

Keeping Kids in School Through Prearrest Diversion: School Disciplinary Outcomes of the Philadelphia Police School Diversion Program

Naomi E. S. Goldstein, Amanda NeMoyer, TuQuynh Le, Siying Guo, Lindsey M. Cole, Angela Pollard,
Rena Kreimer, and Fengqing Zhang
Department of Psychology, Drexel University

Objectives: Developed to keep youth in school and out of court, the Philadelphia Police School Diversion Program allows youth to avoid arrest for specified school-based summary and misdemeanor offenses. This study examined whether diverted youth were also less likely to experience exclusionary discipline, both in response to the referring incident and in the following calendar year. **Hypotheses:** We predicted that diverted youth—compared to youth arrested in schools the year before program implementation—would have been less likely to receive a suspension for their school-based incident, receive a suspension in the year following the incident, and be referred for permanent school removal in the year following the incident. **Method:** Using a quasi-experimental design, we examined data from 1,281 diverted youth and 531 comparable youth arrested in Philadelphia schools in the year before program implementation. These 1,812 students (67% male, 75% Black) ranged from 10 to 22 years of age. After using propensity score matching techniques, we conducted mixed-effects logistic regression analyses to compare the matched groups on 3 outcomes: incident-related suspension, postincident suspension, and postincident referral for permanent school removal. **Results:** No statistically significant group differences in likelihood of incident-related suspension emerged; however, age and gender moderated the relationship between diverted/arrested status and incident-related suspension. Diverted youth were less likely than matched arrested youth to experience both postincident suspension and postincident permanent school removal referral. **Conclusions:** The Philadelphia Police School Diversion Program shows promise in reducing the likelihood that youth will experience future exclusionary discipline following a school-based incident.

Jennifer Cox served as Action Editor.

Naomi E. S. Goldstein  <https://orcid.org/0000-0002-3333-2277>

Amanda NeMoyer  <https://orcid.org/0000-0002-3503-7319>

TuQuynh Le  <https://orcid.org/0000-0002-9619-5812>

Siying Guo  <https://orcid.org/0000-0001-5987-4202>

Lindsey M. Cole  <https://orcid.org/0000-0002-9147-1195>

Angela Pollard  <https://orcid.org/0000-0002-6069-2067>

Rena Kreimer  <https://orcid.org/0000-0001-6383-6882>

Fengqing Zhang  <https://orcid.org/0000-0003-2736-2303>

Siying Guo is now at School of School of Criminal Justice and Public Administration, Kean University. Lindsey M. Cole is now at Department of Psychology, Oklahoma City University.

Some of the data from this article were previously presented at the annual conference of the American Psychology-Law Society in New Orleans, Louisiana, United States (NeMoyer et al. 2020). Further, a complementary report using this sample of youth to address distinct research questions has been published (Goldstein et al. 2021). Research reported in this publication was supported by funding from the U.S. Department of Justice, Office of Justice Programs, Office of Juvenile Justice and Delinquency Prevention (2014-JZ-FX-K0003; 2017-JF-FX-0055), the National Institute of Justice (2017-CK-BX-0001), and the Stoneleigh Foundation. The content of this article is solely the responsibility of the authors and does not necessarily represent the

views of the United States Department of Justice, its agencies, the Stoneleigh Foundation, or other funding organizations.

The authors would like to recognize former Deputy Police Commissioner Kevin Bethel (now, Chief of School Safety in the School District of Philadelphia), former Police Commissioner Charles Ramsey, former Commissioner Richard Ross, Jr., and current Commissioner Danielle M. Outlaw for their work in developing, authorizing, implementing, championing, and continuing the Philadelphia Police School Diversion Program. The authors would also like to recognize School District of Philadelphia Superintendent William R. Hite Jr., Chief of Student Support Services Karyn T. Lynch, Deputy Chief Rachel Holzman, and former Deputy Chief Jody Greenblatt for their support of the program across Philadelphia schools. We also recognize former Philadelphia Department of Human Services Commissioners Anne Marie Ambrose, Vanessa Garrett Harley, and Jessica Shapiro, and current Commissioner Cynthia Figueroa, for their support of the program's creation, implementation, and sustainability. Finally, we offer appreciation to our research partners, Theodore Wills at the School District of Philadelphia, George Kikuchi and Kevin Thomas at the Philadelphia Police Department, and Damon Trent and David Bruce at the Philadelphia Department of Human Services.

Correspondence concerning this article should be addressed to Naomi E. S. Goldstein, Department of Psychology, Drexel University, 3201 Chestnut Street, Stratton Hall, Suite 119, Philadelphia, PA 19104. Email: neg23@drexel.edu

Public Significance Statement

Youth diverted through the Philadelphia Police School Diversion Program appear to be less likely than matched students arrested for school-based offenses to experience exclusionary discipline via suspension in the year following the referring incident. These promising results suggest that prearrest diversion programs can contribute to a reduction in the use of exclusionary discipline in schools and, thus, may improve school climate and contribute to the dismantling of the school-to-prison pipeline.

Keywords: juvenile justice, prearrest diversion, school-to-prison pipeline, school policing, exclusionary discipline

Educational advocates frequently call for reforms aimed at dismantling the school-to-prison pipeline—a process by which schools and school districts, through use of zero-tolerance policies and harsh disciplinary practices, push students out of educational settings and into the justice system (e.g., Heitzeg, 2014). A related and similarly troubling process occurs after youths' arrests and further justice involvement: They often face school suspension and/or expulsion (Bernburg & Krohn, 2003; Kirk & Sampson, 2013). Removed from the protective factors associated with the school environment, suspended and expelled students are at increased risk for negative outcomes, including further school exclusion, school dropout, and future justice involvement (Mittleman, 2018; Monahan et al., 2014).

Prearrest diversion programs, developed to prevent arrest and its collateral consequences (e.g., academic enrollment challenges, employment difficulties; Burrell, 2015), have been suggested as a strategy for dismantling the school-to-prison pipeline (Fam, 2018). One such initiative, the Philadelphia Police School Diversion Program (hereafter, referred to as "Diversion Program"), requires automatically diverting from police custody students with no delinquency history who have been accused of specified summary (e.g., disorderly conduct) and misdemeanor (e.g., trespassing) offenses on school property and facilitates their referral to voluntary community-based services (Goldstein et al., 2019). By diverting students in lieu of arrest, diversion programs may also serve as a method of preventing the negative downstream effects of arrest, such as increased risk for suspension and expulsion. The current study investigated this potential impact, examining whether diversion instead of arrest for school-based offenses reduced the probability of exclusionary school discipline (i.e., suspensions and referral for permanent school removal).

Negative Outcomes of Suspension and Permanent Removal From School

Beyond constituting a normative part of childhood and adolescence, school enrollment and attendance are linked to several positive outcomes for youth. For example, schools offer young people the opportunity to develop supportive relationships with peers and adults (Weber et al., 2016; White & Kelly, 2010) and participate in prosocial extracurricular activities (Mahoney, 2014). These relationships and activities are associated with increased school engagement and connectedness which, in turn, are related positively to academic achievement, school completion, self-efficacy, and general well-being (Korpershoek et al., 2020; Scales et al., 2006; Stanton-Salazar, 2011). Suspensions and expulsions—ostensibly used to remove students from school for engaging in dangerous or illicit

behaviors—prevent youth from accessing the protective factors associated with school, whether for a brief period (i.e., suspension) or an extended time (i.e., expulsion).

Likely related to their removal from school and its protective mechanisms, suspended and expelled students often face several negative personal, academic, and legal outcomes. Experiences with exclusionary discipline sanctions can damage students' feelings of connection to school and their relationships with teachers (Mittleman, 2018; Ramey, 2015). Additionally, students excluded from school via disciplinary sanctions miss critical instructional time, which can contribute to poorer academic performance that compounds over time and widens existing achievement gaps (Morris & Perry, 2016). Youth who are expelled or permanently removed from their regular educational setting through disciplinary transfer to alternative education programs may be at particular risk for poorer academic outcomes, as alternative programs often have limited infrastructure and resources to provide a standard of instruction commensurate with students' original schools (Lehr et al., 2009; Vogell, 2017). Suspensions and permanent school removal are also strongly linked with eventual school dropout (Heitzeg, 2014; Suh & Suh, 2007), leaving youth with fewer employment options and reduced earning potential in adulthood (American Academy of Pediatrics, 2013).

In addition to potentially bringing about negative academic outcomes, it is not clear that exclusionary disciplinary tactics, like suspension, expulsion, and disciplinary transfer, discourage youth from engaging in misbehavior (Weisburst, 2019). In fact, these experiences are often linked to *more* antisocial behavior and often to additional, sometimes escalating, disciplinary sanctions (Heitzeg 2014; Mittleman, 2018; Monahan et al., 2013). Further, students with a history of school-based discipline are also more likely to face future arrest and incarceration, whether during adolescence (Monahan et al., 2014; Mowen & Brent, 2016) or adulthood (Wolf & Kupchik, 2017). Thus, school discipline can often serve as a catalyst that directs youth away from a typical adolescent trajectory and toward a path of challenges across the life span.

Growing Use of Exclusionary Discipline

Rates of exclusionary discipline have increased dramatically within the past 2 decades, despite simultaneously stable or decreasing rates of school violence (Heitzeg, 2014; Weisburst, 2019). The most recent available data suggest that nearly 2.6 million out-of-school suspensions, more than 101,000 expulsions, and approximately 65,000 transfers to alternative education programs occur annually in United States public schools (U.S. Department of Education Office for Civil Rights, 2018). Schools' increased use of

exclusionary responses to student misbehavior, in furtherance of goals related to deterrence and incapacitation, appears to suggest a widespread “criminalization” of school discipline (Hirschfield, 2008, p. 82). The increasing presence of police in schools reflects this trend (e.g., Mittleman, 2018) and contributes to the flow of students into the school-to-prison pipeline through the increased ease and frequency of school-based arrest (Petteruti, 2011). Importantly, when students are arrested for delinquent behavior on campus, they frequently receive a suspension or expulsion for the same misbehavior (Heitzeg, 2014). Additionally, many state laws and school policies mandate or allow for the suspension, expulsion, or transfer of justice-involved students, regardless of whether their arrests occurred at school or in the community (Kirk & Sampson, 2013; Na, 2017; Shah & Strout, 2016).

Even if a student with a history of school-based arrest does not receive a disciplinary sanction for the referring incident, that arrest history can affect the way peers and teachers perceive the student. As explained by labeling theory, youth marked as “deviant” may feel stigmatized by other students, weakening social bonds and school connectedness and pushing youth toward similarly “deviant” peers—all of which might contribute to increased infractions (e.g., acting out, skipping school) that could result in disciplinary responses—including suspensions, expulsions, and disciplinary transfers—that interrupt or remove youth from school (Bernburg et al., 2006; Kirk & Sampson, 2013). Further, once teachers and other school personnel view youth with arrest histories as troublemakers, they may monitor these students more closely and react more harshly to observed misbehavior (Kirk & Sampson, 2013; Mittleman, 2018; Na, 2017). Thus, youth with arrest histories—especially those whose arrests occurred on school grounds—may be at increased risk for exclusionary discipline and the accompanying negative consequences of interrupted schooling, thereby further removing these youth from a prosocial adolescent trajectory and placing them on a pathway to long-term justice involvement.

Reform Efforts

Policies have been enacted at the federal, state, and school district levels to limit schools’ excessive use of exclusionary discipline (Gregory et al., 2017; Heitzeg, 2014) in the hopes of dismantling the school-to-prison pipeline. Further, criminal and juvenile justice stakeholders have also advocated for their peers to act to disrupt their field’s contribution to the widespread pushout of students from schools into the justice system (e.g., Langberg & Fedders, 2013; Teske & Huff, 2011). Collaborative approaches that bring together cross-system stakeholders (e.g., school administrators, police personnel, juvenile court judges) to reduce the frequency that students are referred to and/or arrested by police at school have been identified as a promising strategy to dismantle the school-to-prison pipeline (e.g., Daly et al., 2016). By diverting youth away from arrest, these programs keep disciplinary decision making within the school environment rather than with police or other justice system actors and can help prevent the negative consequences of justice involvement (Goldstein et al., 2019).

Broadly speaking, juvenile diversion aims to reduce youths’ involvement in the justice system, thereby preventing an adjudication record, a formal “delinquent” label, and associated negative consequences (Cocozza et al., 2005; Mears et al., 2016). However, diversion initiatives can be designed in various ways—from basic “warn

and release” policies that occur before arrest to far more structured programs that youth enter postarrest, in lieu of adjudication, that require further action and monitoring of compliance over time (Hoge, 2016; Schlesinger, 2018). Further, eligibility criteria often vary across diversion programs (Cocozza et al., 2005). Likely, in part, because of these sources of heterogeneity, research investigating the efficacy of juvenile diversion programs has produced mixed results (Hoge, 2016; Schwalbe et al., 2012; Wilson & Hoge, 2013). However, scholars consistently agree that most low-risk youth eligible for diversion would benefit most from no justice system intervention (e.g., Schwalbe et al., 2012; Wilson et al., 2018; Wilson & Hoge, 2013). Research focused specifically on school-based diversion initiatives have previously investigated impacts related to rates of school-based referrals and arrests, serious behavioral incidents at school, and future arrest (e.g., Sullivan et al., 2010; Teske, 2011); however, no studies published to date have empirically examined whether implementation of prearrest diversion programs can also reduce the likelihood that youth experience exclusionary school discipline via suspension and referral for permanent removal from school.

Current Study: Philadelphia Police School Diversion Program

In response to the outsized role that school-based arrests played in police referral rates in the city (Goldstein et al., 2019), the Philadelphia Police Department (PPD) developed a prearrest diversion program in partnership with the School District of Philadelphia (SDP) and Department of Human Services (DHS) in 2014. The Philadelphia Police School Diversion Program targets the school-to-prison pipeline by automatically diverting away from arrest students with no history of justice involvement for specific low-level misdemeanor or summary offenses (e.g., disorderly conduct, non-firearm weapon possession) on school property. All eligible youth are diverted through the program based on objective criteria, thus limiting opportunities for implicit biases to influence decision making. Once diverted from arrest, youth have no obligations or requirements to complete as part of the Diversion Program and do not undergo any subsequent monitoring. As a follow up to this diversion from arrest, and ideally within 72 hr, a DHS social worker conducts a home visit and intake screening with the diverted student and their family to identify any potential need for services. When needs are identified, the social worker refers the student to free, community-based prevention services (e.g., substance use treatment, mentoring, academic support) delivered by independent organizations outside of the justice system that are funded via contracts with DHS. Youth enrollment in these services is completely voluntary—declining services does not result in any sanction or arrest for the diverted youth. For more detailed information about the Diversion Program, see Goldstein et al., 2019.

Since implementation, the Diversion Program has enumerated two primary goals: (a) to keep youth out of the justice system—both by reducing arrests in response to school-based misbehavior and by reducing rearrests that frequently occur once youth are in the system (e.g., Grunwald et al., 2010) and (b) to keep youth in school. Previously, we examined research questions related to the first of these two goals, observing that the program appears to have substantially reduced the number of school-based arrests in Philadelphia schools without witnessing an increase in later arrests or in school-based serious behavioral incidents (Goldstein et al., 2021).

However, it is, thus far, unclear whether the program has successfully achieved its second primary goal. Therefore, the current study compared students diverted through the Diversion Program (quasi-experimental sample) with comparable youth who were arrested in Philadelphia schools in the year prior to Diversion Program implementation (quasi-control sample) to evaluate whether program enrollment was associated with a reduced probability of receiving exclusionary school discipline consequences. Of note, exclusionary discipline in Philadelphia schools includes suspension and referral for permanent school removal via expulsion or disciplinary transfer (i.e., when students are compulsorily transferred to alternative education settings).

In line with theoretical and empirical literature, we generated three hypotheses for this study. For Hypothesis 1, we believed that diverted youth would have been less likely than youth in the quasi-control arrested sample to receive a suspension for the school-based incident that led to their diversion or arrest ("referring incident"). For Hypothesis 2, we predicted that diverted youth would have been less likely than youth in the quasi-control arrested sample to be suspended in the 365 days *after* their referring incident. Finally, for Hypothesis 3, we expected that diverted youth would have been less likely than youth in the quasi-control arrested sample to be referred for permanent school removal via expulsion or disciplinary transfer in the 365 days after their referring incident. Finally, given growing concerns about whether juvenile diversion programs produce equitable benefits across youth (e.g., Mears et al., 2016; Samuels-Wortley, 2019), we also sought to explore whether demographic or incident-related factors moderated any observed relationships between diverted/arrested status and our three exclusionary discipline outcomes.

Method

Samples

Researchers received deidentified data from the PPD describing 2,302 Philadelphia school students between 10 and 22 years of age who were either diverted through the Diversion Program from September 2014 to June 2017 or arrested in Philadelphia schools in the 2013–2014 school year—the year before the Diversion Program began. Additionally, we received school-related data (e.g., enrollment information, suspension details) from the SDP for 2,298 of these youth. SDP data were available from September 2012 through June 2018.

Diverted Youth (Quasi-Experimental) Sample

The diverted youth sample included all students enrolled in the Diversion Program between September 2014 and August 2017 ($n = 1,281$). All youth were enrolled in the program if they met Diversion Program eligibility criteria: (a) they had been accused of committing one of several specified delinquent acts (i.e., disorderly conduct, marijuana possession, nonfirearm weapon possession, trespassing, or vandalism) at school; (b) they were at least 10 years of age (the minimum age of arrest in Pennsylvania); and (c) they had no history of delinquency adjudication or any pending adjudications. Youth in the diverted sample were mostly (69%) male and ranged from 10 to 22 years of age ($M = 14.82$, $SD = 2.17$) at the time they were diverted. Black youth were most represented in this

sample (74%); additional racial/ethnic groups represented among diverted students included Hispanic (14%), White (9%), and another race/ethnicity (2%). Of note, because PPD records combine race and ethnicity into a single variable, we were unable to examine these constructs separately. Students were diverted from 212 Philadelphia schools, and the total number of diverted students within each school ranged from 1 to 56 ($M = 5.41$, $SD = 8.85$). Nearly half of youth in this sample (49%) were diverted for nonfirearm weapon possession, with fewer diverted for marijuana possession (38%) or other incident types (14%).

Arrested Youth (Quasi-Control) Sample

The quasi-control sample included all students arrested for school-based offenses in Philadelphia schools in the 2013–2014 school year (i.e., the academic year preceding Diversion Program implementation) who would have been eligible for the Diversion Program if it had existed at the time of their arrest ($n = 531$). Thus, youth in this sample also met the Diversion Program eligibility criteria: arrested for a specified offense, at least 10 years of age, no prior or pending adjudications. Like the diverted youth sample, the quasi-control sample was largely male (62%), between 10 and 19 years of age ($M = 15.50$, $SD = 1.82$) at the time of arrest, and predominantly identified as Black (77%), followed by Hispanic (11%), White (7.7%), and another race/ethnicity (5%). These youth were referred to law enforcement from 101 Philadelphia schools, with the total number of youths arrested at each school ranging from 1 to 52 students ($M = 5.14$, $SD = 8.25$). Nearly half of youth in this sample (46%) were arrested for "other" incident types, with fewer arrested for nonfirearm weapon possession (30%) or marijuana possession (25%).

Measures and Procedures

The PPD's Diversion Program database includes data for all students diverted through the program since its inception—including demographic information (i.e., age at incident, race/ethnicity, gender, school), diversion date, and the most serious type of offense committed (incident type). PPD identified the arrested youth (quasi-control) sample in collaboration with the SDP and the First Judicial District of Pennsylvania by, first, creating a list of all students arrested at Philadelphia schools in the 2013–2014 academic year and then determining which youth would have met eligibility criteria for the Diversion Program, if the program had existed at the time. The SDP created and shared with the PPD a unique study ID number for all diverted and arrested youth to allow the research team to match individual-level data across databases.

The research team worked in partnership with administrators from the PPD and SDP to extract relevant individual-, school-, and district-level data from agency databases to inform long-term Diversion Program evaluation. At prescheduled intervals, PPD Office of Research and Analysis staff extracted information about the diverted and arrested youth samples from the PPD database and transmitted a deidentified version to the researchers. The SDP Office of Evaluation, Research, and Accountability compiled youth records and shared these deidentified data with the research team. The PPD and SDP extracted all data for youth outcome measures directly from agency records, thereby avoiding concerns about youth attrition or response bias that might come from procedures requiring study enrollment and direct participation. The

research team carried out all study procedures in accordance with Drexel University Institutional Review Board policy and with PPD and SDP data licensing agreements.

Youth Demographic and Incident Data

Demographic data for all youth included: gender (male, female); race/ethnicity (Black, White, Hispanic, other); age at arrest or diversion; and school attended. The original race/ethnicity data provided by the PPD included several additional categories (i.e., American Indian/Alaska Native, Asian, Multiracial, unknown, and other); however, due to very low frequencies, we combined all groups other than White, Black, and Hispanic into a single “other race/ethnicity” category. Based on recommendations and guidance from the PPD Office of Research and Analysis, the research team reviewed the primary incident type listed and classified it in one of three categories: nonfirearm weapon possession, marijuana possession, or other (e.g., disorderly conduct, vandalism). For the purposes of these analyses, primary incident type was dichotomized (i.e., marijuana possession compared to nonfirearm weapon possession/other) for simplicity of presentation because nonfirearm weapon possession and other offense types demonstrated similar patterns with regard to the primary outcomes in this study.

Disciplinary Data

To establish baseline experiences of exclusionary school discipline, we examined youth suspension records for the calendar year prior to their referring incident. Preincident suspensions included any suspension occurring in the 365 days prior to the referring incident and we categorized youth as having “no,” “one,” or “two or more” preincident suspensions. Because we only received suspension-related data for students at Philadelphia public schools, we included students in suspension-related analyses only if they were enrolled in a public school for at least 75% of their days enrolled in any school during a given analysis period (e.g., 365 days before the incident, 365 days after the incident).

We also examined three dichotomous (no/yes) outcomes: (a) out-of-school suspension associated with the incident that led to diversion or arrest (incident-related suspension), (b) any suspension within the 365 days following the referring incident (postincident suspension), and (c) any referral for expulsion or disciplinary transfer within 365 days following the referring incident (postincident referral for expulsion or disciplinary transfer). SDP policy changes in 2012 encouraged use of disciplinary transfer in lieu of expulsion, with the two decisions similarly resulting in a student’s permanent removal from their school. As a result, we combined the two forms of school discipline referrals into a single outcome variable of referral for permanent school removal.

We categorized youths’ suspensions as related to their referring incidents if they met one of the following scenarios: (a) the suspension was imposed within one school day of the incident that led to diversion or arrest ($n = 1,053$) or (b) the suspension was imposed within seven calendar days of the referring incident and the corresponding SDP-reported suspension reason matched the PPD-reported incident type ($n = 158$). Additionally, to ensure that we did not omit suspensions linked to the referring incident, we identified all other suspensions that occurred within three school days following a referring incident and two senior research staff jointly reviewed, in detail, the SDP suspension reasons and PPD incident narratives to determine

equivalence. If both researchers agreed that the behaviors described were equivalent, the researchers identified the suspension and incident as related ($n = 87$). If at least one of these researchers questioned the equivalence, the researchers defaulted to a determination that the suspension was not related to the incident ($n = 25$).

Results

Method of Analysis

We first examined differences in baseline characteristics between the diverted youth sample and the quasi-control arrested sample using two-sample independent *t*-tests for continuous variables and chi-square analyses for categorical variables. Then, to reduce the confounding effects of covariates and provide more precise estimates of the Diversion Program’s effects, we created matched diverted and arrested samples via propensity score matching (Austin, 2011; Morgan, 2018). Specifically, we generated matched samples largely equivalent across the following relevant covariates: age at arrest or diversion, gender (male, female), race/ethnicity (Black, others), incident type (marijuana possession, others) and the total number of suspensions in the 365 days prior to the referring incident (0, 1, 2 or more). Of note, we dichotomized race/ethnicity, with Black as the reference group, because the vast majority of students in the SDP and across both samples were identified as Black; additionally, attempting to include the additional race/ethnicity categories as separate groups (with small numbers per group) precluded us from obtaining matched samples with similar propensity scores. Propensity score matching has been widely used in observational studies to estimate treatment effects in the absence of a randomized controlled trial (RCT; Austin, 2011). In this study, we conducted propensity score matching using the R package MatchIt (Ho et al., 2011).

After generating the matched samples of diverted and arrested youth, we examined the effect of the Diversion Program on each of the three school disciplinary outcomes (i.e., incident-related suspension, postincident suspensions, and postincident referral for expulsion or disciplinary transfer) using mixed-effects logistic regression (Bates et al., 2011; Gibbons et al., 2010; Kwok et al., 2008). We chose this modeling strategy to account for the hierarchical structure in the data (i.e., youth were nested within schools). We then added all the covariates used to create the matched samples to the mixed-effects logistic regression models to test whether any of these covariates predicted our disciplinary outcomes. We then conducted moderation analyses by examining interactions between diverted or arrested status and each covariate as separate mixed-effects logistic regression models (Hayes & Rockwood, 2017). This technique allowed us to investigate whether the main effect of diverted status was moderated by any relevant covariates. Although we considered adjusting our threshold significance level because of multiple comparisons, given the exploratory nature of these moderation analyses and concerns about increasing the risk for type II error, we adhered to recommendations for observational research (e.g., Althouse, 2016) and maintained the traditional alpha level of .05. Finally, to determine whether the SDP’s overall trend toward reduced rates of exclusionary discipline over time influenced our results, we performed a cohort analysis among diverted youth, using chi-square tests of independence to examine whether diversion

year served as a predictor of each of our primary outcomes (i.e., incident-related suspension, postincident suspension, postincident referral for expulsion or disciplinary transfer).

Descriptive Data

Across the entire sample of examined youth, schools suspended 69% of students as a result of their referring incident; 68% of diverted youth and 72% of arrested youth experienced this outcome. Further, schools suspended 41% of the overall sample within 365 days of the referring incident; 38% of diverted youth and 48% of arrested youth received a postincident suspension. Finally, 11% of the overall sample experienced postincident referral for permanent removal from school via disciplinary transfer or expulsion; 10% of diverted youth and 13% of arrested youth experienced postincident referral for permanent school removal through one of these two methods.

Initial comparisons of the diverted youth sample ($n = 1,281$) and the quasi-control arrested sample ($n = 531$) demonstrated significant group differences in nearly all examined covariates. As shown in Table 1, these samples differed significantly by age at diversion or arrest, gender, incident type, and the total number of suspensions 365 days before referring incident, but not race/ethnicity. We used propensity score matching to account for these baseline differences between diverted and arrested samples when estimating the effect of the Diversion Program on school disciplinary outcomes. After matching, the propensity score distributions for the two samples were much more similar than previously observed (as displayed in Figure 1) and the samples no longer differed significantly on any of the examined covariates.

Hypothesis 1: Incident-Related Suspension

Results from our initial mixed-effects logistic regression did not identify a significant difference in the probability of incident-related suspension between the matched samples of diverted and arrested youth, $OR = 0.83$, 95% CI [0.60, 1.15], $p = .26$. See Figure 2 for a graphical representation of between-group comparisons without

covariates. We then incorporated covariates into the model, including age at diversion or arrest, gender, race/ethnicity, incident type, and number of preincident suspensions. As shown in Table 2, none of these covariates demonstrated significant relationships with incident-related suspension. We also conducted a cohort analysis among our matched diverted youth sample to examine whether youths' diversion year might be linked to their likelihood of incident-related suspension. Results revealed no such significant relationship, $\chi^2(df = 2) = 0.12$, $p = .94$, $V = .04$, 95% CI [-0.19, .27].

Finally, we explored interactions between the selected covariates and youths' diverted or arrested status (see Table 2). Results revealed that age at diversion or arrest significantly moderated the effect of youths' diverted or arrested status on the likelihood of incident-related suspension. Specifically, as age increased, the difference in the likelihood of incident-related suspension between arrested youth and diverted youth also increased. Figure 3 displays this trend and shows that arrested youth consistently experienced higher likelihoods of incident-related suspension than diverted youth, regardless of age. Gender also displayed a significant moderating effect. Posthoc analyses indicated that, for female students only, youths' diverted or arrested status was significantly associated with the likelihood of receiving an incident-related suspension; arrested girls were significantly more likely than diverted girls to experience this form of discipline, $OR = 0.47$, 95% CI [0.27, 0.82], $p = .008$. Further, within the arrested youth sample, girls were significantly more likely to receive an incident-related suspension than boys, $OR = 2.19$, 95% CI [1.31, 3.76], $p = .003$. We did not observe significant gender differences among diverted youth, $OR = 0.74$, 95% CI [0.47, 1.17], $p = .20$, or significant differences between arrested boys and diverted boys, $OR = 1.19$, 95% CI [0.80, 1.79], $p = .39$. No moderating effects were observed for the remaining covariates (i.e., race/ethnicity, incident type, number of preincident suspensions).

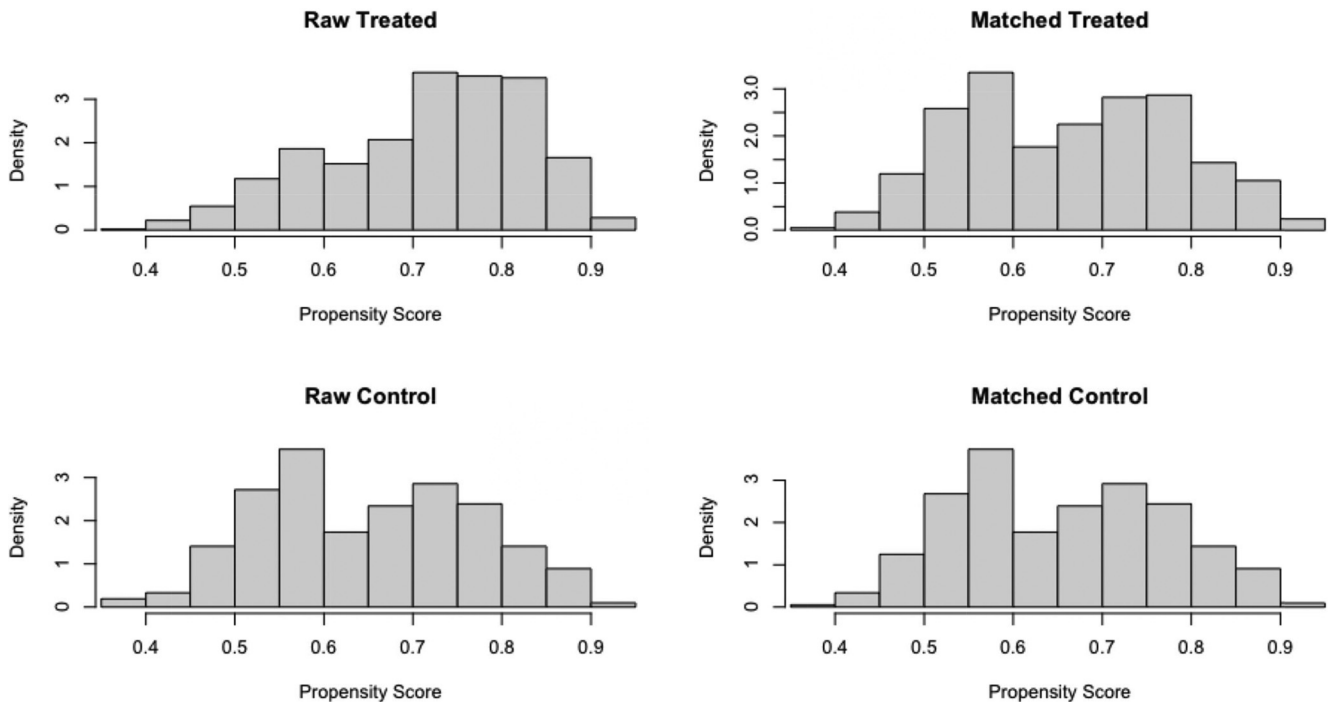
Hypothesis 2: Postincident Suspension

Initial comparisons of the matched samples of diverted and arrested youth indicated that diverted youth were less likely to

Table 1
Comparing Baseline Characteristics of Diverted and Quasi-Control Samples

Variable	Diverted sample ($n = 1,281$) $M (SD)$	Quasi-Control sample ($n = 531$) $M (SD)$	t	df	p	d [95% CI]
Age at arrest/diversion	14.82 (2.17)	15.50 (1.82)	6.35	1,810	<.001	0.33 [0.23, 0.43]
	n (%)	n (%)	χ^2	df	p	V [95% CI]
Gender			8.95	1	.003	0.07 [0.02, 0.12]
Female	395 (30.8%)	203 (38.2%)				
Male	886 (69.2%)	328 (61.8%)				
Race/ethnicity			1.41	1	.24	0.03 [0.00, 0.08]
Black	946 (73.8%)	407 (76.6%)				
Others	335 (26.2%)	124 (23.4%)				
Incident type			28.55	1	<.001	0.13 [0.08, 0.17]
Marijuana possession	484 (37.9%)	131 (24.7%)				
Other	797 (62.1%)	400 (75.3%)				
Prior-year suspensions			10.55	2	.005	0.00 [0.04, 0.14]
0	511 (51.3%)	182 (41.9%)				
1	204 (20.5%)	104 (24.0%)				
2 or more	282 (28.3%)	148 (34.1%)				

Note. Bold values denote statistical significance at the $p < 0.05$ level.

Figure 1*Histograms Displaying the Density of Propensity Scores Before and After Matching*

Note. Raw and matched treated groups refer to the diverted sample before and after propensity score matching, respectively. Raw and matched control groups refer to the arrested sample before and after propensity matching, respectively.

have one or more postincident suspensions, $OR = 0.67$, 95% CI [0.49, 0.91], $p = .01$. See Figure 2 for a graphical representation of between-group comparisons without covariates. We also examined the effects of selected covariates on the likelihood of receiving postincident suspensions; results are displayed in Table 3. Age at diversion or arrest significantly predicted postincident suspensions, with older youth, on average, less likely to receive a suspension within the year following the referring incident. Further, race/ethnicity demonstrated a significant relationship with this outcome, with Black youth, on average, more likely to receive a postincident suspension. Additionally, the indicator variable reflecting youths' preincident suspensions appeared to significantly predict postincident suspension, such that youth without any preincident suspensions were less likely than youth with at least two preincident suspensions to receive a postincident suspension. Additional covariates—including gender, incident type, and the indicator variable comparing youth with no preincident suspensions to youth with one preincident suspension—failed to demonstrate significant relationships with postincident suspension.

Importantly, even after the inclusion of selected covariates, the relationship between youths' diverted or arrested status and the likelihood of postincident suspension remained significant (shown in Table 3). We also tested the potential moderating effects of our examined covariates; however, as displayed in Table 3, no covariate significantly moderated the main effect of youths' diverted/arrested status on likelihood of postincident suspension. Finally, we conducted a cohort analysis among our matched diverted

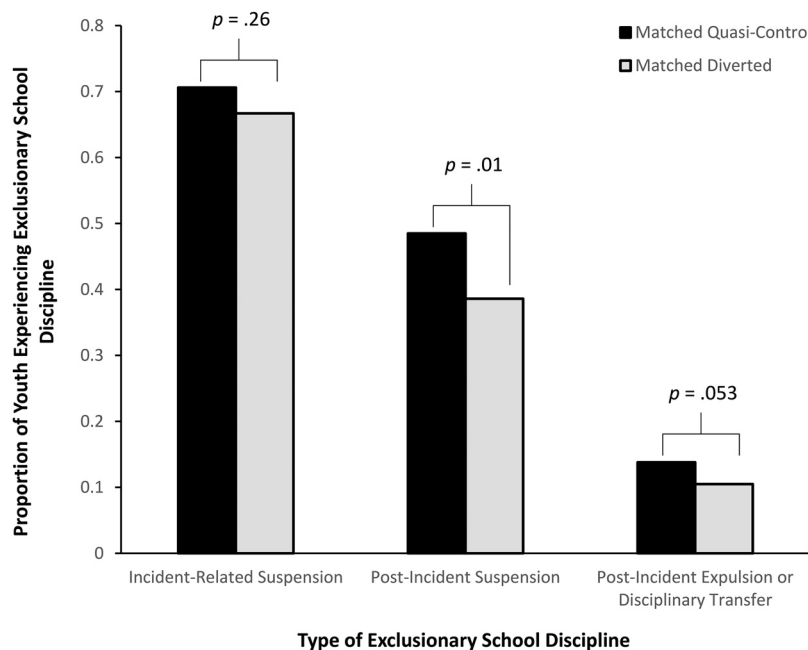
sample to examine whether the year in which youth were diverted might impact their likelihood of postincident suspension. Results revealed no such significant relationship, $\chi^2(df = 2) = 3.78$, $p = .15$, $V = .24$, 95% CI [.00, .48].

Hypothesis 3: Postincident Referral for Removal From School Via Expulsion or Disciplinary Transfer

Mixed-effects logistic regression results did not reveal a significant difference between the matched samples of diverted and arrested youth in the likelihood of receiving a postincident referral for expulsion or disciplinary transfer, $OR = 0.65$, 95% CI [0.42, 1.01], $p = .053$. See Figure 2 for a graphical representation of between-group comparisons without covariates. When we added relevant covariates to the model (see Table 4), we observed that youth with at least two preincident suspensions were more likely to have a postincident referral for expulsion or disciplinary transfer than youth with no preincident suspensions. The remaining covariates were not statistically significant, including age at diversion or arrest, gender, race/ethnicity, incident type, and the indicator variable comparing youth with no preincident suspensions to youth with one preincident suspension.

Of note, after we incorporated all covariates into the mixed-effects logistic regression model, the sample indicator (i.e., diverted or arrested) became statistically significant, as shown in Table 4. This finding suggests that including these covariates in the model helped explain some of the variance in the outcome, thereby allowing us to

Figure 2
Exclusionary School Discipline Outcomes by Sample, After Propensity Score Matching



Note. Proportions and *p*-values in this figure represent data and findings for models conducted following propensity score matching to generate equivalent groups, but *before* adding covariates.

better detect the effect of the Diversion Program. The direction of the observed relationship indicated that diverted youth were less likely than arrested youth to receive a postincident referral for expulsion or disciplinary transfer when holding the values of the other covariates constant. Additionally, although we examined selected covariates as potential moderators of the relationship between diverted or arrested status and postincident referral for expulsion or disciplinary transfer, results presented in Table 4 demonstrate no moderating effects.

Finally, we conducted a cohort analysis among our matched diverted sample to examine whether the year in which youth were diverted might impact their likelihood of postincident referral for school removal. Results revealed a significant relationship, $\chi^2(df = 2) = 19.93$, $p < .001$, $V = .55$, 95% CI [.31, .79]. Further examination of these data indicated that although the likelihood of a postincident referral for school removal for youth diverted in the 2014–2015 and 2015–2016 school years was similar to that of the

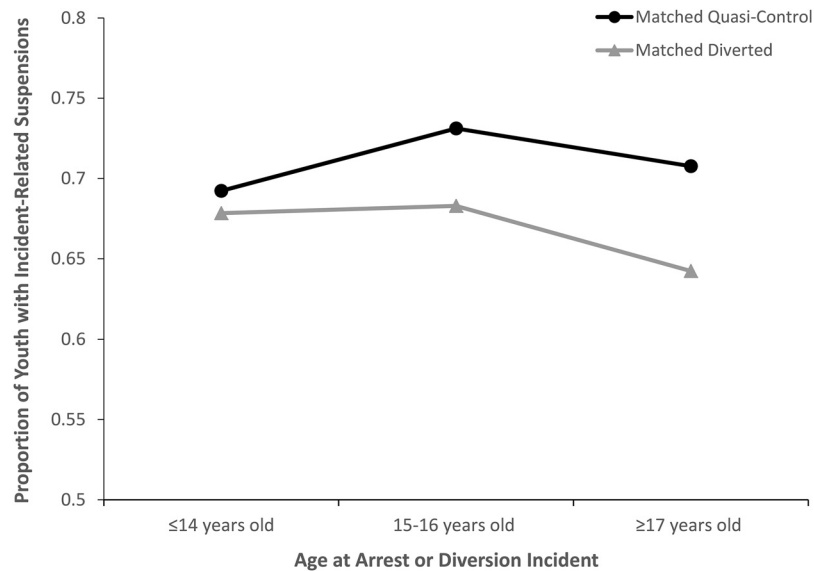
Table 2
Mixed-Effects Logistic Regression Analyses: Factors Linked to Incident-Related Suspension

Variable	<i>b</i>	<i>SE</i>	<i>p</i>	<i>OR</i>	95% CI
Diverted/arrested status ^a	−0.19	0.17	.26	0.83	[0.60, 1.15]
Age at incident ^a	−0.09	0.05	.08	0.91	[0.82, 1.01]
Gender ^a (ref: male)	0.22	0.18	.22	1.24	[0.88, 1.77]
Race/ethnicity ^a (ref: Black)	−0.01	0.21	.96	0.99	[0.65, 1.49]
Incident type ^a (ref: Marijuana)	0.04	0.19	.85	1.04	[0.71, 1.52]
Preincident suspensions ^a (ref: 0)					
One preincident suspension	−0.13	0.20	.53	0.88	[0.59, 1.31]
Two preincident suspension	−0.05	0.20	.82	0.96	[0.65, 1.40]
Status × Age at Incident	−0.18	0.09	.04	0.84	[0.71, 0.99]
Status × Gender	−1.13	0.34	.001	0.32	[0.16, 0.63]
Status × Race/Ethnicity	0.39	0.38	.31	1.48	[0.70, 3.17]
Status × Incident Type	0.08	0.37	.83	1.08	[0.53, 2.23]
Status × One Preincident Suspension	0.75	0.39	.06	2.11	[0.98, 4.60]
Status × Two Preincident Suspension	0.50	0.38	.18	1.65	[0.79, 3.46]

Note. Moderation analyses were conducted independently. Bold values denote statistical significance at the $p < 0.05$ level.

^a These variables were all entered simultaneously into the initial model.

Figure 3
Proportion of Incident-Related Suspensions by Age at Incident Across Matched Samples



youth arrested in the 2013–2014 school year, only one student diverted in 2016–2017 had such a referral.

Discussion

To evaluate whether the Philadelphia Police School Diversion Program achieved its goal of keeping youth in school, this study compared rates of exclusionary discipline within the year following youths' diversion from school-based arrest to rates for comparable youth arrested for similar school-based offenses in the year before the Diversion Program began. Although diverted and arrested youth did not differ in rates of suspension for the incident that brought them into contact with police, findings show promise for the program in reducing the likelihood of suspension in the year following

a student's school-based incident, even when controlling for other relevant factors (i.e., incident type, youth demographics, preincident suspensions). Further, the relationship between youths' diverted or arrested status and their likelihood of receiving an incident-related suspension may depend on age and gender.

Incident-Related Outcomes

The Diversion Program requires automatic enrollment of all eligible youth in lieu of arrest without removing disciplinary decision-making authority from school administrators. Thus, it may not be surprising that rates of incident-related suspensions did not decrease for diverted youth compared to arrested youth. If school personnel requested the assistance of school police in response to

Table 3
Mixed-Effects Logistic Regression Analyses: Factors Linked to Postincident Suspension

Variable	<i>b</i>	<i>SE</i>	<i>p</i>	<i>OR</i>	95% CI
Diverted/arrested status ^a	−0.46	0.16	.004	0.63	[0.46, 0.86]
Age at incident ^a	−0.21	0.05	.001	0.81	[0.74, 0.88]
Gender ^a (ref: male)	0.11	0.16	.50	1.12	[0.81, 1.53]
Race/ethnicity ^a (ref: Black)	0.61	0.19	.001	1.84	[1.27, 2.68]
Incident type ^a (ref: Marijuana)	−0.02	0.19	.93	0.98	[0.68, 1.43]
Preincident suspensions (ref: 0)					
One preincident suspension ^a	0.23	0.21	.27	1.25	[0.83, 1.88]
Two preincident suspension ^a	1.01	0.18	<.001	2.74	[1.94, 3.88]
Status × Age at Incident	−0.06	0.08	.46	0.94	[0.80, 1.11]
Status × Gender	−0.46	0.32	.15	0.63	[0.33, 1.18]
Status × Race/Ethnicity	−0.33	0.37	.38	0.72	[0.35, 1.49]
Status × Incident Type	0.17	0.36	.65	1.18	[0.58, 2.41]
Status × One Preincident Suspension	−0.28	0.42	.51	0.76	[0.33, 1.73]
Status × Two Preincident Suspension	−0.14	0.35	.70	0.87	[0.44, 1.73]

Note. Moderation analyses were conducted independently, and each moderation analysis included all significant covariates from the initial model. Bold values denote statistical significance at the $p < 0.05$ level.

^a These variables were all entered simultaneously into the initial model.

Table 4*Mixed-Effects Logistic Regression Analyses: Factors Linked to Postincident Referral for Removal*

Variable	<i>b</i>	<i>SE</i>	<i>p</i>	<i>OR</i>	95% CI
Diverted/arrested status ^a	−0.50	0.23	.03	0.61	[0.39, 0.95]
Age at incident ^a	−0.09	0.07	.17	0.91	[0.80, 1.04]
Gender(ref: male)	−0.35	0.25	.16	0.71	[0.43, 1.15]
Race/ethnicity ^a (ref: Black)	0.04	0.27	.89	1.04	[0.61, 1.77]
Incident type ^a (ref: Marijuana)	−0.13	0.27	.63	0.88	[0.52, 1.48]
Preincident suspensions (ref: 0)					
One Preincident suspension ^a	0.24	0.32	.44	1.28	[0.69, 2.37]
Two Preincident suspensions ^a	0.77	0.26	.004	2.16	[1.29, 3.61]
Status × Age at Incident	0.02	0.11	.88	1.02	[0.81, 1.28]
Status × Gender	0.65	0.48	.18	1.92	[0.74, 5.00]
Status × Race/Ethnicity	0.60	0.51	.24	1.82	[0.67, 5.07]
Status × Incident Type	−0.05	0.51	.93	0.95	[0.35, 2.62]
Status × One Preincident Suspension	0.09	0.63	.88	1.10	[0.31, 3.89]
Status × Two Preincident Suspension	−0.32	0.51	.54	0.73	[0.26, 2.04]

Note. Moderation analyses were conducted independently, and each moderation analysis included all significant covariates from the initial model. Bold values denote statistical significance at the $p < 0.05$ level.

^a These variables were all entered simultaneously into the initial model.

a student's misbehavior, they may have viewed that behavior as sufficiently serious to warrant a disciplinary response, even if the student was ultimately diverted from arrest. This series of events might be particularly common among school administrators who believe that holding students accountable for their behavior teaches them to behave differently in the future (e.g., DeMatthews et al., 2017). Importantly, during Diversion Program development, some stakeholders expressed concern that school administrators would issue *more* incident-related suspensions in response to youths' diversion to ensure that they were held accountable for their actions. However, the descriptively lower rate of incident-related suspensions for diverted youth belies this prediction.

In addition to its goals related to reducing school-based arrests, the Diversion Program sought to keep youth in school. As a result, during the initial stages of program implementation, school personnel received training on conflict resolution and mediation techniques to encourage their use of these techniques in lieu of using exclusionary discipline (Goldstein et al., 2019). These trainings occurred within the context of national and international efforts to reduce use of exclusionary discipline in schools through student- and school-focused intervention programs (Jean-Pierre & Parris-Drummond, 2018). However, future efforts aimed at reducing rates of incident-related suspensions for diversion-eligible youth should target school personnel more directly—for example, by encouraging or requiring principals to utilize alternatives to out-of-school suspension (e.g., restorative justice practices), especially in response to the less serious forms of behavior for which youth are ultimately diverted.

Although we did not observe significant differences in incident-related suspension between arrested and diverted youth, exploratory moderation analyses suggested that the relationship between these factors may depend on youths' age and gender. First, as student age increased, the difference in the likelihood of an incident-related suspension between arrested youth and diverted youth increased. The between-sample similarity in incident-related suspension rates through approximately age 14 might suggest greater consistency in disciplinary approaches to student behaviors—regardless of diversion or arrest decision—among district elementary and middle schools than among district high schools. Then, as

students get older and enter high school, school personnel may be more likely to respond to a school-based incident that resulted in arrest by removing the student via suspension, perhaps because of fears related to arrested youths' dangerousness and risk to other students (Curran et al., 2019; Watson & Stevenson, 2020). In contrast, district-wide emphasis on improving graduation rates (School District of Philadelphia, 2017; 2020) and implicit or explicit knowledge about the relationship between suspension and school dropout (Heitzeg, 2014; Suh & Suh, 2007) may lead school personnel to prioritize finding alternative measures of discipline for older diverted students to increase their likelihood of graduating from school. Finally, although the School District of Philadelphia removed zero tolerance policies from its code of conduct in 2012, school personnel may not have a thorough understanding of the resulting changes in policy and practice. Most relevantly, they may incorrectly believe that, once arrested for a school-based incident, youth in high school must also be suspended. This mistaken belief may arise from individuals' lack of knowledge about specific district requirements and their observations of how other personnel respond to youth who are arrested in schools. Moving forward, the SDP may benefit from assessing such beliefs among their staff and providing additional training and education about current discipline policies as appropriate.

Second, exploratory moderation analyses suggested that, among female students, arrested youth were more likely than diverted youth to be suspended for their school-based incident, and, among arrested youth, female students were more likely than male students to experience this form of exclusionary discipline. Previous research suggests that girls are more harshly punished than boys for behaviors typically considered masculine, such as expressing anger or acting aggressively toward others (e.g., Moore & Padavic, 2010; Spivak et al., 2014). Additionally, this disparate treatment is particularly apparent among Black girls (e.g., Annamma et al., 2019; Morris & Perry, 2017), a relevant discrepancy given that our samples—and Philadelphia public schools in general—are comprised of predominantly Black students. Given that boys are typically arrested much more frequently than girls (Puzzanchera, 2020; Tracy et al., 2009), school administrators may perceive an arrest as more normative for male students. Thus, by violating this

gender norm, arrested girls may face increased fallout from their school-based incidents, increasing their likelihood of suspension relative to both diverted girls and arrested boys. The fact that we observed differences between arrested and diverted girls, but not arrested and diverted boys, might indicate that diversion serves more of a protective function for girls than it does for boys, a proposition consistent with previous research finding that boys are more likely than girls to be labeled as troublemakers or rule violators, even when they do not engage in delinquent behavior (e.g., Bartusch & Matsueda, 1996; De Coster & Lutz, 2018). Additionally, potential implicit biases about female students of color as disruptive and defiant could contribute to observed disparities, particularly when gender and/or race of students and school personnel do not match (Dee, 2005; Lindsay & Hart, 2017). These findings may support existing proposals for the use of culturally competent interventions in schools, especially those that target broader, systemic mechanisms of change rather than those that focus solely on individual students (e.g., Gregory et al., 2017; Welsh & Little, 2018).

Postincident Outcomes

Promising results regarding postincident use of exclusionary discipline revealed that diverted youth were less likely than arrested youth to be suspended from school in the year following a referring incident. This outcome could be perceived as aligning with labeling theory literature; for example, perhaps when youths' misbehavior at school is decriminalized (i.e., deemed not serious enough for arrest), peers, teachers, and other school personnel were less likely to view diverted students as "delinquent" or "troublemakers" (Bernburg et al., 2006; Kirk & Sampson, 2013). In such cases, students might then better maintain prosocial relationships within their school communities and school personnel might be more willing to grant leniency rather than suspend them in response to future misbehavior (Wolf & Kupchik, 2017). Further, these findings provide support for the Diversion Program as a method to help keep youth in schools over time.

The fact that the number of preincident suspensions predicted postincident suspension aligns with previous research demonstrating that one or more instances of suspension often leads to future use of the same form or escalating forms of discipline (Heitzeg, 2014; Mittleman, 2018). Youth with multiple recent suspensions may be disadvantaged by a "troublemaker" or "frequent flyer" label—regardless of whether they were diverted or arrested more recently—with school staff less willing to provide them leniency for future misbehavior, leading to increased rates of suspension in the following year.

Age and race also demonstrated significant relationships with postincident suspension. With regard to age-related findings, school administrators may view certain types of misbehavior, such as marijuana possession or disorderly conduct, as more normative among older youth than younger youth (e.g., Buchanan & Holmbeck, 1998; Wiley, 2015), obviating the perceived need to address behavior with a serious disciplinary consequence. In contrast, when younger students engage in similar misbehavior, school personnel may view it with greater concern for both the youth and other students in the school and, therefore, react more severely. Although responding with exclusionary discipline may do more harm than good (e.g., Mittleman, 2018), heightened concerns

about younger youths' misbehavior is evidenced-based, given that youth with early onset disruptive behavior are more likely to continue engaging in antisocial behavior over time (Silberg et al., 2015). We also recognize that an argument could be made that older diverted youth were less likely to be suspended immediately following their referring incident because they, instead, faced harsher discipline (e.g., expulsion, disciplinary transfer); however, age was unrelated to referral for permanent removal from school, so this scenario is unlikely.

Finally, postincident suspension differences based on race/ethnicity unfortunately align with extant research demonstrating disproportionately high suspension rates among Black students (Skiba, Chung, et al., 2014; Sullivan et al., 2013). Potential explanations for this disparity include differential rates of initial referral (e.g., Black students are more likely than White students to be referred for discipline for more subjective behaviors, like defiance or disrespect) and differential response at the administrative level (e.g., Black students are more likely than White students to receive harsher punishments for the same behaviors), both of which could potentially be attributed to implicit biases among teachers and other school administrators (e.g., Skiba et al., 2011). Further, although nesting youth within schools accounted for some of the school-level variance in outcome, other potential confounding variables at the school level (e.g., school climate) may have contributed to observed differences based on age and/or race.

Importantly, results of a cohort analysis demonstrated that the likelihood of referral for permanent school removal in the year following diversion decreased dramatically for students diverted from arrest during the 2016–2017 school year. Given that disciplinary transfer decisions are made by school district personnel—whereas suspensions are imposed by school personnel—this finding may reflect SDP-wide efforts to reduce rates of the most punitive form of discipline. District-level policy changes may not quickly filter down to the individual schools, principals, administrators, and other staff, thereby reducing the likelihood that a similar effect would be observed for postincident suspension decisions. However, it would be useful to continue investigating potential cohort effects during future extensions and expansions of the Diversion Program evaluation.

Implications of Keeping Youth in School

Reducing the likelihood of out-of-school suspension can contribute to several positive outcomes, both for individual youth and for their greater school communities. On the individual level, by staying in school, young people can continue to benefit from the protective factors associated with school enrollment and attendance, maintain connections to prosocial peers and adults, and engage in extracurricular activities that promote positive youth development (Korpershoek et al., 2020). Further, students who avoid suspension also avoid the negative personal, academic, and legal consequences associated with such exclusionary discipline (Perry & Morris, 2014; Wolf & Kupchik, 2017). Given that diverted youth also avoid an arrest record—which itself often leads to several additional adverse collateral consequences (e.g., fewer employment opportunities, housing challenges)—diversion in lieu of arrest may help youth continue on a normative adolescent trajectory.

Along with direct benefits to diverted youth, Philadelphia school communities should also benefit from positive Diversion Program outcomes. For instance, extant research suggests that

schools with high rates of exclusionary discipline are also perceived poorly by students in terms of school climate—a factor positively linked to academic achievement and negatively linked to antisocial behavior (Skiba, Arredondo, & Williams, 2014). Additionally, racial/ethnic disparities in out-of-school suspensions at the school level has been linked to reduced connectedness to school adults for *all* students—not just those from minority racial/ethnic groups (Anyon et al., 2016). Thus, reducing the use of exclusionary discipline—and reducing existing disproportionalities—may also contribute to improved school climate and student-teacher engagement. Further, because students with a history of suspension frequently receive additional suspensions (e.g., Mittleman, 2018), these students often exit school and return on several occasions; reducing the suspension rate, likely, would also reduce the disruption that such cycles cause to the classroom environment for fellow students.

Limitations

Results and implications from the current study must be considered in conjunction with study limitations. For example, questions about the success of the Diversion Program attaining its goals would ideally have been investigated using a RCT. However, given the well-established negative effects of arrest, randomizing youth or schools to an “arrest” condition would have exposed some youth to harmful consequences and, therefore, would have been inappropriate and unethical. Further, the PPD instituted the Diversion Program across all Philadelphia schools at the same time, thus precluding the opportunity for randomization. Instead, we utilized a quasi-experimental study design, rigorously generating a quasi-control sample using the same eligibility criteria as the Diversion Program and employing propensity score matching techniques to further reduce group differences on potentially confounding variables. Regarding our analytic strategy, we recognize that the large number of moderation analyses may have resulted in an increased risk for type I error. However, given the exploratory nature of these moderation analyses, we chose to focus on reducing the risk of type II error, which would prohibit the identification of important information about for whom the Diversion Program works best.

Examining school discipline outcomes during a one-year period postincident could potentially be considered another study limitation, as incorporating a longer follow-up period might have provided additional results that complemented or contrasted with our current findings. We would expect that a school-based arrest—or diversion, in lieu of such arrest—would have more immediate and intermediate effects on school discipline, but research should consider how rates of exclusionary discipline between arrested and diverted youth may differ over longer time periods as well. However, in doing so, it would be important to consider the challenges inherent in comparing program effects across different school years, as there are many additional external factors that change within a school district each year that could confound such results. We also acknowledge that, though we would have liked to examine the likelihood of students receiving an incident-related referral for expulsion or disciplinary transfer in addition to examining incident-related suspensions, a lack of descriptive information about the reasons for removal referral prevented us from including that outcome variable in our analyses. Further, we recognize that certain individual- and school-level factors potentially contributing to

the use of exclusionary discipline (e.g., rates of misbehavior, school demographics) would have improved our ability to draw conclusions; however, these data were not available for this study.

Study limitations also include the fact that race and ethnicity were combined into one variable in the PPD data used to conduct study analyses and that we had to dichotomize the race/ethnicity categories to use propensity score matching when creating equivalent groups for comparison. Given established disparities in justice system contact and penetration for youth of color, separating these characteristics and groups would have allowed for a more nuanced examination and may have illuminated additional between-group differences. As a result, future inquiry into these areas of study should focus on obtaining data from larger, more diverse groups of students. Finally, although there may be questions about whether voluntary preventative service referral and participation following diversion may have influenced likelihood of exclusionary discipline, these data were unavailable for analysis at the time of the current study.

Future Directions

Building upon current findings that suggest the Diversion Program can help keep students in schools, future research might examine other school-related outcomes of this program and other diversionary efforts for school-based offenses, such as academic achievement, grade progression, and graduation, as these variables are frequently associated with school enrollment and attendance (e.g., Korpershoek et al., 2020). Similarly, questions about whether the Diversion Program positively impacts school climate are worth exploring, as corresponding decreases in the number of school-based arrests and in the likelihood of suspension and referral for permanent removal following an incident may serve as important mechanisms for improving student and teacher perceptions of, and interactions within, the educational environment. Finally, further inquiry into how school personnel perceive the Diversion Program—including their roles and the role of exclusionary discipline in the wake of implementation—could provide useful context for current findings and identify ways in which educational stakeholders may wish to be further supported.

Conclusion

It appears that the Philadelphia Police School Diversion Program disrupts the school-to-prison pipeline in two primary ways. First, by diverting youth from arrest for school-based offenses, the program directly and immediately helps youth avoid justice system involvement and the negative trajectories that often occur following arrest. Second, the program may also indirectly influence future justice involvement and promote positive youth trajectories by helping students avoid certain forms of exclusionary school discipline and their associated consequences, including future police contact and arrest. Additionally, specific groups of youth—such as students with multiple suspensions in the preceding year, younger students, and male students—may benefit from additional support to facilitate positive outcomes. Continued evaluation of this program and its direct and indirect impacts on youths’ future justice involvement would likely inform local stakeholders as the program evolves and could influence widespread uptake of similar programming elsewhere.

References

- Althouse, A. D. (2016). Adjust for multiple comparisons? It's not that simple. *The Annals of Thoracic Surgery*, 101(5), 1644–1645. <https://doi.org/10.1016/j.athoracsur.2015.11.024>
- American Academy of Pediatrics. (2013). Policy statement: Out-of-school suspension and expulsion. *Pediatrics*, 131, e1000–e1007. <https://doi.org/10.1542/peds.2012-3932>
- Annamma, S. A., Anyon, Y., Joseph, N. M., Farrar, J., Greer, E., Downing, B., & Simmons, J. (2019). Black girls and school discipline: The complexities of being overrepresented and understudied. *Urban Education*, 54(2), 211–242. <https://doi.org/10.1177/0042085916646610>
- Anyon, Y., Zhang, D., & Hazel, C. (2016). Race, exclusionary discipline, and connectedness to adults in secondary schools. *American Journal of Community Psychology*, 57(3–4), 342–352. <https://doi.org/10.1002/ajcp.12061>
- Austin, P. C. (2011). An introduction to propensity score methods for reducing the effects of confounding in observational studies. *Multivariate Behavioral Research*, 46(3), 399–424. <https://doi.org/10.1080/00273171.2011.568786>
- Bartusch, D., & Matsueda, R. (1996). Gender, reflected appraisals, and labeling: A cross-group test of an interactionist theory of delinquency. *Social Forces*, 75(1), 145–176. <https://doi.org/10.2307/2580760>
- Bates, D., Maechler, M., & Bolker, B. (2011). lme4: linear mixed-effects models (R package, version 0.999375-42). <http://CRAN.R-project.org/package=lme4>
- Bernburg, J. G., & Krohn, M. D. (2003). Labeling, life changes, and adult crime: The direct and indirect effects of official intervention in adolescence on crime in early adulthood. *Criminology*, 41(4), 1287–1318. <https://doi.org/10.1111/j.1745-9125.2003.tb01020.x>
- Bernburg, J. G., Krohn, M. D., & Rivera, C. J. (2006). Labeling, criminal embeddedness and subsequent delinquency: A longitudinal test of labeling theory. *Journal of Research in Crime and Delinquency*, 43(1), 67–88. <https://doi.org/10.1177/0022427805280068>
- Buchanan, C. M., & Holmbeck, G. N. (1998). Measuring beliefs about adolescent personality and behavior. *Journal of Youth and Adolescence*, 27(5), 607–627. <https://doi.org/10.1023/A:1022835107795>
- Burrell, S. (2015). Collateral consequences of juvenile court: Boulders on the road to good outcomes. In N. E. Dowd (Ed.), *A new juvenile justice system: Total reform for a broken system* (pp. 333–347). New York University Press. <https://doi.org/10.18574/nyu/9781479898800.003.0020>
- Cocozza, J. J., Veysey, B. M., Chapin, D. A., Dembo, R., Walters, W., & Farina, S. (2005). Diversion from the juvenile justice system: The Miami-Dade Juvenile Assessment Center Post-Arrest Diversion Program. *Substance Use & Misuse*, 40(7), 935–951. <https://doi.org/10.1081/JA-200058853>
- Curran, F. C., Fisher, B. W., Viano, S., & Kupchik, A. (2019). Why and when do school resource officers engage in school discipline? The role of context in shaping disciplinary involvement. *American Journal of Education*, 126(1), 33–63. <https://doi.org/10.1086/705499>
- Daly, B., Hildenbrand, A. K., Haney-Caron, E., Goldstein, N. E. S., Galloway, M., & DeMatteo, D. (2016). Disrupting the school-to-prison pipeline: Strategies to reduce the risk of school-based zero tolerance policies resulting in juvenile justice involvement. In K. Heilbrun (Ed.), *APA handbook of psychology and juvenile justice* (pp. 257–275). American Psychological Association. <https://doi.org/10.1037/14643-012>
- De Coster, S., & Lutz, J. (2018). Reconsidering labels and primary deviance: False appraisals, reflected appraisals, and delinquency onset. *Journal of Research in Crime and Delinquency*, 55(5), 609–648. <https://doi.org/10.1177/0022427818771437>
- Dee, T. S. (2005). A teacher like me: Does race, ethnicity, or gender matter? *The American Economic Review*, 95(2), 158–165. <https://doi.org/10.1257/000282805774670446>
- DeMatthews, D. E., Carey, R. L., Olivarez, A., & Moussavi Saeedi, K. (2017). Guilty as charged? Principals' perspectives on disciplinary practices and the racial discipline gap. *Educational Administration Quarterly*, 53(4), 519–555. <https://doi.org/10.1177/0013161X17714844>
- Farn, A. (2018). *Improving outcomes for justice-involved youth through structured decision-making and diversion*. Center for Juvenile Justice Reform.
- Gibbons, R. D., Hedeker, D., & DuToit, S. (2010). Advances in analysis of longitudinal data. *Annual Review of Clinical Psychology*, 6, 79–107. <https://doi.org/10.1146/annurev.clinpsy.032408.153550>
- Goldstein, N. E. S., Cole, L. M., Houck, M., Haney-Caron, E., Brooks Holliday, S., Kreimer, R., & Bethel, K. (2019). Dismantling the school-to-prison pipeline: The Philadelphia police school diversion program. *Children and Youth Services Review*, 101, 61–69. <https://doi.org/10.1016/j.childyouth.2019.03.022>
- Goldstein, N. E. S., Kreimer, R., Guo, S., Le, T., Cole, L. M., NeMoyer, A., Burke, S., Kikuchi, G., Thomas, K., & Zhang, F. (2021). Preventing school-based arrest and recidivism through prearrest diversion: Outcomes of the Philadelphia police school diversion program. *Law and Human Behavior*, 45(2), 165–178. <https://doi.org/10.1037/lhb0000440>
- Gregory, A., Skiba, R. J., & Mediratta, K. (2017). Eliminating disparities in school discipline: A framework for intervention. *Review of Research in Education*, 41(1), 253–278. <https://doi.org/10.3102/0091732X17690499>
- Grunwald, H. E., Lockwood, B., Harris, P. W., & Mennis, J. (2010). Influences of neighborhood context, individual history and parenting behavior on recidivism among juvenile offenders. *Journal of Youth and Adolescence*, 39(9), 1067–1079. <https://doi.org/10.1007/s10964-010-9518-5>
- Hayes, A. F., & Rockwood, N. J. (2017). Regression-based statistical mediation and moderation analysis in clinical research: Observations, recommendations, and implementation. *Behaviour Research and Therapy*, 98, 39–57. <https://doi.org/10.1016/j.brat.2016.11.001>
- Heitzeg, N. A. (2014). Criminalizing education: Zero tolerance policies, police in the hallways, and the school to prison pipeline. In A. J. Nocella, I. I. P. Parmar, & D. Stovall (Eds.), *From education to incarceration: Dismantling the school-to-prison pipeline* (2nd ed., pp. 11–36). Peter Lang.
- Hirschfield, P. J. (2008). Preparing for prison? The criminalization of school discipline in the USA. *Theoretical Criminology*, 12(1), 79–101. <https://doi.org/10.1177/1362480607085795>
- Ho, D., Imai, K., King, G., & Stuart, E. A. (2011). MatchIT: Nonparametric preprocessing for parametric causal inference. *Journal of Statistical Software*. Advance online publication. <https://doi.org/10.18637/jss.v042.i08>
- Hoge, R. D. (2016). Application of precharge diversion programs. *Criminology & Public Policy*, 15(3), 991–999. <https://doi.org/10.1111/1745-9133.12244>
- Jean-Pierre, J., & Parris-Drummond, S. (2018). Alternative school discipline principles and interventions: An overview of the literature. *McGill Journal of Education*, 53(3), 414–433. <https://doi.org/10.7202/1058410ar>
- Kirk, D. S., & Sampson, R. J. (2013). Juvenile arrest and collateral educational damage in the transition to adulthood. *Sociology of Education*, 88(1), 36–62. <https://doi.org/10.1177/0038040712448862>
- Korpershoek, H., Canrinus, E. T., Fokkens-Bruinsma, M., & de Boer, H. (2020). The relationships between school belonging and students' motivational, social-emotional, behavioural, and academic outcomes in secondary education: A meta-analytic review. *Research Papers in Education*, 35(6), 641–680. <https://doi.org/10.1080/02671522.2019.1615116>
- Kwok, O. M., Underhill, A. T., Berry, J. W., Luo, W., Elliott, T. R., & Yoon, M. (2008). Analyzing longitudinal data with multilevel models: An example with individuals living with lower extremity intra-articular fractures. *Rehabilitation Psychology*, 53(3), 370–386. <https://doi.org/10.1037/a0012765>
- Langberg, J. B., & Fedders, B. A. (2013). How juvenile defenders can help dismantle the school-to-prison pipeline: A primer on educational

- advocacy and incorporating clients' education histories and records into delinquency representation. *Journal of Law & Education*, 42, 653–690.
- Lehr, C. A., Tan, C. S., & Ysseldyke, J. (2009). Alternative schools: A synthesis of state-level policy and research. *Remedial and Special Education*, 30(1), 19–32. <https://doi.org/10.1177/0741932508315645>
- Lindsay, C. A., & Hart, C. M. D. (2017). Teacher race and school discipline: Are students suspended less often when they have a teacher of the same race? *Education Next*, 17(1), 72–78.
- Mahoney, J. L. (2014). School extracurricular activity participation and early school dropout: A mixed-method study of the role of peer social networks. *Journal of Educational and Developmental Psychology*, 4(1), 143–154. <https://doi.org/10.5539/jedp.v4n1p143>
- Mears, D. P., Kuch, J. J., Lindsey, A. M., Siennick, S. E., Pesta, G. B., Greenwald, M. A., & Blomberg, T. G. (2016). Juvenile court and contemporary diversion: Helpful, harmful, or both? *Criminology & Public Policy*, 15(3), 953–981. <https://doi.org/10.1111/1745-9133.12223>
- Mittleman, J. (2018). A downward spiral? Childhood suspension and the path to juvenile arrest. *Sociology of Education*, 91(3), 183–204. <https://doi.org/10.1177/0038040718784603>
- Monahan, K. C., Steinberg, L., & Cauffman, E. (2013). Age differences in the impact of employment on antisocial behavior. *Child Development*, 84(3), 791–801. <https://doi.org/10.1111/cdev.12031>
- Monahan, K. C., VanDerhei, S., Bechtold, J., & Cauffman, E. (2014). From the school yard to the squad car: School discipline, truancy, and arrest. *Journal of Youth and Adolescence*, 43(7), 1110–1122. <https://doi.org/10.1007/s10964-014-0103-1>
- Moore, L. D., & Padavic, I. (2010). Racial and ethnic disparities in girls' sentencing in the juvenile justice system. *Feminist Criminology*, 5(3), 263–285. <https://doi.org/10.1177/1557085110380583>
- Morgan, C. J. (2018). Reducing bias using propensity score matching. *Journal of Nuclear Cardiology*, 25(2), 404–406. <https://doi.org/10.1007/s12350-017-1012-y>
- Morris, E. W., & Perry, B. L. (2016). The punishment gap: School suspension and racial disparities in achievement. *Social Problems*, 63(1), 68–86. <https://doi.org/10.1093/socpro/spv026>
- Morris, E. W., & Perry, B. L. (2017). Girls behaving badly? Race, gender, and subjective evaluation in the discipline of African American girls. *Sociology of Education*, 90(2), 127–148. <https://doi.org/10.1177/0038040717694876>
- Mowen, T., & Brent, J. (2016). School discipline as a turning point: The cumulative effect of suspension on arrest. *Journal of Research in Crime and Delinquency*, 53(5), 628–653. <https://doi.org/10.1177/0022427816643135>
- Na, C. (2017). The consequences of school dropout among serious adolescent offenders: More offending? More arrest? Both? *Journal of Research in Crime and Delinquency*, 54(1), 78–110. <https://doi.org/10.1177/0022427816664118>
- NeMoyer, A., Le, T., Kreimer, R., Guo, S., Oliver, M. K., Kina, F., Cole, L., & Goldstein, N. E. S. (2020, March). *Keeping kids in school through pre-arrest diversion: School-related outcomes of the Philadelphia Police School Diversion Program* [Paper presentation]. Annual conference of the American Psychology-Law Society, New Orleans, LA.
- Perry, B. L., & Morris, E. W. (2014). Suspending progress: Collateral consequences of exclusionary punishment in public schools. *American Sociological Review*, 79(6), 1067–1087. <https://doi.org/10.1177/0003122414556308>
- Petteruti, A. (2011). *Education under arrest: The case against police in schools*. Justice Policy Institute.
- Puzzanchera, C. (2020). *Juvenile arrests, 2018*. U.S. Department of Justice Office of Justice Programs. <https://ojdp.ojp.gov/sites/g/files/xyckuh176/files/media/document/254499.pdf>
- Ramey, D. M. (2015). The social structure of criminalized and medicalized school discipline. *Sociology of Education*, 88(3), 181–201. <https://doi.org/10.1177/0038040715587114>
- Samuels-Wortley, K. (2019). Youthful discretion: Police selection bias in access to pre-charge diversion programs in Canada. *Race and Justice*. Advance online publication. <https://doi.org/10.1177/2153368719889093>
- Scales, P. C., Benson, P. L., & Mannes, M. (2006). The contribution to adolescent well-being made by nonfamily adults: An examination of developmental assets as contexts and processes. *Journal of Community Psychology*, 34(4), 401–413. <https://doi.org/10.1002/jcop.20106>
- Schlesinger, T. (2018). Decriminalizing racialized youth through juvenile diversion. *The Future of Children*, 28(1), 59–82.
- School District of Philadelphia. (2017, November 9). *District graduation rates increase again*. <https://www.philasd.org/blog/2017/11/09/district-graduation-rates-increase-again/>
- School District of Philadelphia. (2020, February 10). District schools mark four consecutive years of improvement citywide on school progress report. <https://www.philasd.org/blog/2020/02/10/district-schools-mark-four-consecutive-years-of-improvement-citywide-on-school-progress-report/>
- Schwalbe, C. S., Gearing, R. E., MacKenzie, M. J., Brewer, K. B., & Ibrahim, R. (2012). A meta-analysis of experimental studies of diversion programs for juvenile offenders. *Clinical Psychology Review*, 32(1), 26–33. <https://doi.org/10.1016/j.cpr.2011.10.002>
- Shah, R. S., & Strout, J. (2016). *Future interrupted: The collateral damage caused by proliferation of juvenile records*. Juvenile Law Center. <https://juvenilerecords.jlc.org/juvenilerecords/documents/publications/future-interrupted.pdf>
- Silberg, J., Moore, A. A., & Rutter, M. (2015). Age of onset and the sub-classification of conduct/dissocial disorder. *Journal of Child Psychology and Psychiatry, and Allied Disciplines*, 56(7), 826–833. <https://doi.org/10.1111/jcpp.12353>
- Skiba, R. J., Arredondo, M. I., & Williams, N. T. (2014). More than a metaphor: The contribution of exclusionary discipline to a school-to-prison pipeline. *Equity & Excellence in Education*, 47(4), 546–564. <https://doi.org/10.1080/10665684.2014.958965>
- Skiba, R. J., Chung, C.-G., Trachok, M., Baker, T. L., Sheya, A., & Hughes, R. L. (2014). Parsing disciplinary disproportionality: Contributions of infraction, student, and school characteristics to out-of-school suspension and expulsion. *American Educational Research Journal*, 51(4), 640–670. <https://doi.org/10.3102/0002831214541670>
- Skiba, R. J., Horner, R. H., Chung, C.-G., Rausch, M. K., May, S. L., & Tobin, T. (2011). Race is not neutral: A national investigation of African American and Latino disproportionality in school discipline. *School Psychology Review*, 40(1), 85–107. <https://doi.org/10.1080/02796015.2011.12087730>
- Spivak, A. L., Wagner, B. M., Whitmer, J. M., & Charish, C. L. (2014). Gender and status offending: Judicial paternalism in juvenile justice processing. *Feminist Criminology*, 9(3), 224–248. <https://doi.org/10.1177/1557085114531318>
- Stanton-Salazar, R. D. (2011). A social capital framework for the study of institutional agents and their role in the empowerment of low-status students and youth. *Youth & Society*, 43(3), 1066–1109. <https://doi.org/10.1177/0044118X10382877>
- Suh, S., & Suh, J. (2007). Risk factors and levels of risk for high school dropouts. *Professional School Counseling*, 10(3), 297–306. <https://doi.org/10.5330/prsc.10.3.w26024vvw6541gv7>
- Sullivan, C. J., Dollard, N., Sellers, B., & Mayo, J. (2010). Rebalancing response to school-based offenses: A civil citation program. *Youth Violence and Juvenile Justice*, 8(4), 279–294. <https://doi.org/10.1177/1541204009358656>
- Sullivan, A., Klingbeil, D. A., & Van Norman, E. R. (2013). Beyond behavior: Multilevel analysis of the influence of sociodemographics and school characteristics on students' risk of suspension. *School Psychology Review*, 42(1), 99–114. <https://doi.org/10.1080/02796015.2013.12087493>
- Teske, S. C. (2011). A study of zero tolerance policies in schools: A multi-integrated systems approach to improve outcomes for adolescents. *Journal of Child and Adolescent Psychiatric Nursing*, 24(2), 88–97. <https://doi.org/10.1111/j.1744-6171.2011.00273.x>
- Teske, S. C., & Huff, J. B. (2011). The court's role in dismantling the school-to-prison pipeline. *Juvenile and Family Justice Today*, 14–17.

- <https://www.reclaimingfutures.org/sites/default/files/documents/TodayWinter2011feature.pdf>
- Tracy, P. E., Kempf-Leonard, K., & Abramoske-James, S. (2009). Gender differences in delinquency and juvenile justice processing: Evidence from national data. *Crime and Delinquency*, 55(2), 171–215. <https://doi.org/10.1177/0011128708330628>
- U.S. Department of Education Office for Civil Rights. (2018). *2015-16 Discipline estimations by discipline type* [Data set]. https://ocrdata.ed.gov/StateNationalEstimations/Estimations_2015_16
- Vogell, H. (2017, December 6). *The failure track: How students get banished to alternative schools*. ProPublica. <https://www.propublica.org/article/how-students-get-banished-to-alternative-schools>
- Watson, A. A., & Stevenson, M. C. (2020). Teachers' and administrators' perceptions of police-to-student encounters: The impact of student race, police legitimacy, and legal authoritarianism. *Race and Justice*. Advance online publication. <https://doi.org/10.1177/2153368720922286>
- Weber, N. M., Somers, C. L., Day, A., & Baroni, B. A. (2016). Predictors and outcomes of school attachment and school involvement in a sample of girls in residential treatment. *Residential Treatment for Children & Youth*, 33(2), 155–174. <https://doi.org/10.1080/0886571X.2016.1188034>
- Weisburst, E. K. (2019). Patrolling public schools: The impact of funding for school police on student discipline and long-term education outcomes. *Journal of Policy Analysis and Management*, 38(2), 338–365. <https://doi.org/10.1002/pam.22116>
- Welsh, R. O., & Little, S. (2018). The school discipline dilemma: A comprehensive review of disparities and alternative approaches. *Review of Educational Research*, 88(5), 752–794. <https://doi.org/10.3102/0034654318791582>
- White, S. W., & Kelly, F. D. (2010). The school counselor's role in school dropout prevention. *Journal of Counseling and Development*, 88(2), 227–235. <https://doi.org/10.1002/j.1556-6678.2010.tb00014.x>
- Wiley, S. A. (2015). Arrested development: Does the grade level at which juveniles experience arrest matter? *Journal of Developmental and Life-Course Criminology*, 1(4), 411–433. <https://doi.org/10.1007/s40865-015-0019-9>
- Wilson, D. B., Brennan, I., & Olaghere, A. (2018). Police-initiated diversion for youth to prevent future delinquent behavior: A systematic review. *Campbell Systematic Reviews*, 14, 1–88. <https://doi.org/10.4073/csr.2018.5>
- Wilson, H. A., & Hoge, R. D. (2013). The effect of youth diversion programs on recidivism: A meta-analytic review. *Criminal Justice and Behavior*, 40(5), 497–518. <https://doi.org/10.1177/0093854812451089>
- Wolf, K. C., & Kupchik, A. (2017). School suspensions and adverse experiences in adulthood. *Justice Quarterly*, 34(3), 407–430. <https://doi.org/10.1080/07418825.2016.1168475>

Received November 13, 2020

Revision received June 16, 2021

Accepted June 25, 2021 ■