disparities in criminal justice system contact were moderated by schools' racial/ethnic composition (see Table 10). One model predicting disparities in referral rates yielded statistically significant three-way interactions after including school racial/ethnic composition; the model predicting disparities in American Indian-White arrests per 1,000 students indicated that the treatment effect depended on schools' enrollment of American Indian students (b = -4.95, SE = 2.49, p = .047; see Figure 16). For schools that removed SBLE, the gap narrowed by about the same amount across levels of American Indian enrollment (by 0.28 at no American Indian enrollment, 0.26 in schools with mean American Indian enrollment, and 0.20 in schools 1 standard deviation above mean American Indian enrollment). In contrast, in schools with SBLE at both waves, we observed the gap in the American Indian-White referral rates per 1,000 students narrowed by 1.30 at no American Indian enrollment, by 1.19 in schools with

mean American Indian enrollment, and by 0.68 in schools 1 standard deviation above mean American Indian enrollment.

We estimated multiple models predicting disparities in arrest rates per 1,000 students that yielded statistically significant three-way interactions after including school racial/ethnic composition. The estimated treatment effect for disparities in Black-White arrest rates per 1,000 students was dependent on schools' enrollment rate of Hispanic students (see Figure 17). In schools that removed SBLE with no Hispanic enrollment, we observed the Black-White arrest disparity narrowed by 1.11 arrests per 1,000 students. The change was less negative at mean Hispanic enrollment, where removing SBLE was associated with narrowing the gap by 0.57. At 1 standard deviation above mean Hispanic enrollment, removing SBLE was associated with the Black-White gap widening by 0.05 units. In contrast, in schools with SBLE at both waves we observed the Black-White student arrest gap widened by 0.61 in schools with no Hispanic enrollment. The positive change was smaller at mean Hispanic enrollment, where we observed a widening by 0.22. At 1 standard deviation above mean Hispanic enrollment, we observed the gap narrowed by 0.24 units. The three-way interaction coefficient was 4.18 (SE = 1.55, p = .007).

The model predicting the Black-White gap in arrests per 1,000 students indicated that the treatment effect depended on schools' enrollment of White students (b = -3.54, SE = 1.71, p = .038; see Figure 18). In schools that removed SBLE with White enrollment rates 1 standard deviation below the mean, removing SBLE was associated with the Black-White gap in arrests per 1,000 students widening by 0.52. At mean White enrollment and at 1 standard deviation above mean White enrollment, removing SBLE was associated with narrowing the gap in Black-White arrest disparities (by 0.40 and 1.31 per 1,000 students, respectively). In contrast, in schools with SBLE at both waves with White enrollment rates 1 standard deviation below the

mean, we observed the gap narrowed by 0.02. At mean White enrollment and at 1 standard deviation above mean White enrollment, the gap widened (by 0.23 and 0.48 arrests per 1,000 students, respectively).

CRCD Sensitivity Analyses

Count Models. One choice that we made in our analysis was to operationalize the measures of criminal justice system contact as a rate per 1,000 students. However, this choice might over-weight small schools and under-weight large schools simply due to the denominators used in calculating rates. Accordingly, we re-estimated the treatment effects using poisson regression models with count outcomes (and OLS regression models with within-school racial/ethnic disparities calculated from raw counts rather than rates). These models showed a similar pattern of results to the models that used rates as the outcome; nearly all were non-significant. There were significant decreases in the overall count of referrals (b = -0.17, SE = 0.08, p = .028) and the count for White students (b = -0.22, SE = 0.08, p = .006), but these effects were small, with a reduction of only a fraction of a referral associated with removing SBLE from schools. There was also a small increase in the Hispanic-White disparities in arrests (b = 0.44, SE = 0.19, p = .023).

Schools with SBLE at Neither Wave as Comparison Group. We replicated all previous estimations with schools that did not have SBLE at either wave as the comparison group. We observed no significant two-way interaction effects predicting arrest or referral rates per 1,000 students by racial/ethnic group. We estimated one model predicting referral rates per 1,000 students that yielded statistically significant three-way interaction effects after including school racial/ethnic composition: the estimated treatment effect for American Indian referral rates per 1,000 students was dependent on schools' enrollment rate of Black students (b = -30.07,

SE = 15.24, *p* = 0.049). Removing SBLE was associated with a negative change in referral rates, which remained about the same amount across levels of Black enrollment: we observed 1.42 fewer referrals per 1,000 students associated with SBLE removal in schools with no Black enrollment, 1.43 fewer referrals per 1,000 students in schools with mean Black enrollment, and 1.46 fewer referrals per 1,000 students in schools 1 standard deviation above mean Black enrollment. In schools without SBLE, we also observed a decrease in American Indian referral rates at no Black enrollment and mean Black enrollment (by 6.93 and 2.73 per 1,000 students, respectively). At 1 standard deviation above mean Black enrollment, American Indian referral rates actually increased by 3.86 per 1,000 students.

We also estimated one model predicting arrest rates per 1,000 students that yielded statistically significant three-way interactions after including school racial/ethnic composition: the model predicting Hispanic arrests per 1,000 students indicated that the treatment effect depended on schools' enrollment of Black students (*b* = 6.21, *SE* = 2.87, *p* = .031). In schools that removed SBLE, we observed a decrease in Hispanic arrest rates as Black enrollment increased (0.87 fewer arrests per 1,000 students at no Black enrollment, 0.73 fewer arrests per 1,000 students at mean Black enrollment, and 0.52 fewer arrests per 1,000 students at 1 standard deviation above mean Black enrollment). In contrast, we observed more Hispanic arrests per 1,000 students in schools with no Black enrollment and mean Black enrollment (by 1.44 and 0.70, respectively) but 0.45 fewer Hispanic arrests per 1,000 students in schools 1 standard deviation above mean Black enrollment.

No models yielded statistically significant two-way interactions predicting disparities in racial/ethnic minority group-White arrest or referral rates per 1,000 students, nor did any models yielded statistically significant three-way interactions predicting disparities in racial/ethnic

minority group-White arrest rates per 1,000 students after including school racial/ethnic composition.

We estimated multiple models predicting disparities in referral rates per 1,000 students that yielded statistically significant three-way interactions after including school racial/ethnic composition. The estimated treatment effect for American Indian-White disparities in referral rates per 1,000 students was dependent on schools' enrollment rate of Hispanic students (b = 7.56, SE = 2.15, $p < .001$). In schools that removed SBLE, the gap in American Indian-White referral disparities narrowed in schools with no Hispanic students by 0.33 referrals per 1,000 students. The gap also decreased at mean Hispanic enrollment, but only by 0.12 referrals per 1,000 students. At 1 standard deviation above mean Hispanic enrollment, removing SBLE was associated with the gap widening by 0.13 referrals per 1,000 students. In contrast, in schools with no SBLE at both waves and no Hispanic enrollment, the American Indian-White referral rate disparity widened by 1.48 referrals per 1,000 students. In the same schools at mean Hispanic enrollment, the disparity widened by only 0.03 referrals per 1,000 students. At 1 standard deviation above mean Hispanic enrollment, the disparity narrowed by 1.69 referrals per 1,000 students.

The model predicting disparities in Black-White referrals per 1,000 students indicated that the treatment effect depended on schools' enrollment of Black students (b = -3.28, SE = 1.65, p = .047). In schools that removed SBLE, the treatment effect widened the gap in Black-White referral disparities in schools with no Black students by 0.17 per 1,000 students. The gap continued to widen as Black enrollment increased. In contrast, in schools with no SBLE at both waves and no Black enrollment, the Black-White disparity narrowed by 0.66 referrals per 1,000 students. In comparison group schools at mean Black enrollment, the disparity narrowed by only

0.13 referrals per 1,000 students. At 1 standard deviation above mean Hispanic enrollment, the disparity widened by 0.70 referrals per 1,000 students.

The estimated treatment effect for American Indian-White disparities in referral rates per 1,000 students was dependent on schools' enrollment rate of White students (b = -5.16, SE = 2.10, p = .014). In schools that removed SBLE, the gap in American Indian-White referral disparities in schools 1 standard deviation below mean White enrollment widened (by 0.42 referrals per 1,000 students). At mean and 1 standard deviation above mean White enrollment, the gap narrowed (by 0.20 and 0.82 referrals per 1,000 students, respectively). In contrast, in schools with no SBLE at both waves 1 standard deviation below White enrollment and at mean White enrollment, American Indian-White disparities narrowed (by 1.13 and 0.05 referrals per 1,000 students, respectively). At 1 standard deviation above mean White enrollment, the disparity widened by 1.04 referrals per 1,000 students.

Conclusion

Overall, we identified a few major patterns in this study's findings. First, as demonstrated in the SSOCS data, removing SBLE was associated with a small reduction in the number of crimes reported to the police. This held true for all but one of the types of crime that we examined, and was consistent regardless of whether we measured the outcome as a rate or a count. Additionally, although some of the three-way interaction models showed that these effects differed depending on the racial/ethnic composition of the school, these models were few, and the overall story pointed to a high degree of consistency across school racial/ethnic composition. This suggests that while removing SBLE may be an effective strategy for achieving a small reduction in the number of crimes reported to police, contrary to our hypothesis we did not see these reductions accrue primarily in schools with larger proportions of students of color. Of

course, one difficulty in making meaning of this pattern is that we are unable to assess whether the reduction in crimes reported to the police is due to a change in behavior (i.e., fewer crimes were committed), detection (i.e., schools learned about fewer crimes), or reporting (i.e., schools were less inclined to report crimes to the police). This is a limitation that has arisen in much of the existing research on the impacts of SBLE.

A second pattern that became clear in the use of the CRDC data was that removing SBLE was largely unrelated to rates of arrest or referrals to law enforcement, even across student race/ethnicity and within-school racial/ethnic disparities. In the few instances where removing SBLE was associated with statistically significant changes in rates of arrest or referral, the observed changes were increases in these rates rather than the hypothesized decreases.

A third pattern, again from the CRDC data, was that the lack of change in rates of arrest or referrals was largely invariant across schools with different racial/ethnic compositions. Similar to the SSOCS data, although there were a few isolated models that showed significant and meaningful differences across contexts, we did not observe a clear and consistent pattern indicative of a theoretically tenable phenomenon. In fact, given the large number of models we estimated, it is quite likely that some of these statistically significant findings are capitalizing on chance.

Reviewing these patterns in light of our three original hypotheses reveals little to no support for any of them.

Hypothesis 1: Removing SBLE is associated with lower rates of criminal justice system contact.

The SSOCS analyses indicated that removing SBLE was predictive of slightly lower rates of reporting most types of crime to the police, but the CRCD analyses did not show any reductions in the rates of school-based arrests or referrals to law enforcement.

> Hypothesis 2: Removing SBLE is associated with particularly lower rates of criminal justice system contact in schools with larger proportions of Black, Hispanic, and Native American students.

Neither the SSOCS or CRDC analyses provided evidence supporting that reductions in criminal justice system contact differed by school racial/ethnic composition.

> Hypothesis 3: Removing SBLE is associated with particularly lower rates of criminal justice system contact among Black, Hispanic, and Native American students relative to their White peers in the same school.

The CRCD analyses showed no evidence that reductions in criminal justice system contact (in the form of arrests or referrals to law enforcement) accrued to students of color relative to White students.

There are multiple potential explanations for why our hypotheses were largely unsupported, although these explanations are untestable with the available data. Two explanations stand out to us as particularly plausible. First, existing laws, policies, and practices may mandate how schools respond to the sorts of behaviors that may lead to arrests, referrals, or reporting crimes to the police in ways that are consistent whether or not SBLE are present. For example, zero-tolerance laws and policies may mandate that behaviors like bringing weapons or drugs to school be referred to law enforcement. So, regardless of whether SBLE are present, schools may be required to connect with the criminal justice system in responding to some behaviors. Even beyond legal requirements to do so, some schools may have practices in place

that reflect a similar process. Future research in this area would do well to map specific behaviors onto the responses, with consideration for the extent to which the responses are mandated or discretionary.

Second, it is possible that removing SBLE leads to a culture shift in schools that maintains the same level of punitiveness that maintains similar rates of criminal justice system contact. Perhaps school staff experience a void when SBLE are no longer present, and seek to fill that void through their own efforts. This might mean increasing their surveillance of students, being quicker to escalate responses to student behaviors, or to call in outside law enforcement to get involved. Schools have a long history of being punitive (especially toward Hispanic, Native American, and Black students), and there is little reason to believe this would stop simply because SBLE are taken out of schools. More research is needed to understand what happens in schools and districts when SBLE are removed, and how the day-to-day experiences of school personnel and the systems for managing and responding to student behavior may shift.

As we collectively work toward improving the educational experiences for students—especially for Hispanic, Native American, and Black students who have traditionally been marginalized in schools—it is imperative to consider how to break the connection between schools and the criminal justice system. The findings here suggest that the fix is not simply removing SBLE from schools. Although this certainly may be part of a broader strategy, our study does not provide evidence that this in and of itself will solve the problem, or reduce the existing racial/ethnic disparities in school-based contact with the criminal justice system, at least in terms of the measures used in this study. Schools and districts are complex organizations that will likely benefit from a coordinated, purposeful effort toward becoming less punitive and less reliant on the criminal justice system for addressing student behaviors.

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Table 1. Categories of SSOCS Crimes Reported to Police

Crime Category	SSOCS Item
Nonserious Violent Crime	1. Physical attack or fight without a weapon
	2. Threats of physical attack with a weapon
	3. Threats of physical attack without a weapon
Serious Violent Crime	1. Rape or attempted rape
	2. Sexual assault other than rape (including threatened rape)
	3. Robbery (taking things by force) with a weapon
	4. Robbery (taking things by force) without a weapon
	5. Physical attack or fight with a weapon
Property Crime	1. Theft/larceny (taking things over $10 without personal confrontation)
	2. Vandalism
Substance-Related Crime	1. Distribution, possession, or use of illegal drugs
	2. Possession or use of alcohol or illegal drugs
Weapon Crime	1. Possession of firearm/explosive device
	2. Possession of knife or sharp object with intent to harm

Table 2. Descriptive statistics for SSOCS dependent variables

	Time 1			Time 2		
	N	*M*	*SD*	*N*	*M*	*SD*
Nonserious violent crime rate per 100 students	1,750	1.07	1.94	1,750	0.77	1.61
Serious violent crime rate per 100 students	1,750	0.38	0.91	1,750	0.28	0.84
Property crime rate per 100 students	1,750	0.68	1.17	1,750	0.44	0.94
Substance-related crime rate per 100 students	1,750	0.51	1.19	1,750	0.36	0.62
Weapon-related crime rate per 100 students	1,750	0.13	0.23	1,750	0.12	0.26

SOURCE: Institute for Education Sciences, National Center for Education Statistics, "School Survey on Crime and Safety" 2003-04, 2005-06, 2007-08, 2009-10, 2015-16, and 2017-18.

Note: Data are not nationally representative. Sample sizes and minimum/maximum values are rounded to the nearest 10 to comply with IES guidelines.

Table 3. Entropy balancing with the SSCOS data (N = 1,750)

	Treat			Control (Before Weighting)			Control (After Weighting)		
	Mean	Variance	Skewness	Mean	Variance	Skewness	Mean	Variance	Skewness
Average Daily Attendance	92.57	99.30	-7.17	93.09	41.93	-8.59	92.57	90.74	-6.82
School Programming Index	5.87	1.75	-1.38	5.85	1.90	-1.57	5.87	1.91	-1.70
Parental Invovlement Index	11.56	10.50	0.30	10.90	10.58	0.17	11.56	10.50	0.02
Community Involvement index	4.68	4.83	-0.17	4.96	4.29	-0.28	4.68	4.47	-0.12
Charter School	0.01	0.01	9.46	0.00	0.00	17.85	0.01	0.01	9.46
Part Magnet School	0.02	0.02	7.66	0.04	0.03	5.04	0.02	0.02	7.66
Magnet School	0.02	0.02	7.66	0.01	0.01	10.21	0.02	0.02	7.66
Other	0.01	0.01	13.49	0.00	0.00	15.44	0.01	0.01	13.49
% Limited English Proficient	6.77	132.70	2.60	7.63	153.90	3.24	6.77	135.40	3.42
% Special Education Students	13.49	82.72	3.77	13.50	57.81	2.98	13.49	56.18	2.87
% Below 15th Percentile	14.08	209.80	2.39	14.49	192.80	2.36	14.08	202.70	2.55
% Likely to Attend College	62.76	580.60	-0.56	59.72	532.90	-0.37	62.76	526.90	-0.50
% Who Consider Academic Achievement to be Very Important	71.71	487.40	-1.05	67.88	473.50	-0.67	71.71	419.30	-0.85
% Male	49.81	114.70	-1.52	49.09	71.02	-3.90	49.81	50.68	-4.27
Crime Near Students' Homes (High Level is Reference)									
Moderate Level of Crime	0.19	0.15	1.59	0.21	0.16	1.44	0.19	0.15	1.59
Low Level of Crime	0.61	0.24	-0.45	0.55	0.25	-0.20	0.61	0.24	-0.45
Different Levels of Crime	0.11	0.10	2.52	0.18	0.15	1.67	0.11	0.10	2.52
Crime Near School (High Level is Reference)									
Moderate Level of Crime	0.20	0.16	1.50	0.18	0.15	1.63	0.20	0.16	1.50
Low Level of Crime	0.73	0.20	-1.04	0.76	0.18	-1.20	0.73	0.20	-1.04
Counts of School-Based Crimes									
Rape or Attempted Rape	0.01	0.01	13.49	0.04	0.05	6.64	0.01	0.01	14.35
Sexual Assault Other than Rape	0.09	0.18	6.68	0.21	0.66	6.07	0.09	0.18	7.75
Robbery with a Weapon	0.02	0.05	13.49	0.02	0.03	10.64	0.02	0.03	10.85
Robbery without a Weapon	0.35	1.70	4.69	0.88	21.95	13.13	0.35	3.33	9.94
Physical Attack or Fight with a Weapon	0.22	1.66	9.52	0.26	12.34	29.20	0.22	12.76	29.00
Physical Attack or Fight without a Weapon	18.20	683.10	3.60	21.89	906.00	4.10	18.20	593.60	3.51
Threat of Physical Attack with a Weapon	0.28	0.84	4.94	0.60	16.12	18.34	0.28	5.19	31.68
Threat of Physical Attack without a Weapon	11.98	473.80	3.49	13.10	694.70	5.79	11.98	985.90	6.69
Theft/Larceny	6.79	197.80	5.91	10.73	256.00	3.93	6.79	91.44	3.52
Possession of Firearm/Explosive Device	0.26	1.47	10.06	0.22	0.78	13.00	0.26	1.06	11.38
Possession of Knife or Sharp Object with Intent to Harm	1.63	4.76	2.32	2.09	9.19	2.93	1.63	5.96	2.68
Distribution, Possession, or Use of Illegal Drugs	3.82	78.32	6.12	5.51	76.33	3.60	3.82	40.03	3.34
Possession or Use of Alcohol or Illegal Drugs	2.60	33.15	5.04	3.97	45.40	3.19	2.60	24.39	3.93
Vandalism	3.95	43.75	3.28	5.73	150.20	6.37	3.95	60.55	7.21
Hate Crimes	0.16	1.05	9.59	0.23	0.98	6.28	0.16	0.57	6.96
Activities Disrupted by Threats	0.19	0.51	5.49	0.27	0.91	6.29	0.19	0.46	6.33
Frequency of Social Disturbances									
Student Racial Tensions	4.07	0.68	-1.23	3.97	0.58	-1.45	4.07	0.51	-1.38
Student Bullying	3.02	1.22	-0.49	2.99	1.15	-0.54	3.02	1.08	-0.51

Student Sexual Harassment	3.87	0.53	-0.97	3.72	0.57	-1.40	3.87	0.46	-1.30
Widespread Disorder in Classrooms	4.30	0.93	-1.76	4.35	0.68	-1.62	4.30	0.75	-1.58
Student Disrespect for Teachers	3.40	1.24	-0.80	3.26	1.34	-0.63	3.40	1.22	-0.80
Gang Activities	4.48	0.65	-1.87	4.36	0.72	-1.67	4.48	0.60	-1.99
Students Involved in Offenses	87.56	25632.00	5.61	133.20	138775.00	11.77	87.57	25901.00	9.66
Student Transfers for Disciplinary Reasons	6.42	159.00	3.12	10.95	905.70	14.73	6.42	158.00	3.98
Student Removals for Remainder of Year	1.74	46.80	6.23	2.12	56.84	8.22	1.74	42.42	8.80
Year 1 of Survey	2008.00	12.41	1.15	2007.00	11.64	1.27	2008.00	12.85	1.17

SOURCE: Institute for Education Sciences, National Center for Education Statistics, “School Survey on Crime and Safety” 2003-04, 2005-06, 2007-08, 2009-10, 2015-16, and 2017-18.

Note: Data are not nationally representative. Sample sizes are rounded to the nearest 10 to comply with IES guidelines.

Table 4. Estimating the impact of removing SBLE from schools on rates of crimes reported to the police using entropy balancing in the SSOCS data

	Average Treatment Effect (n = 2,300)														
	Nonserious violent crime			Serious violent crime			Property crime			Substance-related crime			Weapon-related crime		
	b	*SE*	*p*	*b*	*SE*	*p*	*b*	*SE*	*p*	*b*	*SE*	*p*	*b*	*SE*	*p*
SBLE Removed x Post	-0.65	0.26	.013	-0.23	0.10	.020	-0.36	0.11	.001	-0.20	0.24	.405	-0.07	0.03	.021
	Proportion American Indian (AmInd) Students as a Moderator (n = 250)														
SBLE Removed	0.22	0.53	.678	0.00	0.18	.995	0.06	0.18	.723	-0.02	0.40	.956	-0.04	0.06	.478
Post	-0.14	0.24	.554	0.00	0.13	.979	0.02	0.14	.904	-0.19	0.13	.149	0.02	0.04	.716
SBLE Removed x Post	0.07	0.85	.937	0.40	0.46	.385	-0.46	0.27	.094	-0.36	0.50	.478	-0.18	0.08	.031
AmInd enrollment rate	1.76	2.01	.382	2.95	1.71	.085	-0.81	0.33	.015	-0.19	0.65	.766	-0.14	0.13	.291
SBLE Removed x AmInd	-1.90	2.20	.390	-2.92	1.73	.093	1.34	0.79	.089	1.14	1.13	.314	0.28	0.21	.194
Post x AmInd	-2.33	2.06	.258	-3.19	1.72	.064	-0.06	0.48	.897	1.40	0.77	.071	-0.15	0.17	.370
SBLE Removed x Post x AmInd	2.04	2.58	.430	2.66	1.93	.169	0.31	0.93	.737	2.22	1.43	.122	0.47	0.27	.086
	Proportion Hispanic (Hisp) Students as a Moderator (n = 1,710)														
SBLE Removed	0.04	0.36	.901	-0.18	0.11	.104	-0.15	0.20	.441	-0.38	0.47	.428	0.05	0.05	.365
Post	-0.15	0.14	.282	-0.02	0.09	.798	-0.13	0.06	.051	-0.09	0.04	.033	-0.01	0.02	.379
SBLE Removed x Post	-0.38	0.39	.327	0.01	0.14	.955	-0.23	0.20	.259	0.25	0.48	.605	-0.09	0.06	.136
Hisp enrollment rate	-0.01	0.26	.956	0.00	0.10	.963	0.01	0.14	.939	0.09	0.10	.383	0.01	0.04	.677
SBLE Removed x Hisp	1.93	1.01	.057	1.12	0.57	.048	1.46	1.02	.154	3.12	3.17	.324	-0.01	0.13	.967
Post x Hisp	0.25	0.36	.494	0.09	0.18	.628	-0.03	0.19	.859	-0.01	0.13	.927	0.03	0.05	.562
SBLE Removed x Post x Hisp	-1.53	1.18	.196	-1.26	0.59	.034	-1.15	1.04	.270	-2.43	3.19	.447	-0.03	0.14	.840
	Proportion Black Students as a Moderator (n = 1,610)														
SBLE Removed	0.25	0.33	.460	-0.08	0.09	.416	-0.03	0.11	.791	0.04	0.09	.613	0.03	0.03	.345
Post	-0.14	0.12	.243	0.02	0.07	.814	-0.06	0.06	.321	-0.07	0.04	.073	0.02	0.02	.414
SBLE Removed x Post	-0.54	0.36	.132	-0.15	0.12	.216	-0.36	0.13	.004	-0.05	0.15	.745	-0.08	0.04	.026
Black enrollment rate	1.34	0.46	.004	0.43	0.25	.080	-0.11	0.15	.440	-0.20	0.09	.018	0.27	0.10	.009
SBLE Removed x Black	0.98	1.76	.576	0.38	0.55	.489	0.46	0.37	.211	-0.18	0.17	.304	-0.06	0.19	.753
Post x Black	0.42	0.65	.519	0.02	0.34	.957	-0.10	0.19	.583	-0.06	0.11	.553	-0.17	0.11	.116
SBLE Removed x Post x Black	-1.37	1.91	.473	-0.38	0.67	.568	-0.24	0.40	.548	0.61	0.45	.173	0.11	0.22	.605
	Proportion White Students as a Moderator (n = 2,180)														
SBLE Removed	1.47	0.83	.076	0.40	0.30	.178	0.42	0.22	.064	-0.11	0.11	.323	0.01	0.09	.938
Post	0.04	0.31	.899	0.03	0.18	.880	-0.30	0.10	.003	-0.14	0.07	.045	-0.03	0.03	.335
SBLE Removed x Post	-1.79	0.91	.048	-0.76	0.33	.024	-0.54	0.25	.027	0.55	0.25	.030	-0.09	0.10	.352
White enrollment rate	-0.67	0.30	.025	-0.27	0.16	.098	-0.13	0.11	.243	-0.07	0.07	.304	-0.13	0.03	.000
SBLE Removed x White	-1.76	0.96	.068	-0.59	0.35	.097	-0.62	0.28	.025	0.20	0.15	.187	0.03	0.11	.781
Post x White	-0.28	0.38	.454	-0.09	0.22	.674	0.31	0.14	.029	0.10	0.10	.301	0.04	0.04	.356
SBLE Removed x Post x White	1.76	1.06	.098	0.82	0.39	.038	0.38	0.32	.240	-0.86	0.32	.007	0.01	0.12	.918

SOURCE: Institute for Education Sciences, National Center for Education Statistics, "School Survey on Crime and Safety" 2003-04, 2005-06, 2007-08, 2009-10, 2015-16, and 2017-18.

Note: Data are not nationally representative. Sample sizes are rounded to the nearest 10 to comply with IES guidelines.

Table 5. Descriptive statistics for key variables in the CRDC data (N = 82,193)

	Wave 1				Wave 2			
Variable	Mean	SD	N	Range	Mean	SD	N	Range
School SBLE condition								
Removed SBLE	0.11		82,089		0.11		82,089	
SBLE at both waves	0.17		82,150		0.17		82,150	
SBLE at neither wave	0.63		81,962		0.63		81,962	
Referral rates per 1,000 students								
Total	4.94	28.65	81,053	0-1,800	4.67	25.96	81,814	0-1,714.29
Hispanic	4.90	39.50	76,624	0-3,500	3.99	30.57	78,230	0-2,000.00
American Indian	6.27	59.62	50,060	0-1,428.57	5.03	54.60	48,844	0-3,000.00
Black	8.91	59.07	72,051	0-3,250	7.90	49.75	72,898	0-2,333.33
White	4.51	33.34	79,709	0-2,000	3.88	27.74	80,578	0-2,000.00
Arrest rates per 1,000 students								
Total	1.66	17.67	81,368	0-1,555.56	1.14	13.40	81,288	0-1,666.67
Hispanic	1.57	23.21	76,946	0-2,500	0.89	14.08	77,710	0-1,000.00
American Indian	1.91	33.66	50,297	0-2,000	1.19	29.07	48,540	0-3,000.00
Black	2.90	29.31	72,367	0-1,500	1.99	23.50	72,374	0-1,666.67
White	1.42	18.99	80,027	0-1,000	0.86	13.28	80,156	0-2,000.00
Within-school racial/ethnic disparities in referral rates								
Hispanic-White	1.35	4.62	11,026	0-177.5	1.15	4.35	13,227	0-205.29
American Indian-White	1.66	10.91	8,512	0-407	1.49	11.85	9,630	0-318.00
Black-White	2.78	10.06	10,656	0-367	2.59	10.97	12,638	0-667.00
Within-school racial/ethnic disparities in arrest rates								
Hispanic-White	1.26	4.42	4,024	0-99.57	1.00	3.14	4,127	0-82.00
American Indian-White	1.71	12.89	3,202	0-407	1.18	9.94	3,139	223.50
Black-White	2.48	7.20	3,969	0-180.25	2.77	13.67	4,029	223.50

Table 6. Entropy balancing with the CRDC data (Removed vs. SBLE at Both Waves)

	Removed SBLE (n = 7,509)			SBLE at Both Waves (n = 13,027) Pre-weighting			SBLE at Both Waves (n = 13,027) Post-weighting		
	Mean	Variance	Skew	Mean	Variance	Skew	Mean	Variance	Skew
School Characteristics									
Special education school	0.013	0.012	8.721	0.008	0.008	10.950	0.013	0.012	8.721
Magnet school	0.044	0.042	4.458	0.056	0.053	3.851	0.044	0.042	4.457
Charter school	0.031	0.030	5.422	0.010	0.010	9.860	0.031	0.030	5.422
Alternative school	0.024	0.024	6.187	0.013	0.013	8.478	0.024	0.024	6.187
Grades with Students Enrolled									
Kindergarten	0.486	0.250	0.057	0.275	0.200	1.006	0.486	0.250	0.057
1st grade	0.491	0.250	0.036	0.277	0.200	0.996	0.491	0.250	0.036
2nd grade	0.493	0.250	0.027	0.279	0.201	0.987	0.493	0.250	0.028
3rd grade	0.491	0.250	0.035	0.279	0.201	0.985	0.491	0.250	0.036
4th grade	0.488	0.250	0.049	0.278	0.201	0.991	0.488	0.250	0.049
5th grade	0.467	0.249	0.131	0.281	0.202	0.974	0.467	0.249	0.131
6th grade	0.357	0.229	0.599	0.334	0.222	0.705	0.357	0.229	0.599
7th grade	0.307	0.213	0.838	0.347	0.227	0.645	0.307	0.213	0.839
8th grade	0.308	0.213	0.830	0.352	0.228	0.619	0.308	0.213	0.830
9th grade	0.254	0.190	1.130	0.414	0.243	0.350	0.254	0.190	1.130
10th grade	0.254	0.190	1.129	0.413	0.243	0.353	0.254	0.190	1.129
11th grade	0.255	0.190	1.123	0.412	0.242	0.356	0.255	0.190	1.123
12th grade	0.255	0.190	1.122	0.412	0.242	0.358	0.256	0.190	1.121
Enrollment									
Total enrollment	641.600	229,198.000	2.508	842.800	343,093.000	1.714	641.700	171,844.000	2.060
White enrollment rate	0.536	0.105	-0.318	0.601	0.092	-0.590	0.536	0.104	-0.296
Hispanic enrollment rate	0.206	0.064	1.544	0.176	0.056	1.907	0.206	0.069	1.617
American Indian enrollment rate	0.020	0.006	8.006	0.012	0.003	10.880	0.020	0.007	7.783
Black enrollment rate	0.176	0.066	1.855	0.151	0.046	2.039	0.176	0.061	1.790
Special education enrollment rate	0.135	0.008	6.033	0.129	0.005	6.465	0.135	0.008	6.030
Chronic absenteeism rate	0.151	0.023	2.920	0.147	0.017	3.117	0.151	0.028	4.129
Rate of sex-based bullying	0.002	0.000	20.910	0.002	0.000	19.600	0.002	0.000	19.220
Rate of race-based bullying	0.001	317.000	24.700	0.001	0.000	29.420	0.001	0.000	30.750
Rate of disability-based bullying	0.000	286.000	49.560	0.001	0.000	43.300	0.000	0.000	62.450
Students with one or more in-school suspensions	44.570	9,611.000	6.969	78.090	15,115.000	3.736	44.590	6,089.000	3.848
Students with a single out of school suspension	24.640	1,277.000	4.368	37.740	2,098.000	2.690	24.650	1,055.000	2.583
Students with multiple out of school suspensions	18.880	2,062.000	10.850	26.210	2,432.000	6.853	18.890	1,852.000	9.990
Students expelled with educational services	1.115	42.580	18.680	2.061	103.600	20.660	1.116	34.320	26.410
Students expelled without educational services	0.965	50.000	16.930	1.201	78.710	25.670	0.966	64.050	21.410
Students expelled under zero-tolerance policies	0.240	2.564	19.150	0.626	26.680	40.550	0.242	2.369	15.540
Baseline measures									
Locale *(ref. City)*									

Suburb	0.300	0.210	0.875	0.324	0.219	0.752	0.300	0.210	0.875
Town	0.150	0.127	1.964	0.179	0.147	1.679	0.150	0.127	1.964
Rural	0.248	0.187	1.165	0.279	0.201	0.984	0.248	0.187	1.165
Title I Eligible	0.763	0.181	-1.237	0.691	0.214	-0.826	0.763	0.181	-1.237
Pupil-Teacher ratio	16.920	149.200	37.190	16.570	412.200	76.500	16.920	837.800	44.490
Proportion free and reduced lunch eligible	0.668	5.654	59.740	0.603	1.560	29.090	0.668	2.565	27.490

Table 7. Estimating the impact of removing SBLE from schools (compared to schools that had SBLE at both waves) on rates of criminal justice system contact using entropy balancing in the CRCD data

	Total (n = 40838)			Hispanic (n = 29071)			American Indian (n = 2450)			Black (n = 23976)			White (n = 37706)		
	b	*SE*	*p*	*b*	*SE*	*p*	*b*	*SE*	*p*	*b*	*SE*	*p*	*b*	*SE*	*p*
Referral Rate Treatment Effect	-1.18	0.63	.059	-0.49	0.68	.472	-2.36	2.55	.353	0.08	1.03	.942	-0.69	0.42	.105
	Total (n = 40712)			Hispanic (n = 28967)			American Indian (n = 2424)			Black (n = 23856)			White (n = 37621)		
	b	*SE*	*p*	*b*	*SE*	*p*	*b*	*SE*	*p*	*b*	*SE*	*p*	*b*	*SE*	*p*
Arrest Rate Treatment Effect	0.18	0.39	.639	0.42	0.38	.265	0.52	1.13	.646	1.43	0.66	.030	0.51	0.26	.047

Table 8. Estimating the moderating role of school racial/ethnic composition on the impact of removing SBLE from schools (compared to schools that had SBLE at both waves) on rates of criminal justice system contact using entropy balancing in the CRCD data

Referrals	Total (n = 29,071)			Hispanic (n = 29,071)			American Indian (n = 1,827)			Black (n = 19,713)			White (n = 27,076)		
	b	*SE*	*p*	*b*	*SE*	*p*	*b*	*SE*	*p*	*b*	*SE*	*p*	*b*	*SE*	*p*
SBLE Removed	-1.16	0.47	.014	-1.27	0.58	.028	-1.74	3.59	.627	-2.31	1.05	.027	-0.90	0.48	.059
Post	-1.48	0.56	.008	-2.66	0.54	.000	-2.06	2.73	.450	-1.65	1.03	.109	-0.35	0.48	.468
SBLE Removed x Post	0.40	0.71	.572	0.63	0.75	.403	-3.45	4.34	.426	1.32	1.52	.387	-0.34	0.63	.585
Hispanic enrollment rate	3.74	1.55	.016	1.36	1.55	.382	0.33	7.04	.962	9.40	3.70	.011	5.13	1.41	.000
SBLE Removed x Hisp	-2.18	1.90	.251	-1.96	1.92	.308	-0.59	11.15	.958	-5.55	4.46	.214	-0.57	1.97	.773
Post x Hisp	5.45	3.12	.081	5.93	2.58	.022	0.38	9.37	.967	4.10	5.19	.429	0.39	2.23	.860
SBLE Removed x Post x Hisp	-4.91	3.41	.150	-3.76	2.95	.202	5.80	14.19	.683	-4.53	6.31	.473	-1.90	2.80	.496
	Total (n = 2,450)			Hispanic (n = 1,827)			American Indian (n = 2,450)			Black (n = 1,193)			White (n = 2,342)		
	b	*SE*	*p*	*b*	*SE*	*p*	*b*	*SE*	*p*	*b*	*SE*	*P*	*b*	*SE*	*p*
SBLE Removed	-1.53	1.53	.317	-1.15	2.07	.576	-4.27	2.75	.121	-5.70	3.71	.125	0.87	1.34	.518
Post	0.33	1.35	.807	2.09	1.66	.208	-1.40	2.40	.558	0.72	3.56	.840	1.04	1.02	.306
SBLE Removed x Post	-1.58	1.92	.409	-2.57	2.42	.289	-2.82	3.44	.412	-2.15	5.07	.672	-2.32	1.73	.180
AmInd enrollment rate	6.83	5.54	.217	15.84	10.08	.116	-5.65	5.95	.343	-36.71	9.85	.000	7.12	5.46	.192
SBLE Removed x AmInd	7.85	8.08	.332	16.97	17.67	.337	11.62	9.11	.202	13.26	20.91	.526	-4.22	7.24	.560
Post x AmInd	-6.22	7.09	.380	-27.10	10.55	.010	-1.76	7.82	.822	-14.13	15.33	.357	-12.99	5.82	.026
SBLE Removed x Post x AmInd	0.46	9.94	.963	-6.61	18.81	.725	1.61	11.31	.887	6.45	29.58	.827	11.75	8.69	.177
	Total (n = 23,977)			Hispanic (n = 19,713)			American Indian (n = 1,193)			Black (n = 23,976)			White (n = 21,822)		
	b	*SE*	*p*	*b*	*SE*	*p*	*b*	*SE*	*p*	*b*	*SE*	*p*	*b*	*SE*	*p*
SBLE Removed	-1.65	0.63	.009	-1.19	0.70	.088	-8.85	3.48	.011	-4.60	1.00	.000	-0.74	0.48	.127
Post	0.32	0.75	.669	0.31	0.65	.630	-0.88	4.02	.827	-0.48	1.07	.654	1.08	0.50	.031
SBLE Removed x Post	-0.99	0.92	.278	-1.61	0.87	.065	-0.54	4.81	.910	-0.62	1.45	.671	-1.42	0.65	.028
Black enrollment rate	6.37	2.09	.002	1.30	2.00	.514	-17.69	11.92	.138	-4.64	2.34	.047	3.48	1.96	.076
SBLE Removed x Black	-1.66	2.43	.496	-3.56	2.52	.158	8.33	13.19	.528	2.85	2.79	.308	-2.12	2.39	.375
Post x Black	-0.60	3.15	.848	-6.67	2.30	.004	-14.36	15.19	.345	0.73	3.40	.831	-5.58	2.24	.013
SBLE Removed x Post x Black	2.66	3.90	.496	9.68	3.16	.002	14.25	18.16	.433	2.44	4.31	.571	4.70	2.86	.101
	Total (n = 37,706)			Hispanic (n = 27,076)			American Indian (n = 2,342)			Black (n = 21,822)			White (n = 37,706)		
	b	*SE*	*p*	*b*	*SE*	*p*	*b*	*SE*	*p*	*b*	*SE*	*p*	*b*	*SE*	*p*
SBLE Removed	-1.34	0.89	.134	-0.61	0.85	.472	0.09	4.90	.986	-0.83	1.46	.567	-2.22	0.93	.017
Post	-0.61	0.85	.470	0.19	0.79	.807	-5.00	3.39	.141	0.77	1.39	.579	-1.35	1.03	.191
SBLE Removed x Post	-1.09	1.19	.360	-0.92	1.13	.418	7.71	5.94	.194	-1.20	2.09	.567	-0.16	1.26	.898
White enrollment rate	-4.42	0.73	.000	2.15	0.91	.018	16.70	5.59	.003	4.15	1.74	.017	-4.72	0.94	.000
SBLE Removed x White	0.63	1.12	.577	-0.94	1.47	.521	-7.37	10.56	.485	-4.71	2.58	.068	2.06	1.19	.082
Post x White	0.82	1.11	.462	-2.39	1.31	.068	6.97	7.65	.362	-2.69	2.48	.278	2.01	1.33	.132

SBLE Removed x Post x White	0.34	1.56	.829	0.35	1.93	.855	-20.36	12.73	.110	2.41	3.92	.538	-0.85	1.66	.607
Arrests	Total (n = 28,969)			Hispanic (n = 28,967)			American Indian (n = 1,801)			Black (n = 19,618)			White (n = 26,993)		
	b	*SE*	*p*	*b*	*SE*	*p*	*b*	*SE*	*p*	*b*	*SE*	*p*	*b*	*SE*	*p*
SBLE Removed	-0.80	0.28	.004	-0.54	0.29	.059	-0.40	1.86	.831	-0.50	0.69	.471	-0.61	0.27	.026
Post	-1.24	0.44	.005	-1.38	0.35	.000	-1.42	1.38	.305	-0.70	0.67	.300	-0.73	0.30	.015
SBLE Removed x Post	0.78	0.46	.093	0.55	0.40	.167	0.72	2.27	.752	-0.28	0.83	.738	0.36	0.33	.271
Hispanic enrollment rate	4.44	1.18	.000	3.47	1.02	.001	0.70	3.47	.840	12.19	3.09	.000	2.67	0.75	.000
SBLE Removed x Hisp	-3.87	1.23	.002	-3.61	1.09	.001	-0.62	5.82	.915	-11.64	3.24	.000	-1.89	0.84	.025
Post x Hisp	1.10	2.43	.651	0.95	1.90	.617	-0.34	4.11	.935	-7.36	3.68	.045	0.10	1.41	.944
SBLE Removed x Post x Hisp	-1.38	2.47	.576	-0.43	1.95	.826	0.87	7.08	.903	6.89	3.91	.078	0.01	1.50	.993
	Total (n = 2,424)			Hispanic (n = 1,801)			American Indian (n = 2,424)			Black (n = 1,168)			White (n = 2,316)		
	b	*SE*	*p*	*b*	*SE*	*p*	*b*	*SE*	*p*	*b*	*SE*	*p*	*b*	*SE*	*p*
SBLE Removed	-2.25	1.02	.028	-2.86	1.56	.066	-2.24	1.38	.104	-8.50	3.23	.009	-1.86	0.76	.014
Post	-2.47	1.10	.025	-2.18	1.04	.037	-2.70	1.32	.041	-6.69	3.26	.040	-1.47	0.74	.047
SBLE Removed x Post	2.76	1.21	.022	2.90	1.63	.075	2.31	1.72	.181	7.31	3.54	.039	2.51	0.93	.007
AmInd enrollment rate	-3.21	2.10	.127	-8.81	3.26	.007	-6.07	2.32	.009	-26.93	11.99	.025	-3.91	1.80	.030
SBLE Removed x AmInd	6.79	3.22	.035	26.10	13.80	.059	6.19	3.71	.095	25.84	14.29	.071	4.77	2.77	.085
Post x AmInd	7.41	4.28	.083	6.51	3.35	.052	7.78	4.50	.084	13.17	12.51	.293	2.66	1.92	.165
SBLE Removed x Post x AmInd	-9.80	5.21	.060	-23.35	14.11	.098	-7.83	5.74	.173	-13.27	19.90	.505	-6.75	3.20	.035
	Total (n = 23,860)			Hispanic (n = 19,618)			American Indian (n = 1,168)			Black (n = 23,856)			White (n = 21,745)		
	b	*SE*	*p*	*b*	*SE*	*p*	*b*	*SE*	*p*	*b*	*SE*	*p*	*b*	*SE*	*p*
SBLE Removed	-2.06	0.46	.000	-1.12	0.38	.003	-4.23	2.18	.052	-3.55	0.68	.000	-0.80	0.43	.060
Post	-0.99	0.50	.048	-1.05	0.37	.005	-2.42	2.33	.299	-2.04	0.70	.003	-0.42	0.44	.339
SBLE Removed x Post	1.00	0.54	.063	0.18	0.43	.679	3.50	2.83	.217	1.34	0.81	.099	0.25	0.46	.582
Black enrollment rate	4.38	1.30	.001	1.92	1.19	.105	-5.09	9.53	.594	0.61	1.50	.685	3.93	2.10	.061
SBLE Removed x Black	-0.75	1.47	.611	-2.99	1.33	.024	2.19	9.84	.824	0.93	1.71	.590	-4.09	2.15	.058
Post x Black	-2.80	1.54	.068	-2.71	1.24	.028	-6.76	10.49	.520	-1.64	1.72	.340	-4.27	2.15	.047
SBLE Removed x Post x Black	0.45	1.75	.798	3.68	1.42	.009	0.83	11.48	.943	0.33	2.01	.868	4.18	2.22	.061
	Total (n = 37,624)			Hispanic (n = 26,993)			American Indian (n = 2,316)			Black (n = 21,745)			White (n = 37, 621		
	b	*SE*	*p*	*b*	*SE*	*p*	*b*	*SE*	*p*	*b*	*SE*	*p*	*b*	*SE*	*p*
SBLE Removed	-2.82	0.62	< .001	-1.45	0.42	.001	1.35	1.94	.486	-4.38	1.05	< .001	-3.19	0.69	< .001
Post	-2.19	0.71	.002	-1.00	0.55	.070	-1.60	1.40	.254	-3.91	1.02	< .001	-2.36	0.80	.003
SBLE Removed x Post	1.64	0.76	.032	0.68	0.61	.268	2.20	2.41	.362	3.62	1.18	.002	2.12	0.83	.011
White enrollment rate	-4.04	0.70	< .001	-0.96	0.52	.068	5.65	2.67	.034	-3.19	1.38	.020	-3.95	0.81	< .001
SBLE Removed x White	2.86	0.75	< .001	1.12	0.68	.101	-5.46	3.98	.170	3.78	1.63	.020	3.49	0.85	< .001
Post x White	2.21	0.87	.011	0.21	0.80	.796	0.61	3.29	.852	4.01	1.55	.010	2.55	0.99	.010
SBLE Removed x Post x White	-2.07	0.95	.030	-0.90	0.94	.335	-2.40	5.05	.634	-5.06	1.96	.010	-2.68	1.04	.010

Table 9. Estimating the impact of removing SBLE from schools (compared to schools that had SBLE at both waves) on within-school racial/ethnic disparities in rates of criminal justice system contact using entropy balancing in the CRCD data

Referrals	Hispanic-White ratio (n = 8,702)			American Indian-White ratio (n = 812)			Black-White ratio (n = 7,038)		
	b	*SE*	*p*	*b*	*SE*	*p*	*b*	*SE*	*p*
SBLE Removed x Post	0.01	0.13	0.920	0.20	0.55	0.711	0.25	0.24	0.307
Arrests	Hispanic-White ratio (n = 3,750)			American Indian-White ratio (n = 335)			Black-White ratio (n = 3,256)		
	b	*SE*	*p*	*b*	*SE*	*p*	*b*	*SE*	*p*
SBLE Removed x Post	-0.24	0.22	0.277	0.84	1.27	0.512	-0.65	0.40	0.107

Table 10. Estimating the moderating role of school racial/ethnic composition on the impact of removing SBLE from schools (compared to schools that had SBLE at both waves) on within-school racial/ethnic disparities in rates of criminal justice system contact using entropy balancing in the CRCD data

Referrals	Hispanic-White (n = 8,702)			American Indian-White (n = 677)			Black-White (n = 6,330)		
	b	*SE*	*p*	*b*	*SE*	*p*	*b*	*SE*	*p*
SBLE Removed	-0.03	0.17	.835	-1.63	0.64	.012	-0.12	0.29	.674
Post	-0.33	0.11	.003	-0.41	0.65	.532	-0.02	0.20	.926
SBLE Removed x Post	-0.08	0.21	.720	0.08	0.81	.926	0.07	0.40	.852
Hispanic enrollment rate	-1.35	0.19	.000	-3.37	1.08	.002	-1.90	0.45	.000
SBLE Removed x Hispanic	-0.04	0.35	.906	2.49	1.53	.105	-0.49	0.68	.471
Post x Hispanic	0.70	0.24	.003	1.35	1.55	.384	0.11	0.55	.849
SBLE Removed x Post x Hispanic	0.29	0.46	.522	-0.40	2.05	.846	0.45	0.99	.650
	Hispanic-White (n = 677)			American Indian-White (n = 812)			Black-White (n = 456)		
	b	*SE*	*p*	*b*	*SE*	*p*	*b*	*SE*	*p*
SBLE Removed	0.06	0.32	.851	-1.95	0.67	.004	-0.54	0.66	.412
Post	-0.04	0.28	.896	-1.30	0.66	.048	1.22	0.74	.100
SBLE Removed x Post	-0.61	0.40	.126	1.02	0.81	.204	-1.22	0.99	.219
AmInd enrollment rate	-0.37	0.87	.672	-5.25	1.42	.000	-0.65	5.25	.902
SBLE Removed x AmInd	0.51	1.21	.676	3.52	1.74	.044	-1.59	6.70	.813
Post x AmInd	-0.68	1.57	.667	5.68	2.06	.006	-10.09	7.69	.190
SBLE Removed x Post x AmInd	-0.34	1.90	.856	-4.95	2.49	.047	10.05	10.09	.320
	Hispanic-White (n = 6,330)			American Indian-White (n = 456)			Black-White (n = 7,038)		
	b	*SE*	*p*	*b*	*SE*	*p*	*b*	*SE*	*p*
SBLE Removed	-0.01	0.18	.961	-2.37	0.97	.015	-0.56	0.28	.050
Post	-0.34	0.13	.007	-0.38	0.99	.699	-0.36	0.21	.091
SBLE Removed x Post	0.06	0.23	.812	0.55	1.15	.632	0.53	0.40	.188
AmInd enrollment rate	-1.59	0.32	.000	-5.29	3.13	.091	-3.71	0.39	.000
SBLE Removed x Black	-0.32	0.55	.553	5.72	4.16	.170	1.00	0.73	.172
Post x Black	0.72	0.40	.070	1.40	3.55	.693	1.55	0.54	.004
SBLE Removed x Post x Black	0.51	0.72	.479	-3.24	4.72	.493	-1.04	1.07	.332
	Hispanic-White (n = 8,702)			American Indian-White (n = 812)			Black-White (n = 7,038)		
	b	*SE*	*p*	*b*	*SE*	*p*	*b*	*SE*	*p*
SBLE Removed	-0.12	0.16	.436	1.22	0.81	.129	-0.19	0.30	.532
Post	0.23	0.12	.044	2.24	0.83	.007	0.50	0.22	.025
SBLE Removed x Post	0.37	0.21	.079	-1.41	1.06	.184	0.24	0.43	.573
AmInd enrollment rate	1.47	0.20	.000	6.66	1.57	.000	2.90	0.38	.000
SBLE Removed x White	0.08	0.38	.823	-4.91	1.89	.009	-0.14	0.70	.845
Post x White	-0.72	0.25	.005	-5.04	1.87	.007	-0.81	0.50	.100
SBLE Removed x Post x White	-0.63	0.47	.182	3.16	2.28	.166	-0.03	0.99	.972
Arrests	Hispanic-White (n = 3,750)			American Indian-White (n = 289)			Black-White (n = 2,971)		
	b	*SE*	*p*	*b*	*SE*	*p*	*b*	*SE*	*p*

SBLE Removed	0.32	0.31	.298	-2.38	1.72	.166	0.49	0.55	.374
Post	-0.25	0.17	.134	-1.42	1.85	.444	0.61	0.30	.044
SBLE Removed x Post	-0.47	0.37	.207	1.68	2.17	.441	-1.71	0.69	.012
Hispanic enrollment rate	-1.22	0.27	.000	-4.93	2.68	.067	-1.79	0.48	.000
SBLE Removed x Hispanic	-0.60	0.64	.354	4.01	3.49	.252	-1.42	1.20	.238
Post x Hispanic	0.46	0.34	.177	4.20	4.47	.348	-1.76	0.67	.008
SBLE Removed x Post x Hispanic	1.00	0.79	.206	-5.26	5.24	.317	4.18	1.55	.007
	Hispanic-White (n = 289)			American Indian-White (n = 335)			Black-White (n = 232)		
	b	*SE*	*p*	*b*	*SE*	*p*	*b*	*SE*	*p*
SBLE Removed	0.52	0.68	.448	-1.95	1.42	.171	0.77	1.36	.572
Post	-0.58	0.55	.297	-0.82	1.46	.575	-0.15	0.89	.869
SBLE Removed x Post	-0.07	0.97	.941	0.33	1.79	.854	-1.06	1.76	.546
AmInd enrollment rate	-5.58	5.36	.299	-9.19	4.54	.044	-0.68	11.50	.953
SBLE Removed x AmInd	4.45	5.89	.451	7.35	5.19	.158	-9.14	13.17	.488
Post x AmInd	4.66	5.72	.416	2.62	5.10	.607	-9.48	12.35	.443
SBLE Removed x Post x AmInd	-4.70	7.68	.541	1.31	7.53	.862	13.25	15.65	.398
	Hispanic-White (n = 2,971)			American Indian-White (n = 232)			Black-White (n = 3,256)		
	b	*SE*	*p*	*b*	*SE*	*p*	*b*	*SE*	*p*
SBLE Removed	0.23	0.31	.469	-3.18	2.19	.147	-0.26	0.50	.604
Post	-0.30	0.16	.054	-0.10	2.39	.965	0.05	0.31	.871
SBLE Removed x Post	-0.38	0.37	.302	-0.08	2.55	.976	-0.90	0.64	.159
AmInd enrollment rate	-1.53	0.39	.000	-10.34	6.75	.127	-3.39	0.46	.000
SBLE Removed x Black	0.26	1.26	.839	12.50	8.52	.144	0.79	1.37	.564
Post x Black	1.00	0.57	.081	0.89	7.48	.906	0.46	0.79	.567
SBLE Removed x Post x Black	-0.09	1.49	.952	-1.09	12.01	.928	2.30	1.86	.218
	Hispanic-White (n = 3,750)			American Indian-White (n = 335)			Black-White (n = 3,256)		
	b	*SE*	*p*	*b*	*SE*	*p*	*b*	*SE*	*p*
SBLE Removed	0.02	0.28	.948	2.49	1.72	.148	-0.21	0.58	.719
Post	0.30	0.16	.061	1.12	1.36	.410	-0.19	0.28	.498
SBLE Removed x Post	0.03	0.36	.926	-1.18	2.21	.593	1.32	0.73	.070
AmInd enrollment rate	1.44	0.31	.000	7.74	2.92	.008	2.94	0.47	.000
SBLE Removed x White	0.19	0.69	.782	-7.24	3.74	.054	0.26	1.39	.852
Post x White	-0.84	0.38	.029	-3.87	3.46	.264	0.77	0.72	.287
SBLE Removed x Post x White	-0.38	0.84	.652	3.92	4.47	.382	-3.54	1.71	.038

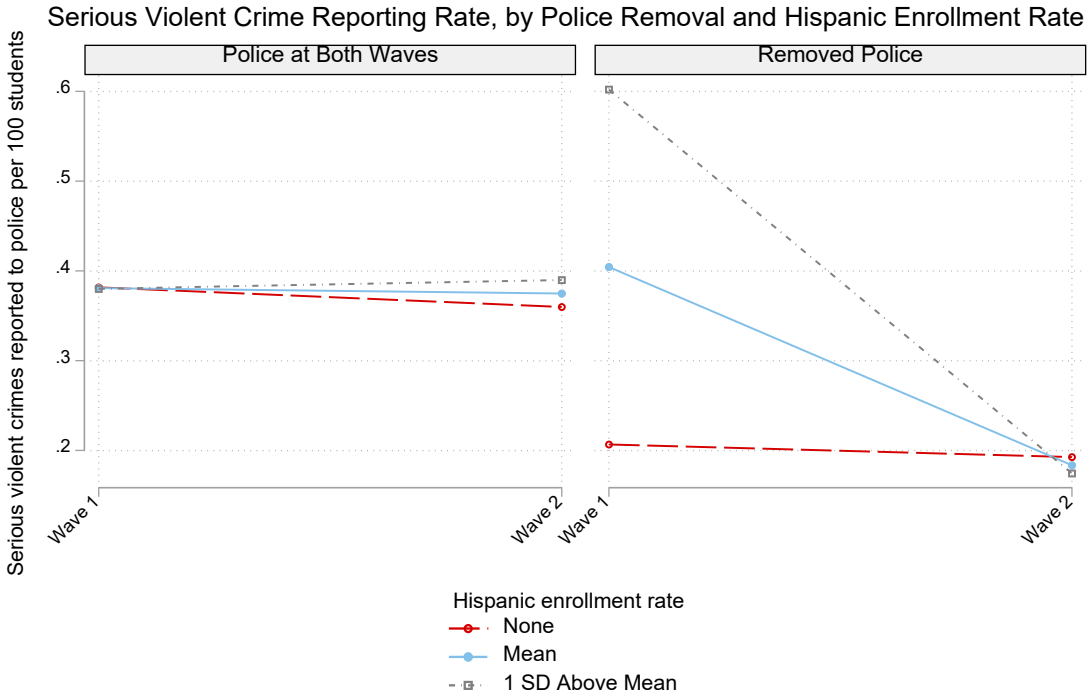

Figure 1. Serious violent crime reporting rate, by SBLE removal and Hispanic enrollment rate using the SSOCS data

SOURCE: Institute for Education Sciences, National Center for Education Statistics, "School Survey on Crime and Safety" 2003-04, 2005-06, 2007-08, 2009-10, 2015-16, and 2017-18.
Note: Data are not nationally representative.

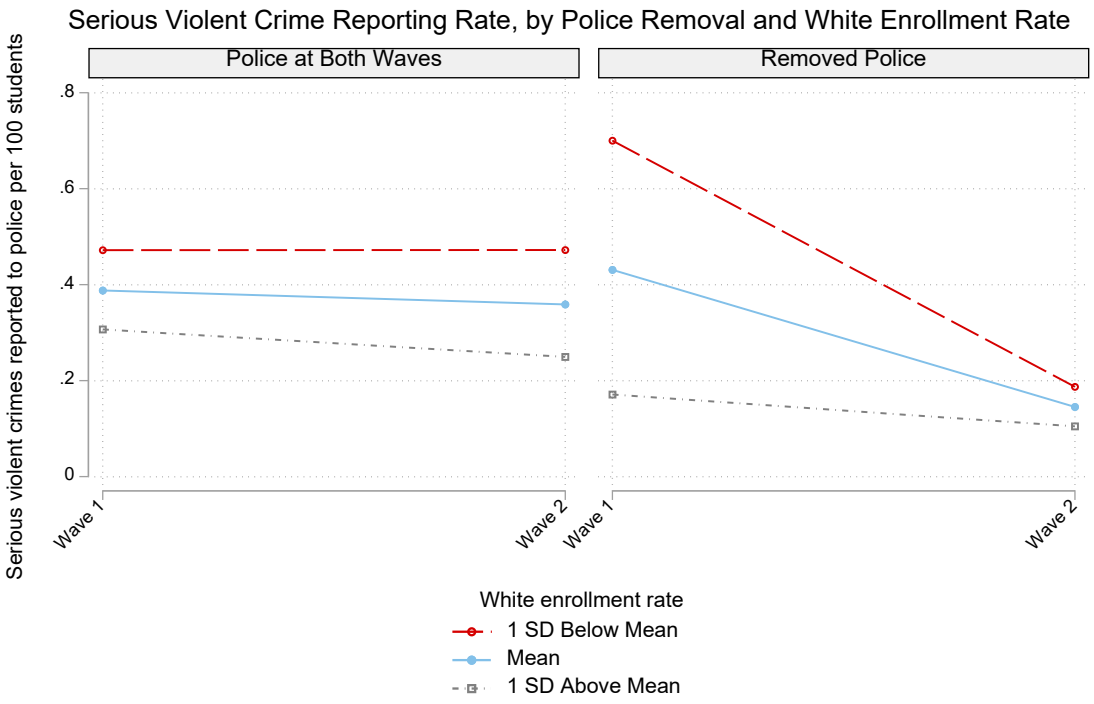

Figure 2. Serious violent crime reporting rate, by SBLE removal and White enrollment rate using the SSOCS data

SOURCE: Institute for Education Sciences, National Center for Education Statistics, "School Survey on Crime and Safety" 2003-04, 2005-06, 2007-08, 2009-10, 2015-16, and 2017-18.
Note: Data are not nationally representative.

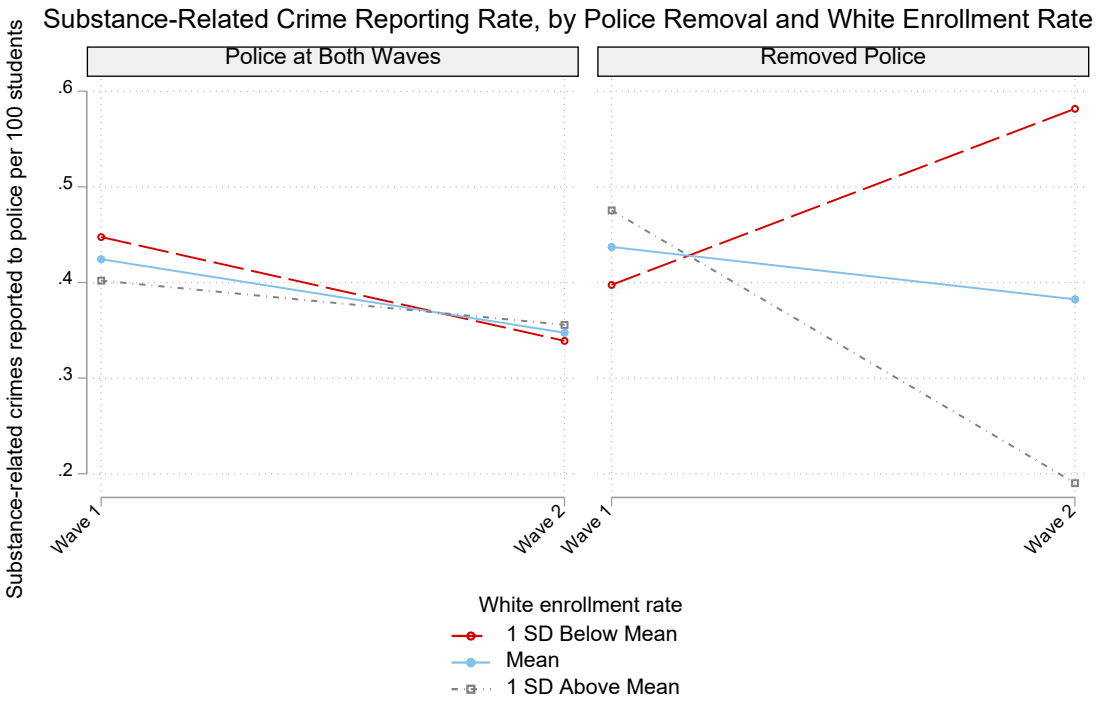

Figure 3. Substance-related crime reporting rate, by SBLE removal and White enrollment rate using the SSOCS data

SOURCE: Institute for Education Sciences, National Center for Education Statistics, "School Survey on Crime and Safety" 2003-04, 2005-06, 2007-08, 2009-10, 2015-16, and 2017-18.
Note: Data are not nationally representative.

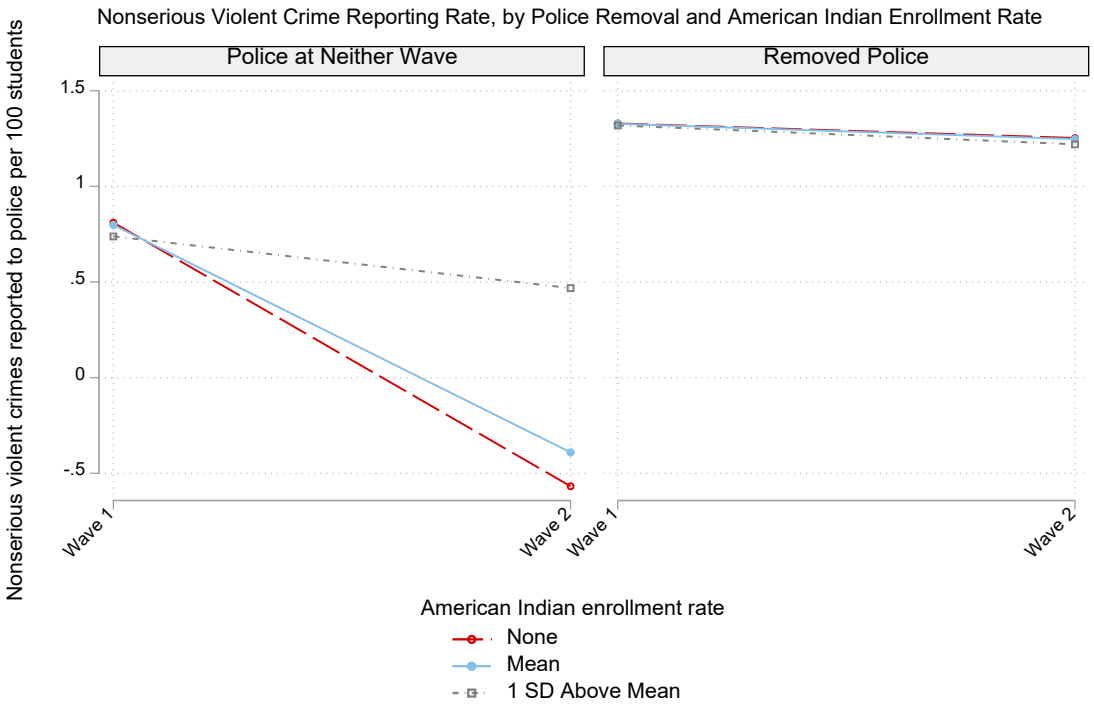

Figure 4. Nonserious violent crime reporting rate, by SBLE removal and American Indian enrollment rate using the SSOCS data

SOURCE: Institute for Education Sciences, National Center for Education Statistics, "School Survey on Crime and Safety" 2003-04, 2005-06, 2007-08, 2009-10, 2015-16, and 2017-18.
Note: Data are not nationally representative.

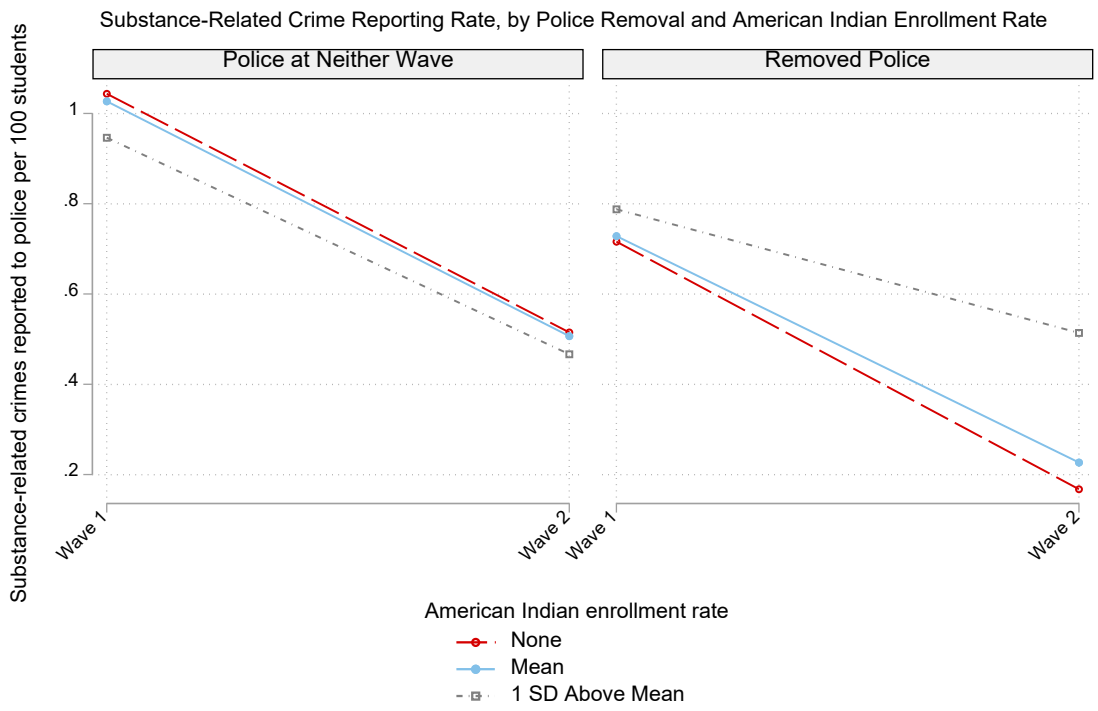

Figure 5. Substance-related crime reporting rate, by SBLE removal and American Indian using the SSOCS data enrollment rate

SOURCE: Institute for Education Sciences, National Center for Education Statistics, "School Survey on Crime and Safety" 2003-04, 2005-06, 2007-08, 2009-10, 2015-16, and 2017-18.
Note: Data are not nationally representative.

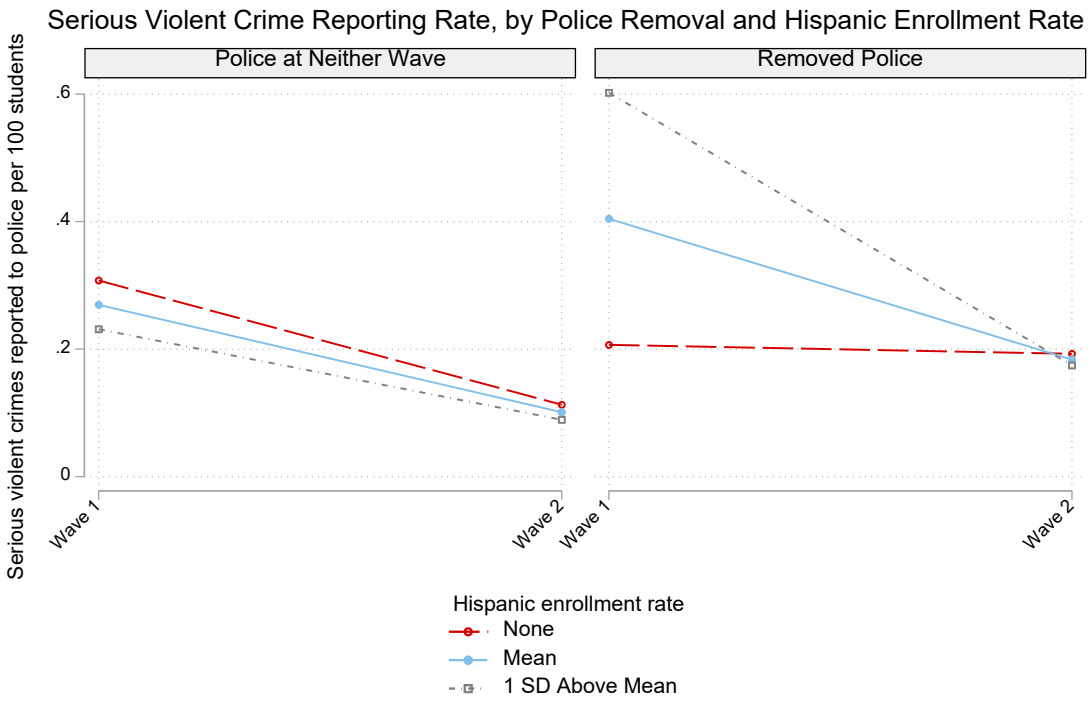

Figure 6. Serious violent crime reporting rate, by SBLE removal and Hispanic enrollment rate using the SSOCS data

SOURCE: Institute for Education Sciences, National Center for Education Statistics, "School Survey on Crime and Safety" 2003-04, 2005-06, 2007-08, 2009-10, 2015-16, and 2017-18.
Note: Data are not nationally representative.

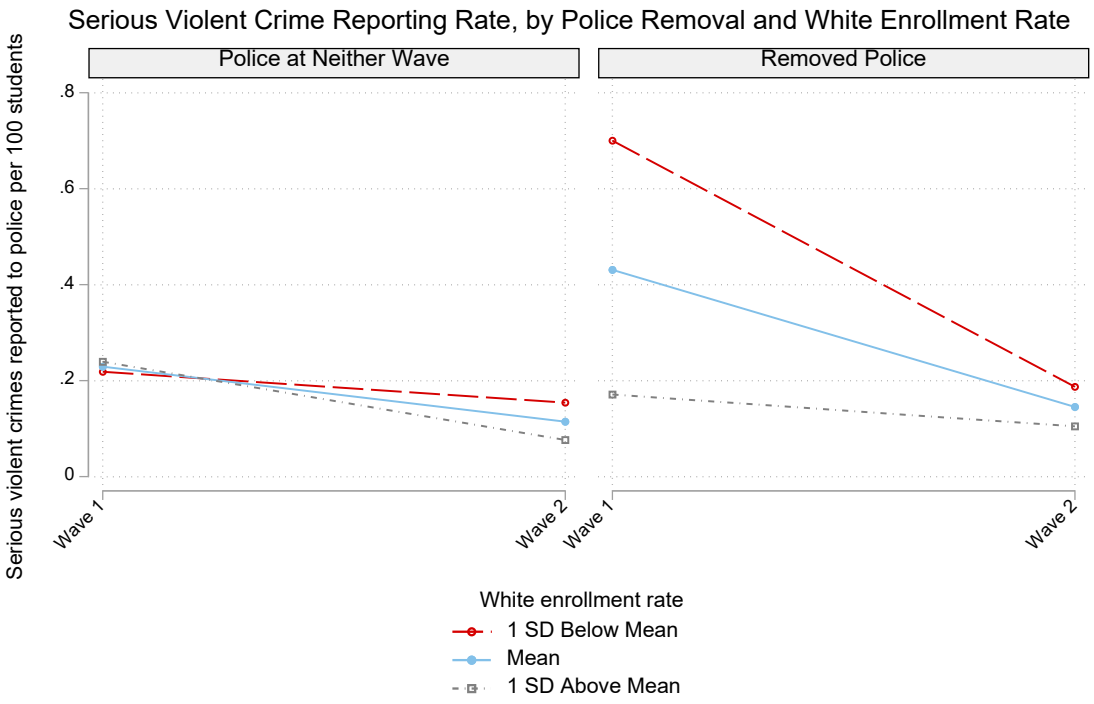

Figure 7. Serious violent crime reporting rate, by SBLE removal and White enrollment rate using the SSOCS data

SOURCE: Institute for Education Sciences, National Center for Education Statistics, "School Survey on Crime and Safety" 2003-04, 2005-06, 2007-08, 2009-10, 2015-16, and 2017-18.
Note: Data are not nationally representative.

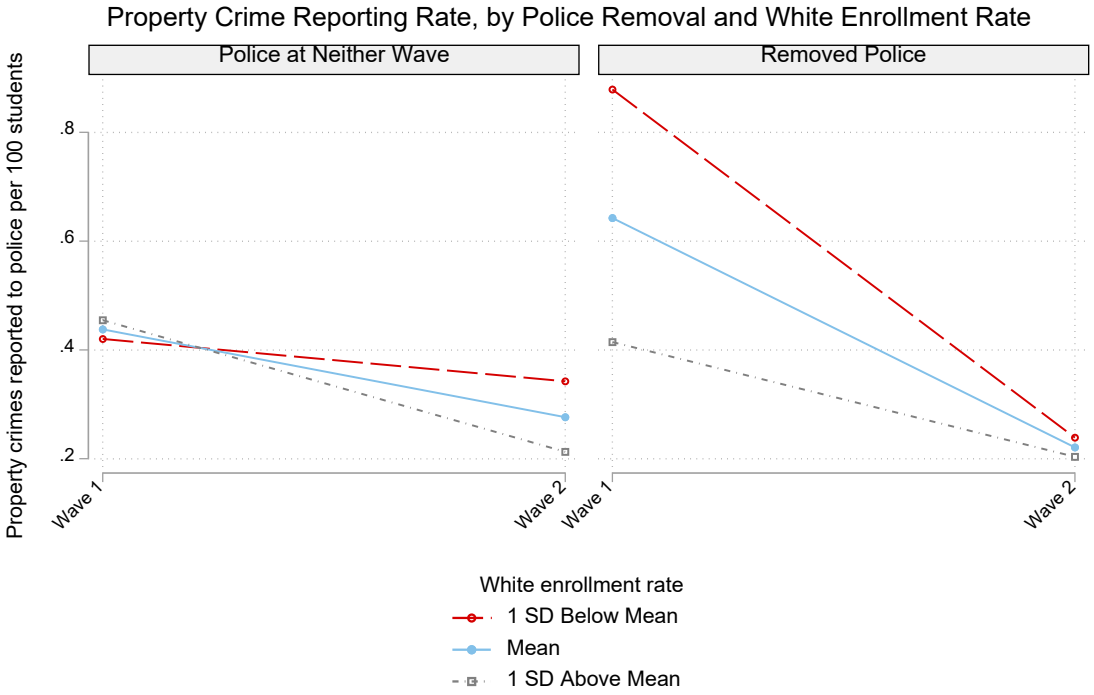

Figure 8. Property crime reporting rate, by SBLE removal and White enrollment rate using the SSOCS data

SOURCE: Institute for Education Sciences, National Center for Education Statistics, "School Survey on Crime and Safety" 2003-04, 2005-06, 2007-08, 2009-10, 2015-16, and 2017-18.
Note: Data are not nationally representative.

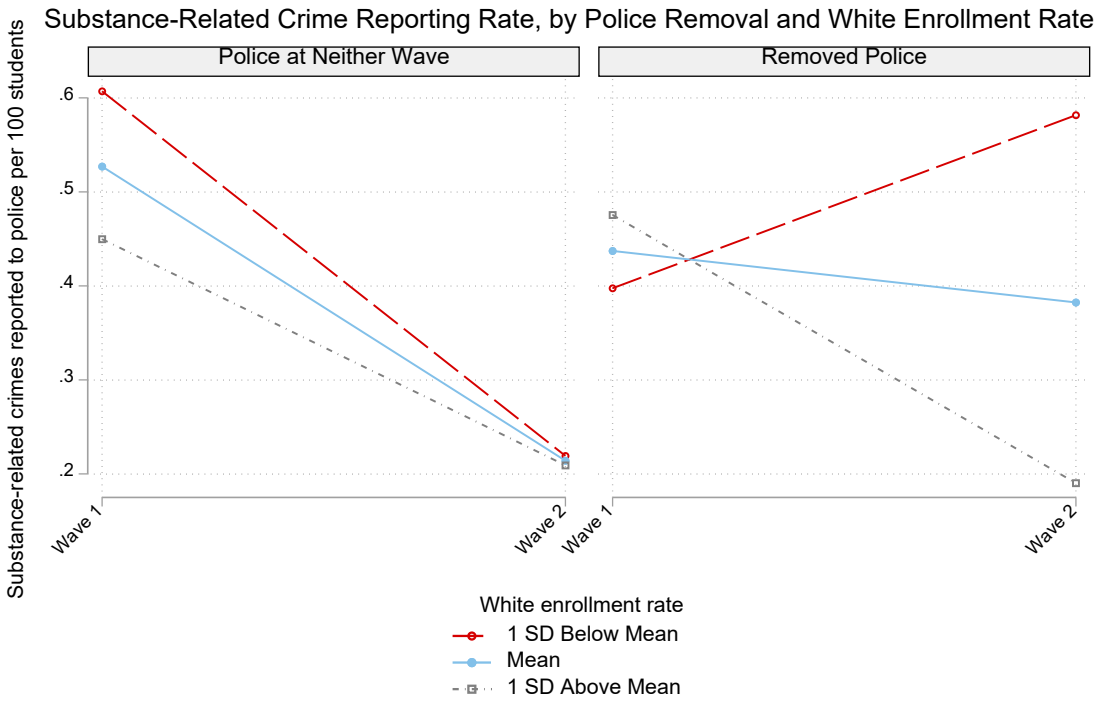

Figure 9. Substance-related crime reporting rate, by SBLE removal and White enrollment rate using the SSOCS data

SOURCE: Institute for Education Sciences, National Center for Education Statistics, "School Survey on Crime and Safety" 2003-04, 2005-06, 2007-08, 2009-10, 2015-16, and 2017-18.
Note: Data are not nationally representative.

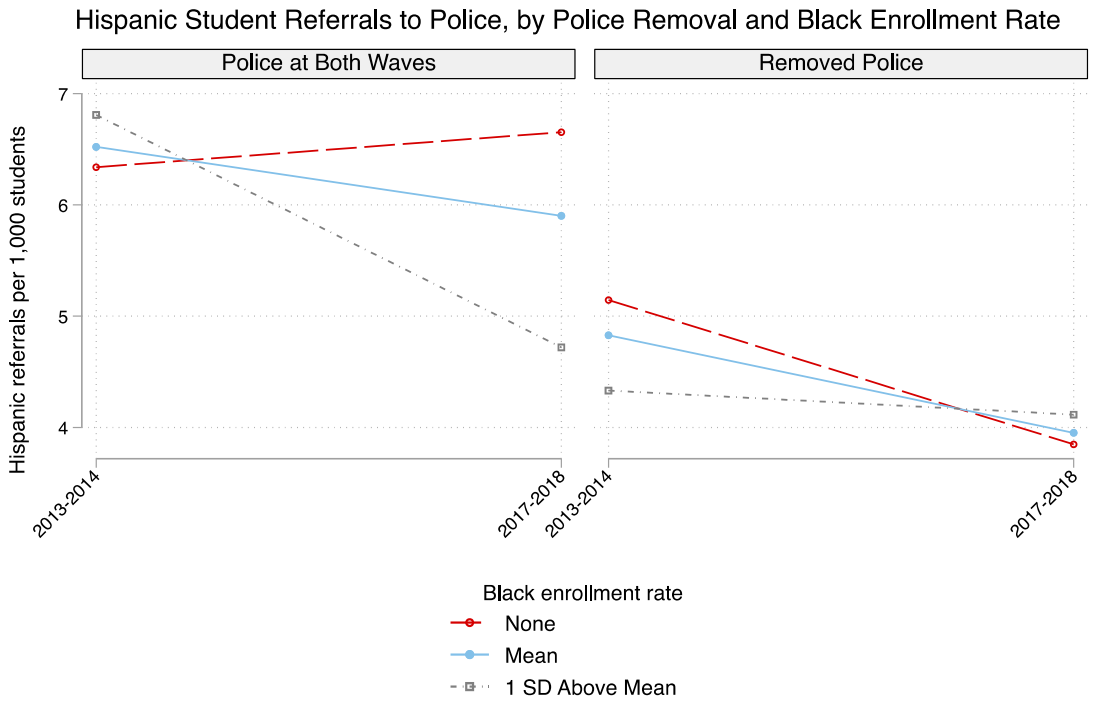

Figure 10. Hispanic student referrals to police, by SBLE removal and Black enrollment rate using the CRDC data

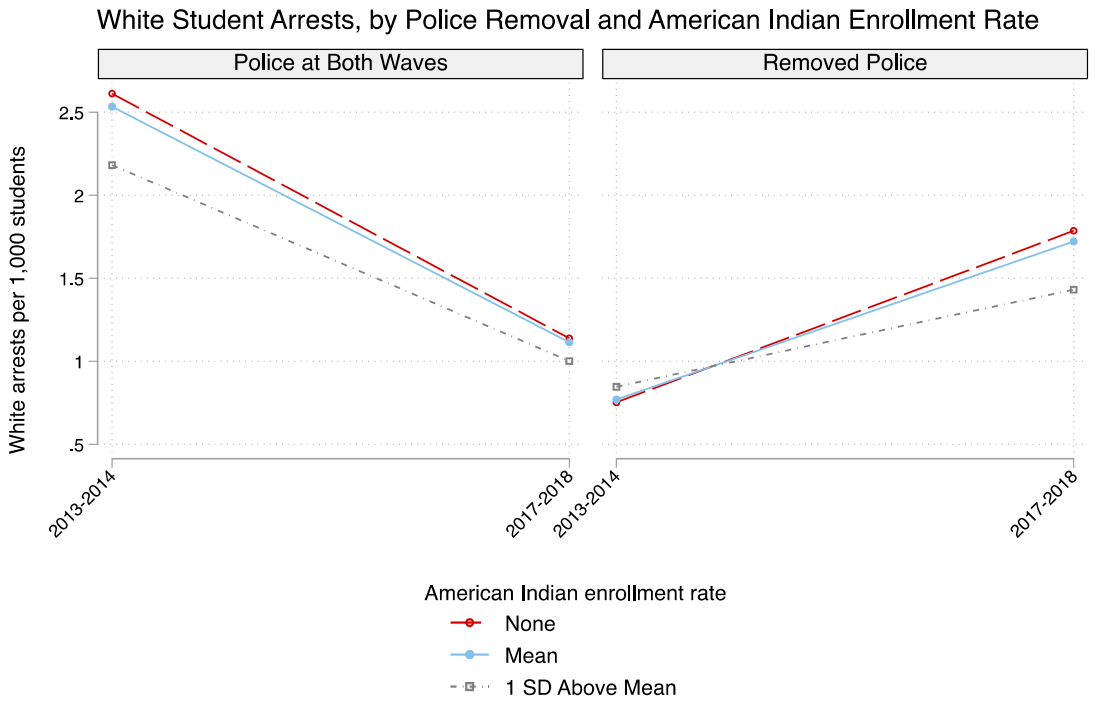

Figure 11. White student arrests, by SBLE removal and American Indian enrollment rate using the CRDC data

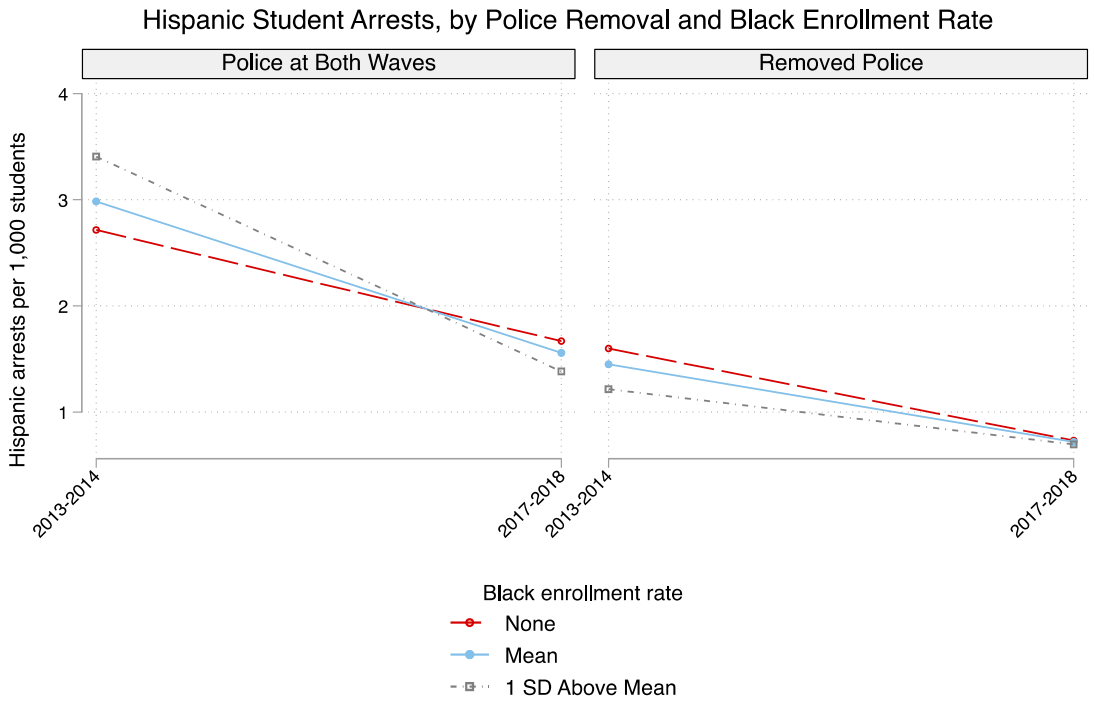

Figure 12. Hispanic student arrests, by SBLE removal and Black enrollment rate using the CRDC data

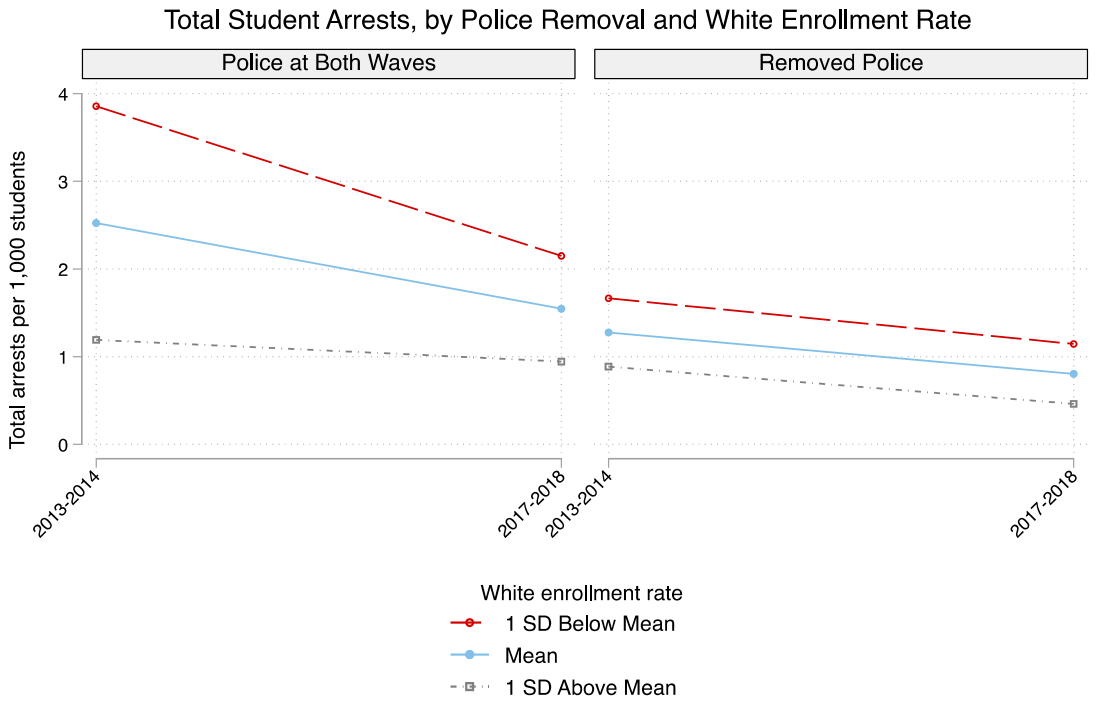

Figure 13. Total student arrests, by SBLE removal and White enrollment rate using the CRDC data

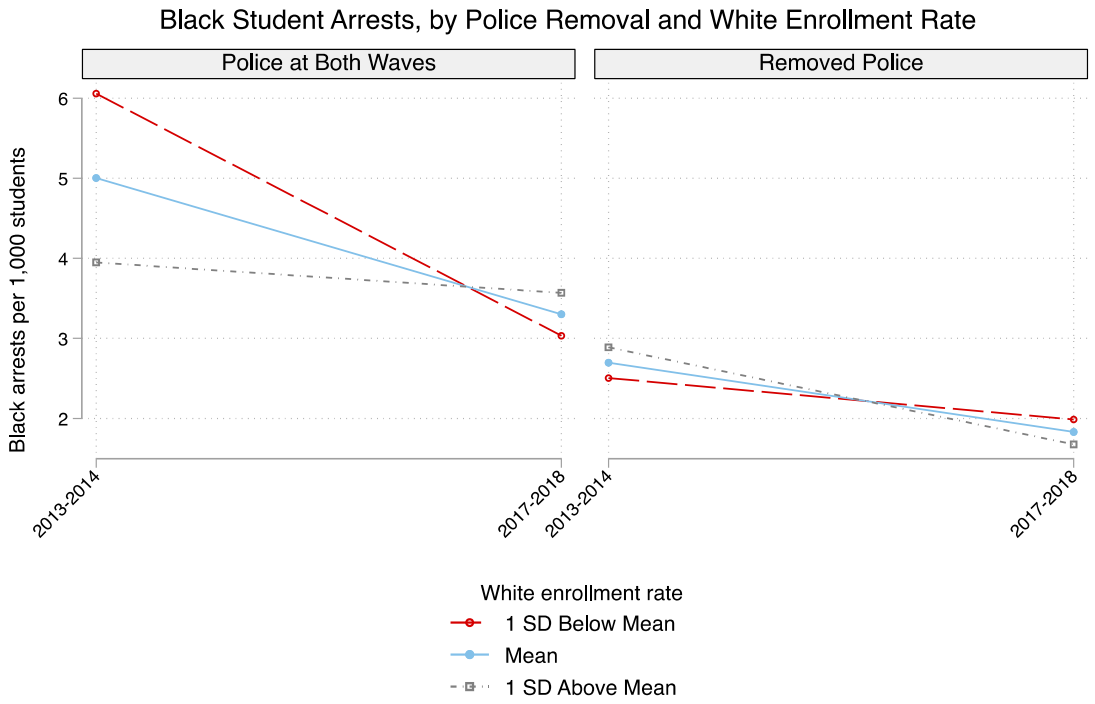

Figure 14. Black student arrests, by SBLE removal and White enrollment rate using the CRDC data

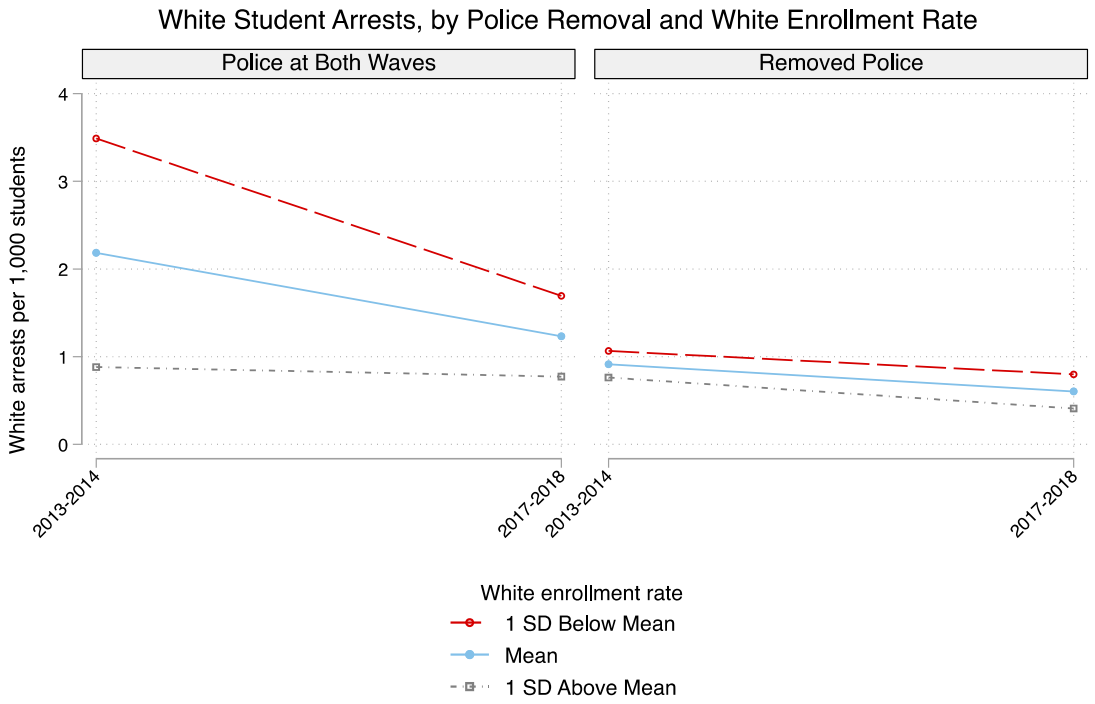

Figure 15. White student arrests, by SBLE removal and White enrollment rate using the CRDC data

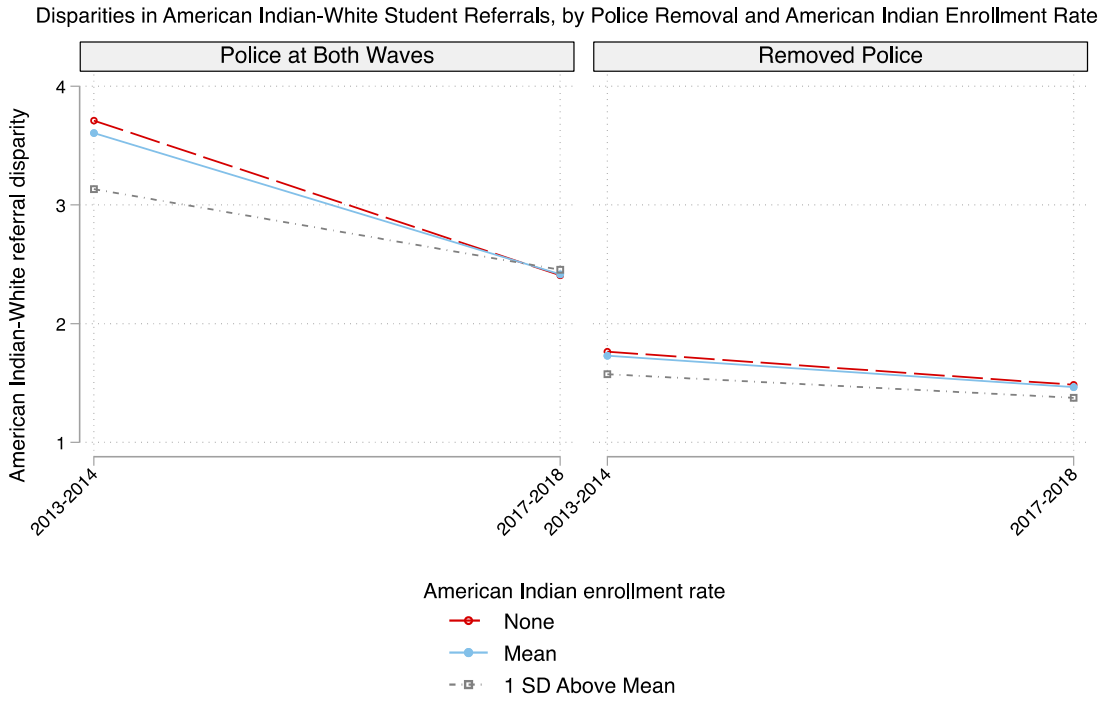

Figure 16. Disparities in American Indian-White student referrals, by SBLE removal and American Indian enrollment rate using the CRDC data

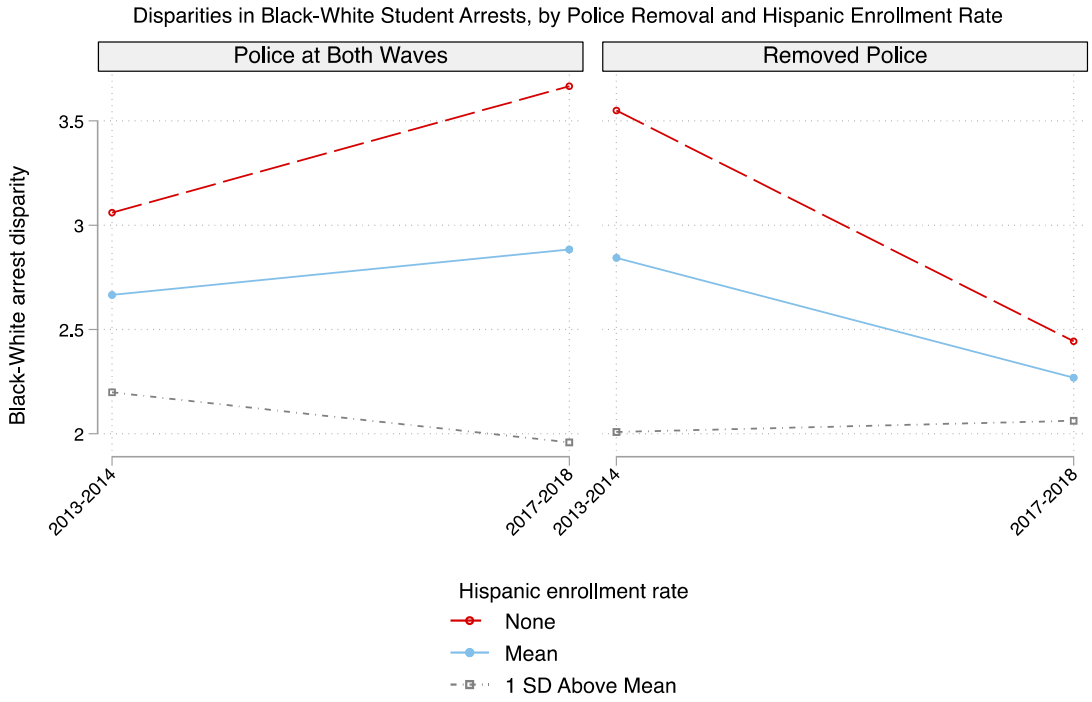

Figure 17. Disparities in Black-White student arrests, by SBLE removal and Hispanic enrollment rate using the CRDC data

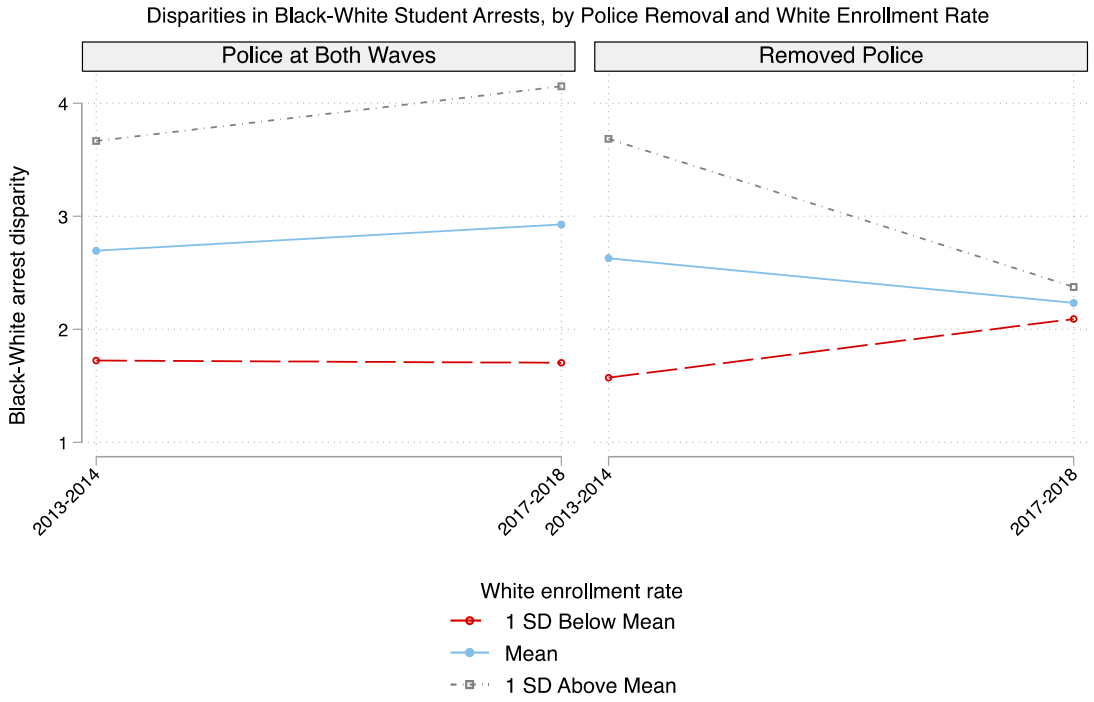

Figure 18. Disparities in Black-White student arrests, by SBLE removal and White enrollment rate using the CRDC data

Artifacts

Dissemination Activities

- Fisher, B. W., & Devlin, D. N. “Police-free schools: Shifts in student punishment associated with removing police from schools.” Paper presentation at American Educational Research Association, Philadelphia, PA, April 2024.
- Fisher, B. W. “Removing police from schools and the implications for racial/ethnic disparities in criminal justice system contact.” Paper presentation at *American Society of Criminology*, Philadelphia, PA, November 2023.