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SRO ROLES AND TEACHER BEHAVIORAL INTERVENTION STRATEGIES: AN
ANALYSIS ON BEHAVIORAL APPROACHES AND STUDENT SUSPENSIONS

By

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B.A., Morehead State University, 2017
M.S., Eastern Kentucky University, 2019

A Dissertation
Submitted to the Faculty of the
College of Arts and Sciences of the University of Louisville
in Partial Fulfillment of the Requirements
for the Degree of

Doctor of Philosophy
In Criminal Justice

Department of Criminal Justice
University of Louisville
Louisville, Kentucky

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A Dissertation Approved on

August 16th, 2022

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DEDICATION

I dedicate this dissertation to my beloved nieces and nephews. I want you all to know that the sky is the limit. If your tio can reach his dreams, you all can do the same and so much more. I love you all with all my heart and will always be there to support you as you reach your dreams.

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ABSTRACT

SRO ROLES AND TEACHER BEHAVIORAL INTERVENTION STRATEGIES: AN ANALYSIS ON BEHAVIORAL APPROACHES TO STUDENT SUSPENSIONS

Ivan Benitez

August 16th, 2022

Recently there have been nationwide calls for schools to end their contracts with local police departments in efforts to remove school resource officers (SROs) due to their criminalizing effect on students. Aiming towards racial equity in safety and discipline, advocates have suggested re-envisioning discipline through a restorative lens to minimize student harm. One approach which has been promising in student outcomes are behavioral intervention strategies. The current study contributes to the literature by examining the direct effects of SRO roles and teacher behavioral intervention strategies on student suspensions. Using factor analysis, I found three SRO roles: law enforcement officer, mentor, and authoritarian. I then regressed student suspensions on SRO roles and teacher behavioral intervention strategies. SROs' authoritarian role was significantly and positively associated with student suspensions. Teacher behavioral intervention strategies was significantly and negatively associated with student suspensions. Results suggest that teacher behavioral intervention strategies align with students interest. SROs. Policy implications and recommendations are discussed.

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CHAPTER I

INTRODUCTION

Schools often rely on exclusionary practices when addressing student misconduct. Exclusionary practices consist of actions that require student removal from school premises. Relying on exclusionary practices has continued despite the literature suggesting that exclusionary practices create short- and long-term detrimental effects for students (Marchbanks et al., 2015). Excessive use of exclusionary practices should be alarming since this type of punishment is widespread throughout the United States. Approximately 35% of schools reported using at least one form of exclusionary practice during the 2017-18 school year, including out of school suspensions, expulsions, and the transfer of students to schools that specialize in behavioral management (Wang et al., 2020). It is estimated that 75% of all serious disciplinary actions imposed during school year 2017-18 were out of school suspensions (Wang et al., 2020), which have been used for minor student misconduct. While all school grade levels can treat student misconduct with exclusionary practices, middle and high schools use them at higher rates (58% and 76%), compared to only 17% of primary schools (Wang et al., 2020). As a result, students closer to adulthood face harsher repercussions that could permeate into adulthood, creating larger negative societal economic impacts (Marchbanks, 2015).

Research suggests that school suspensions exacerbate students' education attainment and academic performance (Lacoe & Steinberg, 2019; Marchbanks, 2014;

Noltemeyer & Ward, 2015). Studies also suggest that negative correlations exist between exclusionary practices and schools' academic success (Perry & Morris, 2014). The effects that even conforming students face may be attributable to the natural disruption of the classroom caused by student misconduct and the need for teachers to stop class to address it. Scholars also note that exclusionary practices have resulted in what has been termed school criminalization. The concept of school criminalization posits that behavioral management strategies and security measures like police in schools create an environment where students are perceived and treated as potential criminals (Hirschfield, 2008). Therefore, student exposure to law enforcement officials subjects them to greater surveillance, potentially increasing their risks for receiving disciplinary actions like suspensions (Fisher & Hennessey, 2016). The effect that SROs have on student discipline should be further examined and questioned since evidence suggests that students receiving suspensions increases their risk of subsequently being involved in delinquency, criminal activities, and incarceration in adulthood (Wolf & Kupchik, 2017).

The policies that introduced harsh discipline and SROs have also faced criticism, particularly for using criminal justice logics and language used in law enforcement and corrections. For example, zero-tolerance policies in the criminal justice system posit that the appropriate and most effective way to reduce recidivism and create deterrent effects is by incapacitating criminals. Exclusionary practices are inherently driven by this same logic, in that student removal would eliminate potential offenders. Moreover, scholars also suggest that schools' zero tolerance policies influence discipline in ways that align with carceral institutions, like establishing and maintain order (Wacquant, 2000).

There have been significant increases in the number of schools adopting SROs, with proponents advocating that SROs are essential for creating safe learning environments. SROs are the most common type of school-based law enforcement (SBLE) to date and generally serve three roles, including – law enforcement officer, teacher, and mentor- though school administrators and SROs alike feel that their predominate role is acting as a sworn law enforcement officer (McKenna et al., 2016; Travis & Coon, 2005; Schlosser, 2014). Recently, schools have started considering their use of SROs since they can potentially exacerbate disciplinary actions. Based on these considerations, some schools have ended their contracts with local police departments, ultimately removing SROs in the process. And since SROs are often paid for with school budgets, opponents suggest that ending SRO programs could potentially open up avenues and funding for alternative approaches to student discipline and safety.

Critics also suggest that because SROs are often retired law enforcement officers, their presence inevitably creates prisonlike atmospheres (Davidson, 2019), where students could be under constant surveillance. Qualitative data similarly suggests that SROs tend to view mundane students behavior from a criminogenic lens (Higgins et al., 2021). Incidents of SROs physically assaulting students has also left stakeholders unsure about their effectiveness in serving their purposes. One example took place in December of 2019, where video recordings of an SRO slamming an 11-year-old middle school student and then dragging him through the hallway went viral (Lamb, 2021). Such injustices caused by the systemic inequality inherent in policing have left SROs receiving major public scrutiny (O’grady, 2020).

Advocates could argue that poor SRO behavior by few individuals does not reflect schools' policies and SRO values. In fact, there have been calls increased training that would promote safe spaces for students (Farlow, 2018.), a narrative that calls for additional SRO funding. Since SROs are typically active sworn law enforcement officers or retired law enforcement officers, it is imperative that any additional SRO training be limited to SROs learning to work within school settings, like the advanced training provided by NASRO (NASRO, n.d.b). Such training could improve interactions between SROs and students.

SROs are also a large part of school criminalization in that their prerogative as a sworn law enforcement officers still includes the power to bring certain student actions to the attention of school administrators and police departments alike. SROs' actions may vary by school settings like how police officers respond to crime based on environment (Sun et al., 2008). For example, evidence suggests that SROs perceive threats differently based on schools' racial/ethnic composition, where SROs in predominantly white schools expressed concerns about outside threats, unlike predominantly minority schools, where students were perceived as potential threats (Fisher et al., 2022). In response to the existing systemic inequality perpetuated through exclusionary practices as well as the use of SBLE, schools are choosing to re-envision their disciplinary approaches and security measures as means for promoting racial equity. Schools recent actions stem from the social and political movements whose goals have been to address and dismantle systemic racism that has impacted schools and students of color in particular. Thus, debates over SROs have left room for discussions as to what potential alternatives exist that schools could take to improve school environments while still promoting safe spaces.

In response to the outcomes caused by harsh discipline, schools have begun moving away from zero-tolerance policies (ACS, 2015). For example, zero tolerance policies have in the past, led schools to treat minor offenses like tardiness and a failure to comply to school dress code with exclusionary punishment (Losen & Martinez, 2013). One disciplinary approach that may undermine school criminalization and the school-to-prison pipeline is an overall improvement in teacher training on behavioral intervention strategies. Such strategies would bolster teachers' abilities in dealing with students, which have historically been mitigated through formalized disciplinary policies. Formal policies ignore the important teacher roles that are not limited to being an educator. For example, teachers might act as mentors and help students learn and develop socialization skills that are beneficial for them and facilitates conforming behavior. This is reflected in the improvement of student-teacher cohesion within classrooms (Pas et al., 2015).

Taken together, the negative effects of exclusionary practices and the presence of SROs (Fisher & Hennessey, 2016), schools have begun reconsidering their approaches to student discipline. The debate on SROs will continue, with proponents advocating that the answer is increased training, and opponents voicing that SROs still have criminalizing effects. And although conversations relating to sensitive topics like race and punishment can be difficult, the most recent tragedies involving police and fatal killings in 2020 of minorities have shed light on the flaws in policing. For example, school districts throughout the country, particularly in major cities, have cut ties with their SRO program to show their efforts to defund the police (Schwartz et al., 2021). Alternative suggestions to discipline have been made, but there is also a need to empirically test these alternative so that schools make informed decisions on discipline.

In light of findings on the negative effects of exclusionary practices, and the effects that SROs have on discipline, it is worth wanting to find solutions. Perhaps teacher behavioral intervention strategies might be worth examining. Pitting these two approaches against one another could shed light on disciplinary practices that are in the best interest of students. The current study contributes to the SRO and education literature by examining the relationship between student suspensions and how SROs and teacher training on behavioral intervention strategies. Findings from the current study could be useful for schools who are looking to make educated decisions on how to approach student discipline.

CHAPTER II

LITERATURE REVIEW

School discipline

Exclusionary practices

Schools often rely on exclusionary disciplinary practices for even minor student misconduct (Newton et al., 2014). Exclusionary practices require students to be removed from school grounds if and when they fail to comply to school policies. As a result, students are displaced from the general population. Exclusionary practices peaked in the early 1990's, when unprecedented crime rates pushed policy makers for a tough approach on crime reduction (Burns & Crawford, 1999; Toby, 1998). Congress passed the Gun Free Schools Act in 1993, providing federal funding to schools that implemented disciplinary policies that required students to be expelled if they entered school grounds with a weapon (Gun Free School Act, 1993). The passing of the Act resulted in schools' discretionary power being diminished in exchange for zero-tolerance policies. Though such policies may have been introduced with good intent, it has undoubtedly increased unwanted outcomes, like exclusionary practices (Curran, 2016). Schools' tough on crime policies are largely based on criminological work and rhetoric that resonates with broken windows. Specifically, broken windows posits that minor offenses, if left unaddressed, would increase in frequency and intensity until serious offenses were rampant (Wilson & Kelling, 1982). Therefore, from this same stance, schools might then expect small

infractions to become larger if unaddressed. Despite broken windows' widespread use, it has yet to be empirically supported (Harcourt, 2001). And while school discipline rhetoric states that exclusionary practices are intended to enforce normative behavior and undermine student misconduct, suspensions have not significantly reduced school crime or student offenders (Gerlinger, 2021). Instead, it has created an environment where exclusionary practices are used for minor student misconduct. Thus, what may not have been obvious at the time was that introducing tough policies would later come at a cost. Specifically, schools would begin to lose their prerogative in student discipline in exchange for formal exclusionary practice policies.

Exclusionary practices and student outcomes

Prior research suggests that zero tolerance policies and exclusionary practices are harmful to students since they are displaced and alienated. Specifically, zero tolerance policies require student removal for misconduct and requires separation from their peers. Student removal is problematic because they have less peer socialization time, placing isolated students at a disadvantage. Specifically, research shows that students who received suspensions had poorer socialization skills (Flanagain, 2007), those which are crucial in adulthood. Though one removal may not be harmful, the compound effect warrants attention. Exclusionary practices can also have a negative effect on students' education attainment. Students who have received an exclusionary disciplinary action reported performing poorer in academics, test scores, and having lower graduation rates, compared to students who have not received any type of exclusionary disciplinary action (Aracia, 2006; Lcoe & Steinberg, 2019; Marchbanks, 2014). A study using longitudinal data and a quasi-experimental design similarly found that student suspensions

exacerbated student academic performance and lowered graduation rates (Chu & Ready, 2018). In fact, the overall negative effect of school suspensions on student academic performance has been found across all grade levels (Andrew & Blake, 2021). However, suspensions mostly occur in middle and high schools, warranting concern since their effects can manifest into adulthood. Also, alarming is the existing disparities in student outcomes caused by exclusionary practices. Specifically, Black students received more suspensions for minor student misconduct compared to their white students, which predicted poorer academic performance (Del Toro & Wang, 2021).

Empirical reviews on exclusionary discipline

Extensive reviews of the literature on exclusionary practices have also generally found evidence that such practices, like suspensions, are strongly associated with detrimental student outcomes. For example, a meta-analysis on the empirical studies examining the relationship between exclusionary practices and student outcomes reported fifty-three effect sizes from thirty-four studies and found that exclusionary practices negatively affected student academic achievement and had a positive effect on student dropout rates (Noltemeyer & Ward, 2015). Of the thirty-four studies, twenty-four studies reported forty-two effect sizes on academic success, and ten studies reported eleven effect sizes on dropout. Additionally, stronger effect sizes were found in studies where student bodies were mostly composed of minority, male, and from low a socioeconomic home (Noltemeyer & Ward, 2015). A second meta-analysis examined the relationship between exclusionary practices and student delinquency found comparable results. Specifically, the authors examined 274 effect sizes from forty studies. All three meta-analytic models suggested that an increase in exclusionary practices resulted in an

increase in student delinquency (Gerlinger et al., 2021). Since there is empirical evidence which suggests that exclusionary practices harm students, this could extend beyond schools.

Exclusionary discipline and the school to prison pipeline

In addition to the negative school outcomes such as grade retention, performance, and completion, exclusionary practices also create early exposure to the criminal justice system (Rosenbaum, 2020), often referred to as the “school to prison pipeline.” The name stems from its premise, in that students are funneled from an educational institution directly into legal institutions. One empirical study found evidence suggesting that the excessive use of exclusionary practices, like suspensions and expulsions, significantly increased students’ risk of later being involved with the criminal justice system (Skiba et al., 2014). In line with this, strong ethnographic work from a prison school in New Orleans reveals how mundane student misconduct can be harshly treated with isolation from schools and placement in a correctional facility where they receive their education (Simmons, 2017), and notably a perfect exemplar of students being funneled from schools to prisons. A review of the empirical evidence also makes similar claims. Specifically, a systematic review on the effects of suspensions on student outcomes revealed that all seven studies included in the review reported significant and positive relationships between student suspensions and subsequent involvement in the criminal justice system, like incarceration in adulthood (Novak, 2018).

The overlap between criminal justice logics and language and schools’ approaches to student discipline is another exemplar. First, exclusionary practices like suspensions, in rhetoric, said to function as deterrent measures for students with

nonconforming behavior. Specifically, the idea is that student's knowing that misconduct could result in a suspension should deter them from unwanted behavior. However, there is little support that such practices are effective for this purpose. Second, criminal justice logics permeate into school settings is the use of the direct use of zero-tolerance policies. Just like determinate sentencing, there is no flexibility in the schools choosing disciplinary actions for student misconduct but instead rely on guidelines.

Criminalization

School criminalization

School criminalization occurs when educational institutions adopt criminal justice logics that view students as potential threats (Hirschfield, 2008). Specifically, school criminalization happens when schools begin to resemble criminal justice institutions like prisons. As Hirschfield (2008) notes, school criminalization is evident in schools use of crime control lens when dealing with student misconduct. For example, crime control policies in educational institutions include using formal policies driven by similar logics used in the zero-tolerance policies introduced in the 1980s and 90s. Such policies were intended to assist in crime control by deterring and incapacitating potential offenders. This is evident in schools' narrative when addressing student misconduct. For example, schools using words like "offender" and "deter" are identical to those used in the criminal justice system (Kayama et al., 2015), as well using exclusionary practices for minor student misconduct, like noncompliance to attendance (Simmons, 2017).

Zero-tolerance policies introduced the elimination of determinant sentencing in judicial proceedings, eliminating room for subjectivity. Schools' zero-tolerance policies have similarly eroded the administrator discretion. Specifically, schools are obligated to

report student incidents that are criminal in nature without weighing mitigating factors. Formal policies also explicitly outline how school administrators are to address certain misconduct as well as when authorities should be contacted. Therefore, students are never too distant from the criminal justice system and its actors. School criminalization is also evident in the changes in security measures that align with criminal justice institutions.

School criminalization is also facilitated with the presence of criminal justice authorities. SROs are the largest growing sector of law enforcement (NASRO, n.d.a), which may be facilitating the introduction of students to the criminal justice system. While SROs may be primarily used as a security measure intended to protect schools from potential threats, their existing role as sworn law enforcement officers, permits them to practice reporting certain actions to school administrators and police departments alike (Sawchuk, 2021). Research suggests that schools with SROs reported an increase in arrest rates for disorderly conduct but decreased arrests for assault and weapon charges (Theriot, 2009). As a result, the mere presence of SROs bridges a gap between education and criminal justice institutions. Therefore, discipline that was once handled by school administrators is now subject to the interpretation of law enforcement officials (Hirschfield, 2008). SROs might then treat students as offenders and hereby remove them from the school premises.

SROs facilitating the introduction of students to the criminal justice system is evident in the literature where positive relationships between reports to the police and having SROs have been found. For example, schools who reported having SROs present during school hours reported fewer incidents of school violence, but also reported an increase in the use of exclusionary practices and the number of referrals made to the

police (Sorensen et al., 2021). Moreover, results from longitudinal data from multiple datasets similarly found that schools who were provided with Cops in School (CIS) funding for police in schools increased the number of reports made to the police, with significant increases seen in adolescents 15 years old or younger (Owens, 2017).

Unwanted effects introduced by having SROs may be exacerbating the school-to-prison pipeline, since SROs are exposing students to the criminal justice system (Kupchik & Monahan, 2006) due to their obligation to report certain crimes.

Criminalization features

There are additional features of school criminalization that extend beyond formal disciplinary policies and SRO presence. For example, schools have adopted security measures that shape schools into a resemblance of correctional institutions. More specifically, these school structural changes can alter how students feel about safety. For example, some schools require students to pass through metal detectors and expose students to contraband searches by dogs. However, the increasing use of security measures have been found to undermine students and parents' perceptions of safety (Reingle Gonzalez et al., 2016; Mowen & Freng, 2019). Moreover, these perceptions of safety are exacerbated when security measures are perceived as being used for surveilling students rather than outside threats (Lindstrom Johnson et al., 2018). Thus, while SROs may be used to create safe spaces, their use may actually increase students' sense of safety (Curran et al., 2021). It is also evident in schools whose students are in favor of SROs. For example, students who felt that SROs made them feel safer were significantly more likely to report incidents to SROs (Crichlow-Ball et al., 2022).

School criminalization and the criminal justice similarly share racial/ethnic disparities. Research suggests that higher rates of ethnic heterogeneity increased schools' use of law enforcement and security personnel, and that poorer schools were significantly more likely to report students to authorities (Irwin et al., 2013). Moreover, schools largely composed of minority students have also shown existing disparities in discipline and restorative practices, compared to predominantly white schools (Payne & Welch, 2010). Other studies have shown that harsh disciplinary policies extend beyond impoverished schools and are used in more affluent schools (Kupchik, 2009). Though the findings may be slightly convoluting, there is still a need for schools to change practices in order to minimize student harm.

Police in schools

Introduction to SROs

Police in schools date back to the 1950s in the state of Michigan and implemented widespread throughout the early 1990s in response to high profile school shootings. Despite only being around nationally for a little over two decades, no other area in law enforcement has seen such exponential growth as police in schools have (NASRO, n.d.a.), marking a point in history of unprecedented rates of police in schools. SROs are the most common type of SBLE, which have become more standardized since the founding of the National Association of School Resource Officers (NASRO) in 1991, providing up-to-date training. NASRO's basic training course consists of forty hours of training split into a five-day period where SROs learn about the triad model, consisting of a law enforcement officer, mentor, and educator. The law enforcement role consists of SROs creating safe and secure settings. The mentor role consists of working and assisting

troubled students. And the teacher role consists of educating students on legal aspects as well as improving students' perceptions and trust for law enforcement.

Although SROs only serve three roles, the precarious nature of school's settings could create uncertainty in an SRO and how to interact with students. Moreover, SROs may equally learn about all three roles during their training but have shown to predominantly fill in their law enforcement role (McKenna et al., 2016; Travis & Coon, 2005; Schlosser, 2014). SROs serving mostly as a sworn law enforcement officer may also be attributed to the fact that most SROs are active or retired police officers and view their police training received in the academy and behavior as second nature. Therefore, it may be this existing overlap between active or former police officers and the higher engagement in the law enforcement role that has resulted in students being subjected to extensive scrutiny like potential offenders.

SRO presence and student outcomes

The presence of SROs has severely impacted students in many ways. For example, one study which examined the effects of Texas school funding for police found that funding for police in schools was significantly and negatively associated with graduation rates and subsequent student college enrollment rates (Weisburst, 2019). Similar effects of police in schools exist in other areas of the country as well. For example, data of North Carolina schools suggest that schools with SROs significantly increased their use of exclusionary practices compared to schools without SROs (Sorensen et al., 2021). Additionally, a quasi-experimental study that used propensity scoring to match samples, found that schools who reported having police present in the last three years had significantly higher suspension rates than schools without police

(Zhang, 2019). SRO advocates have also proposed that their presence reinforces safe places for students. However, scientific data has provided evidence which suggests otherwise. Specifically, schools who reported having SROs over a three-year period had no significant differences in reported bullying compared to schools without SROs (Devlin et al., 2018). Thus, the scientific literature suggesting that SROs created unwanted student effects does not align with SRO advocates.

SRO roles and student outcomes

To date, there are few empirical studies on the effects of SRO roles and student outcomes. One study has provided evidence which suggests that SRO roles impact school crime differently. Specifically, schools whose SROs' embraced a law enforcement role subjected students to increased reported crime compared to schools whose SROs' had mixed roles and schools without SROs (Devlin & Gottfredson, 2018). Additional scientific evidence suggests that differing SRO roles impacts school crime uniquely. Using latent class analysis (LCA), Fisher and Devlin (2020) found three existing SRO roles, including low engagement, full triad, and reactionary SROs. Low engaged SROs rarely participated in SRO roles, full triad SROs were actively involved in all SRO roles, and reactionary SROs predominantly engaged in law enforcement roles. The authors found that schools with reactionary SROs significantly increased reports of nonserious violence and property crimes, whereas full triad SROs significantly increased reports on property crimes and crimes reported to the police (Fisher & Devlin, 2020). Building on their previous work, Devlin and Fisher (2021) found that SRO roles impacted school social disturbances differently. Specifically, schools with reactionary SROs reported

having increased bullying, racial/ethnic tensions, and gang activity, whereas schools with full triad SRO reported less racial/ethnic tensions and bullying (Devlin & Fisher, 2021).

There are many reasons as to why differing SRO roles may elicit changes in reporting student misconduct. For example, SROs who take on their law enforcement role will almost inevitably see school settings and students alike through a criminal justice lens where student misconduct is perceived as a criminal offense. In such instances, SROs are constantly surveilling their school settings for any activity which could be punishable. Alternatively, SROs who engage in the mentoring and teaching roles may likely be able to build rapport with students and create interpersonal connections. As a result, students feel as though they can speak to SROs about issues they may be facing and may unintentionally be acting as potential informants (Kupchik, 2010; Petteruti, 2011). Therefore, examining the effects to which SRO roles have on student outcomes would provide us with a greater understanding of their impacts on students and assist in making cognizant decisions about SROs presence in schools. Moreover, it is also worth thoroughly examining the empirical reviews on studies pertaining to SROs to better understand their holistic effects on student outcomes.

Empirical reviews on SROs

Throughout the body of literature on police in schools, and SROs more specifically, the studies have varied in rigorousness. There has only been one meta-analysis on SROs, where the authors examined the relationship between SROs and exclusionary practices including school suspensions and student arrests. The screening process resulted in seven eligible studies with a total of ten effect sizes. There were two meta-analytic models, one used for effect sizes that came from pre and post studies and

the second for studies with comparison groups. The first meta-analytic model reporting three comparison group effect sizes did not find any statistically significant differences in schools suspension based on SRO treatment (Fisher & Hennessey, 2016). The second meta-analytic model reported the seven effect sizes for the pre and post designs and found that implementing SROs subsequently increased disciplinary actions by 21% (Fisher & Hennessey, 2016). Additional reviews of the literature have found supporting evidence that SROs negatively impact students (Javdani, 2019; Stern & Petrosino, 2018). One systematic review of twenty-eight eligible studies found that while SROs had no significant effects on disciplinary actions or school safety, SROs increased student arrests (Javdani, 2019).

Two things are worth nothing from these empirical reviews. First, it is clear that although the existing studies examining the effects of SROs are rigorous, researchers have not conducted a sufficient number of empirical studies that provide full certainty. Second, the literature suggests that although SROs do not always create negative student outcomes, they do tend to increase the use of exclusionary practices. The two systematic reviews present the foundational work which supports the claim that SROs contribute to the school-to-prison pipeline (Javdani, 2019; Stern & Petrosino, 2018). Therefore, additional studies should examine to what extent SROs contribute to school criminalization, and whether alternative approaches exist.

SROs and the school to prison pipeline

School criminalization stemming through the use of SROs is an additional exemplar of public schools manifesting the school to prison pipeline. As stated above, SROs often consist of law enforcement officers, to which they have commonly reported

placing greater emphasis on their law enforcement role (McKenna et al., 2016; Travis & Coon, 2005; Schlosser, 2014). What this translates into is extensive student surveillance where school officials perceive students as potential criminals, despite the absence of crime. Qualitative data collected from interviews with SROs also provided evidence that SROs themselves often perceived mundane student behavior as openings for criminal behavior (Higgins et al., 2021). Moreover, SROs constantly maintained an unpredictable location so that students would constantly be on edge about their presence. Thus, SROs perceived students as potential offenders, repeatedly exposing them to criminal justice logics like surveillance rather than the students that they are. Additional criminal justice logics that students face direct exposure are police restraining tactics. For example, one study that examined SROs and arrest decision making found that SROs' decision-making skills are similar to those of arresting police officers, such as the need to incapacitate students for misconduct as well as creating a general deterrence effect for any student that may be considering engaging in deviant behavior (Wolf, 2014), a direct overlap between policing and schools. And although a school arrest may have started as way to restrain a student, this should be alarming because it could result in repeat offending.

Other studies have also presented compelling evidence that specific offenses related to drugs and weapons also increase when schools have police present (Gottfredson et al, 2020; Zhang, 2019), an expected outcome since increasing SBLE funding has shown to increase schools' cooperation with law enforcement (Owens, 2017). SROs as a facet of school criminalization is also evident in the variation in SROs' behavior based on school context, with SROs in poorer and underfunded schools engaging in more law enforcement behavior (Lynch et al., 2016). In his ethnographic

study, Kupchik (2010) similarly discusses how schools with larger minority populations often receive policing through a criminogenic rhetoric. In fact, studies have shown that police in schools disproportionately impacts students of color (Crosse et al., 2022; Homer & Fisher, 2020). Thus, SRO behavior shaped by school context, particularly variables like ethnic composition, strongly resembles how police officers engage in communities base on similar attributes (Kane, 2002). With the extensive use of SROs exacerbating the school-to-prison pipeline, it is worth examining alternative avenues that do not have a student criminalization effect.

Behavioral intervention strategies

Behavioral intervention strategies

Schools have heavily relied on punitive disciplinary actions to deal with student misconduct. However, the negative outcomes caused by punitive discipline has influenced schools to implement and provide teachers with behavioral management strategies, such as PBIS. Specifically, PBIS uses techniques that target improving schools academic and behavioral outcomes (Sugai & Simonsen, 2012). It is estimated that approximately 25,000 U.S. schools currently use PBIS (Center on PBIS, n.d.), and the number continues to grow as schools continue to consider their disciplinary approaches. PBIS consists of a three-tiered system to instill and reinforce schoolwide conforming student behavior. The purpose for tier one is to educate students on expected and acceptable behavior in ways where they can internalize it. Teachers can also promote positive behavior through positive reinforcements, like condoning good behavior while simultaneously disregarding unwanted behavior. A major component to tier one is that data on student behavior are constantly recorded to further improve intervention

strategies. Tier two consists of more specific intervention strategies for students that did not respond well to tier one. The goal in tier two is for troubled students to slowly begin adopting conforming behavior. Tier three is intended for those students who are far more troubled and require specialized intervention strategies that are tailored specifically for them. Training in classroom management could also be provided to teachers where they can discuss topics like positive classroom environment that is expected of students and discipline that will follow if they act out. Thus, the purpose of PBIS is to instill a new philosophical approach to student discipline that is intended to improve student educational experiences in exchange for exclusionary disciplinary actions that are harming students.

Behavioral intervention strategies and student outcomes

Using alternative behavioral intervention strategies have produced beneficial outcomes for students. For example, studies have provided evidence which suggest that schools using PBIS improves school environments and is evident in the overall improvement in student classroom behavior (Gage et al., 2018; Stronge et al., 2011). Evidence also suggests that implementing PBIS can result in improved social ties between teachers and students (Bradshaw et al., 2012; Bradshaw et al., 2008). These effects of PBIS have also shown to have long-term benefits. For example, a longitudinal study from Maryland found that schools who effectively implemented schoolwide positive behavioral interventions and supports (SWPBIS) significantly lowered student suspension rates while also seeing overall improvements in student academic performance (Bradshaw et al., 2010).

Longitudinal studies have similarly found that using PBIS lowered suspension rates (Kim et al., 2018), though some found no significant improvements in student academic performance (James et al., 2019). Studies have also shown that providing teachers with classroom management skills also improves school discipline and culture. For example, schools that provided classroom management training had significant decreases in disciplinary referrals, particularly student suspensions (Reglin et al., 2012). Teacher's responses to classroom disruption provides additional evidence that behavioral management strategies are beneficial. For example, classrooms with more disruptive students resulted in teachers using more reactive behavioral management strategies compared to less disruptive classrooms (Pas et al., 2015). The following studies are in line with existing theories which positing that schools lacking behavioral management training may be a contributing factor to punitive discipline (Stevenson et al., 2020). The empirical studies on the effectiveness of PBIS are also worth noting.

Empirical reviews on PBIS

The empirical evidence suggests that using behavioral intervention strategies benefits students and school environments alike. One meta-analysis that examined the effects of behavioral interventions on student outcomes found that although nonsignificant, behavioral interventions lowered schools student arrest rates (Mielke & Farrington, 2021). However, implementation is essential when schools are adopting PBIS. For example, PBIS programs that were effectively implemented resulted in a greater effect in reducing suspensions, with larger effects being found in high schools (Mielke & Farrington, 2021). A systematic review on the effects of PBIS and student suspensions similarly found a statistically significant and inverse relationship (Gage et

al., 2018). Specifically, as behavioral interventions increased, student suspensions decreased. Moreover, a systematic review of twelve empirical studies found a statistically significant and negative relationship, reporting that increased teacher classroom management decreased behavioral problems (Oliver et al., 2011).

An additional study also found that the overall use of behavioral intervention strategies that were sustainably adopted in New Hampshire significantly improved student outcomes. Specifically, using positive behavioral interventions significantly lowered suspension rates in middle and high schools. The use of PBIS also worked so well that schools were able to recover teaching days (Muscott et al., 2008). This was assessed by treating each exclusionary practice not used as one day. A thorough synthesis of the literature on PBIS consisting of 55 studies also found that although there were variations in the magnitude of the effects, it was nearly unanimous that the use of PBIS resulted in improved student outcomes (Noltmeyer et al., 2018). Despite behavioral intervention strategies producing positive student benefits, a review of the literature suggests that creating equity and mitigating disparities may simply fall out of its scope (Cruz et al., 2021). Thus, while the scientific literature suggests that behavioral intervention strategies create less harmful outcomes for students than exclusionary practices, schools should consider their implementation.

A response to the School-to-prison pipeline

With the literature suggesting that behavioral interventions improve student outcomes, it seems clear as to why continuing to improve such trainings is imperative. In line with national trends of shifting towards restorative practices that seek racial equity, a greater emphasis on teacher training on positive behavioral interventions and classroom

management skills may be the alternative, potentially minimizing student disciplinary outcomes. For example, schools whose teachers have overall received less training may be unsure in how to deal with student misconduct and therefore be more susceptible to relying on using a disciplinary approach, particularly an exclusionary practice. This is evident in teachers' response to student misconduct, where teachers whose students did not behave as well received discipline. Alternatively, schools' whose teachers have received more training may be more prepared in dealing with student misconduct, allowing them to de-escalate the situation while still maintaining control of their classrooms (Pas et al., 2015). This lack of training leads me to explore whether providing teacher training on PBIS may be a behavioral management strategy that could undermine the school-to-prison pipeline. I suspect that the teacher behavioral intervention strategies will reduce student suspensions.

The current study

Schools' reliance on exclusionary discipline practices has shown to have harmful effects for students. Certain school characteristics, however, may result in changes in the frequency of disciplinary actions. Specifically, schools with SROs have reported higher rates of exclusionary practices used compared to schools without SROs (Fisher & Hennessey, 2016). The evidence also suggests that schools with SROs have reported higher rates of a disproportionate use of disciplinary actions (Crosse et al., 2022). While the SRO triad model consists of three roles, and the law enforcement role is said to create criminalizing effects, SROs are still sworn law enforcement and are therefore likely to scrutinize student misconduct. This is evident in SROs treating and perceiving even mundane behavior as criminal (Higgins et al., 2021).

Therefore, the possibility always exists that an SRO may be quick to call out student misconduct and have it reported to school administrators or even their police departments. On the other hand, teacher behavioral intervention strategies address student misconduct through a restorative approach, which could undermine the need to rely on student suspensions. Based on the existing literature, the current study is driven by the following research questions:

Research Question 1: What is the relationship between teacher behavioral intervention strategies and student suspensions?

Research Question 2: What is the relationship between SRO roles and student suspensions?

Based on the prior literature, I have developed two hypotheses. First, I hypothesize that SROs' law enforcement and authoritarian role will have a positive relationship with student suspensions, and a negative relationship between SROs' mentor role and suspensions. Second, I hypothesize that an increase in teacher behavioral intervention strategies will have a negative relationship with students suspensions. The current study makes one contribution to the current literature. While there are studies examining the effects of SROs on student outcomes and behavioral intervention strategies on student outcomes (Peguero et al., 2020), no study has examined student outcomes using both SRO roles and teacher behavioral intervention strategies as main predictors. The main predictors are used to assess and determine which disciplinary actions are less harmful for students. this line of work is crucial because it is a great opportunity to directly compare SROs and teacher behavioral intervention strategies to determine which behavioral approach has students' best interests at hand. Having a

clearer picture and better understanding in the working relationships between SROs, teachers, and student outcomes could assist schools in making a conscious decision in choosing whether or not to retain SROs or pursue additional teacher training on behavioral management as an alternative to student discipline. Schools having empirical evidence at hand is crucial, particularly now when schools are choosing to make significant changes to their disciplinary policies.

CHAPTER III

METHODS

Data and sample

The data used in the current study comes from the 2018 School Survey on Crime and Safety (SSOCS), the latest version of its kind. The data are collected on behalf of the U.S. Department of Education and is managed by their agency, the National Center for Education Statistics (NCES), with the purpose of providing information to help understand school-level crime and safety (Padgett et al., 2020). SSOCS is a nationally representative dataset on public educational institutions ranging between kindergarten and the 12th grade. The schools received the surveys, which asks questions pertaining to safety, security, and disciplinary measures like student offenses recorded and reported to the police, as well as offenses that subsequently involve the police. To date, NCES has administered the SSOCS survey seven times, with the first wave starting in 1999, and gaps between 2001-02 and 2011-14. The data were collected following the high-profile school shootings in the 1990s and was intended to provide quality data on school crime and safety to provide policymakers with evidence-based studies to assist in making schools safer. The data collection process began in February 2018 and ended in July of 2018, where 2,762 schools completed and returned the survey out of a total of 4,803 eligible schools, producing a 62% response rate. I decided to use the 2018 SSOCS dataset

because it is the most recent version collected and would therefore provide contemporary generalizations.

The Common Core Data (CCD), under NCES, created the National Teacher and Principal Survey (NTPS). NCES then altered the NTPS sampling frame and used it for the 2018 SSOCS survey. The purpose of the data are to collect valuable fiscal and nonfiscal information on schools throughout the U.S. The surveys were then administered to schools by state education officials to collect data on schools safety and context. Schools that were excluded from the selection process included institutions found on U.S. territories, Department of Defense schools, home schools, special education, vocational, alternative, virtual, and early start schools. Magnet or partial magnet schools were included in the sampling frame since they are formally considered public institutions. The total sampling frame to select schools from was 84,418.

To obtain generalizable results from U.S. public education institutions, the data were collected using a stratified random sampling technique. Prior to the selection process, the data were stratified on key school variables, including schools' level (e.g., primary, middle, and high school), size (student body), and location. Schools were then stratified a second time based on their student demographics, as well as their state and region. Upon sampling, researchers placed schools into experimental and control groups. Bifurcating the two groups was done so that researchers could examine and evaluate the response rate of the mail-in SSOCS version versus schools that received a paid incentive and schools that received online versions. Of the selected 4,803 schools to participate in the survey, 3,652 received the traditional mail-in version versus the 1,151 schools who received an online version. Half of schools were then placed in a second experimental

group that received a mailed-in paid incentive (2,401). Schools that received an online version were alternated to receive the incentive to ensure even distributions.

Although most schools in the United States are primary institutions, the school crime and safety incidents that are pertinent to the survey are most commonly reported in middle and high schools. Therefore, middle and high schools received surveys at a disproportionate rate compared to primary schools to allow for richer data collection. The researchers also administered the survey through a pilot study to examine and control for expected non-response rates. The number of schools eligible for the survey based on level were 1,170 primary schools, 1,704 middle schools, 1,748 high schools, and 181 schools that had a combination of levels. School levels varied by region and so efforts to create a standardized rule or cutoffs based on available grade levels were made. Primary schools could range between K-8, middle schools could range between 4th and 9th grade, high schools could range between 9th and 13th grade, and combined schools were composed of any mix of two or more levels. School stratification occurred based on school size, where schools with larger student enrollment rates received more surveys than schools with lower student enrollment rates. Schools with larger enrollment rates were oversampled to provide researchers with a more representative data of U.S. schools.

Of all seven SSOCS versions, the 2018 version is the first to take precaution to minimize respondents being selected for multiple surveys. The following steps to reduce this type of error are important because the SSOCS sampling frame is a tailored version of the NTPS sampling frame, leaving room for double selection. To address this, researchers used the reverse Keyfitz approach, which initially decreases the conditional probabilities of selection for sample two if already included in sample one and increased

the conditional probabilities for those unselected. Taking this approach ensured that the SSOCS sample was independent from that of the NTPS.

Measures

Dependent variables

The focal dependent variable in the current study is a count measure called *student removal through suspension*, which included those suspensions that were at least five days but less than a year. Using the following measure is pertinent to the study and is contributive towards the literature because it provides the opportunity to examine the relationship between SRO roles and alternative disciplinary actions and student suspensions.

Independent variables

SRO measures

The SRO literature suggests that the triad model consists of three roles – law enforcement officer, mentor, and teacher. From a scientific and analytical standpoint, these roles cannot be directly measured and are therefore measured through latent variables. SRO latent variables are measured through observed variables, like those included in the SSOCS dataset pertaining to activities SROs engage in. The dataset used in the current study has twelve variables relating to SROs, but only nine of them are theoretically and empirically supported. These roles include SROs participating in *traffic control, patrolling school, discipline, solving school problems, prevention training, student mentoring, teaching law related courses, record or report discipline, and provide legal definitions*. The remaining variables related to whether SROs carry certain

equipment, and therefore do not relate to SRO roles. For example, the following SRO measures that were excluded from the analysis were variables pertaining to SROs carrying a *firearm*, *chemical spray*, or whether SROs were *equipped with body worn cameras*. I recoded the variables so that 0 indicated no and a 1 indicated yes. No multicollinearity was present within the SRO measures, so I proceeded with the analysis. SRO measures are defined in Table 1.

Table 1. SRO measures defined

Measure	Definition
Traffic control	Sworn law enforcement officers participate in traffic control
Patrol	Sworn law enforcement officers participate in security enforcement and patrol
Discipline	Sworn law enforcement officers participate in maintaining school discipline
Solving school problems	Sworn law enforcement officers participate in identifying school problems and actively seeking solutions
Prevention training	Sworn law enforcement officers participate in training teachers and staff in school safety or crime prevention
Student mentoring	Sworn law enforcement officers participate in mentoring students
Teaching law courses	Sworn law enforcement officers participate in teaching a law-related education course or training students (i.e., drug-related education, criminal law, or crime prevention)
Recording/reporting discipline	Sworn law enforcement officers participate in recording or reporting discipline problems to school authorities
Provide legal definitions	Sworn law enforcement officers participate in providing information to school authorities about legal definitions of behavior for recording or reporting purposes (i.e., defining assault for school authorities)

SRO roles have been measured using different methodological approaches, including confirmatory factor analysis (CFA) and latent class analysis (LCA). There are crucial distinctions that give these two approaches their own strengths and limitations. First, LCA is person-centered, or that it classifies individuals based on what actions they participate in. On the other hand, CFA takes an item-centered approach and classifies roles based on the commonality between measures. As a result, LCA creates subgroups with unique response patterns while CFA examines commonalities between measures (Li, 2017). Secondly, LCA is suitable for data of any level of measurement, whereas CFA is suitable for continuous level data, though prior studies have used both approaches (Benitez et al., 2020; Fisher & Devlin, 2020; Lynch et al., 2016). A third approach that has been used in the literature is creating dichotomous measures that indicate whether schools had law enforcement SROs, mixed SROs (who engaged in additional roles outside of law enforcement roles, and no SROs (Devlin & Gottfredson, 2018). Though the following approaches are suitable for the current analysis, I decided to use the CFA approach because it would likely provide theoretically consistent SRO roles.

SRO roles

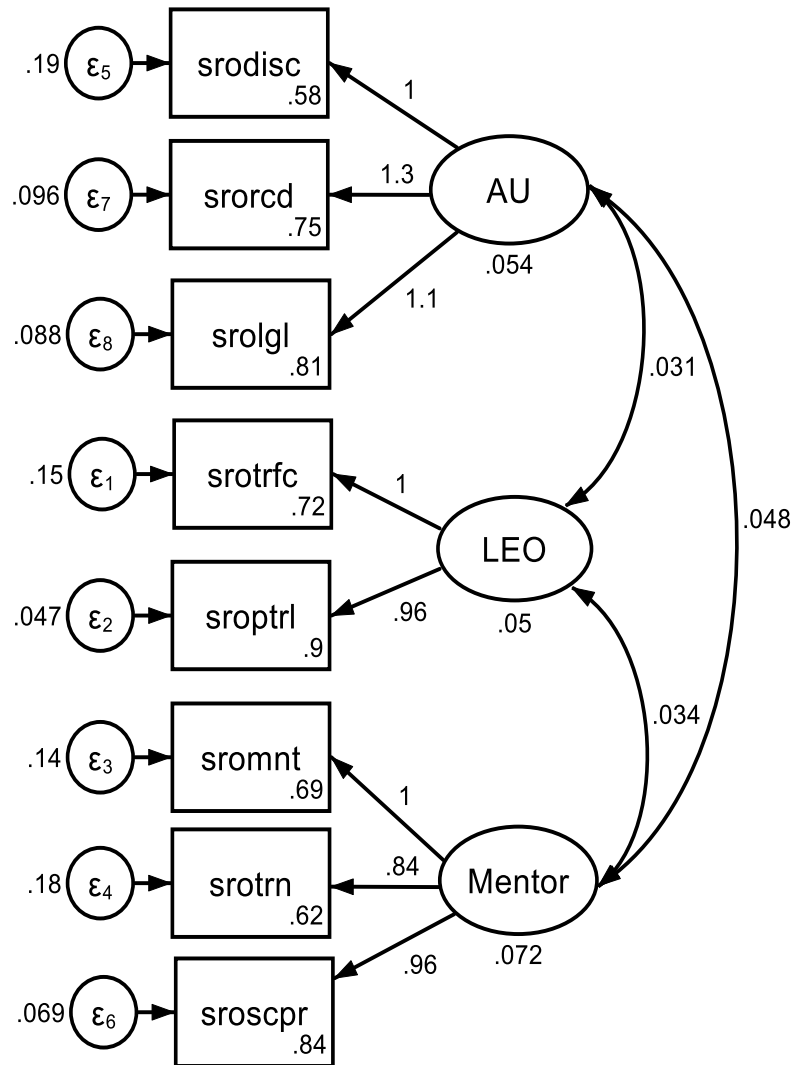
In beginning the process of creating the SRO roles, I first ran an exploratory factor analysis (EFA) on the 9 SRO measures. I did this to determine whether the available data would produce theoretically consistent SRO roles. Two fit statistics were reported, including Bartlett's test of sphericity, and the Kaiser-Meyer-Olkin measure of sampling adequacy (KMO). Bartlett's test of sphericity tests the null hypothesis that the variables of interest are not correlated, and so a statistically significant chi-square value indicates that the null hypothesis can be rejected. The chi-square value from the factor

analysis conducted was 2697.24 and was statistically significant ($p < .000$). The KMO similarly tests the extent to which variables are correlated. KMO values less than .80 would suggest that only partial correlations exist and values that exceed the .80 threshold show strong correlations. The KMO value retrieved from the current analysis was .814. Therefore, the following two fit statistics suggested that proceeding with factor analysis was appropriate and so I proceeded with collapsing the SRO measures into SRO roles using CFA. I examined the goodness of fit indices for the CFA model before finalizing the SRO roles. The fit indices that I assessed included the root mean square error of approximation (RMSEA), comparative fit index (CFI), Tucker-Lewis index (TLI), and the root mean squared residual (RMSR). RMSEA values less than .05 indicate a good fitting model, with values less than .08 being acceptable. The CFI and TLI similarly examine a model fit, where values greater than .9 suggest a good fitting model. The RMSR is also a fit statistic, where values between 0 and .08 are conventional (Hu & Bentler, 1999).

Upon inspection of the fit statistics, the *teaching law courses* measure had a weak factor loading and was therefore dropped. This provided an overall better fit to the SRO roles model. The final CFA results on SRO roles are found in Figure 1 as a structural equation model and the results with factor loadings are found in Table 2. The three SRO roles were titled law enforcement, authoritarian and mentor. The most consistent roles with the existing literature was the law enforcement role, which includes SROs participating in traffic control and patrolling schools, and the mentor role. The authoritarian role included many of the measures in the mentor role found in the literature (Benitez et al., 2021), including three related do discipline. However, instead of the

mentoring measure, the authoritarian role includes providing legal definitions. The name authoritarian was used since all the measures pertained to defining and involvement in discipline.

Figure 1. CFA on SRO roles



Note: RMSEA: 0.040., CFI: .97., TLI: .96., SRMR: 0.023

Table 2. SRO 3 Factor model loadings

LEO

SROs participate in patrolling school 1 (Constrained)
SROs participate in traffic control .956 (.010) ***

Mentor

SROs participate in student mentoring 1 (Constrained)
SROs participate in solving school problems .963 (.055) ***
SROs participate in prevention training .837 (.056) ***

Authoritarian

SROs participate in student discipline 1 (Constrained)
SROs participate recording/reporting student discipline 1.286 (.080) ***
SROs participate in providing legal definitions 1.073 (.072) ***

Note: RMSEA: 0.040, CFI: 0.97, TLI: 0.96, SRMR: 0.023

* $p < .05$. ** $p < .01$. *** $p < .001$

Since the law enforcement role has theoretically been premised to have negative effects on student outcomes, particularly involving the criminal justice system, I hypothesized that there would be positive relationships between the law enforcement role and suspensions. On the other hand, since the mentor role consists of providing care for individuals, I hypothesized that there might be a negative relationship between the mentor role and suspensions. Since the authoritarian role includes measures pertain to discipline, I also hypothesized that this role would increase student suspensions.

Teacher behavioral intervention strategies

I used four measures relating teacher behavioral intervention strategies, including *classroom management, intervention and referral strategies, positive behavioral interventions, and crisis prevention and intervention*, and are defined in Table 3. I recoded each variable so that 0 indicated no and 1 indicated yes, and then created an additive scale ranging from 0 to 4. Before creating the scale, I tested for internal validity using Cronbach's alpha, which ranges from 0 to 1. A coefficient of .70 would indicate internal consistency, whereas values exceeding .90 indicate measurement redundancy. The Cronbach's alpha was .62, indicating enough internal consistency to proceed with creating a scale (Ursachi et al., 2015). I only used variables pertaining to behavioral intervention strategies and excluded variables pertaining to policies and recognizing bullying because they do not relate to a response to student behavior. I modeled the scale to one used in the literature (Peguero et al., 2020). The variables have previously been used as controls (Stevens et al., 2021), but the current study views them as focal independent variables. Though these measures do not measure PBIS directly, they are the closest measures relating to behavioral intervention.

Table 3. Teacher behavioral intervention strategies defined

Measure	Definitions
Classroom management	Did your school or school district provide any training in classroom management for teachers or aides?
Intervention and referral strategies	Did your school or school district provide any training in intervention and referral strategies for students displaying signs of mental health disorders (i.e., depression, mood disorders, ADHD)
Positive behavioral intervention	Did your school or school district provide any training in positive behavioral intervention strategies to teachers or aides?
Crisis prevention and intervention	Did your school provide or school district provide any training in crisis prevention and intervention for teachers or aides?

Control variables

I controlled for key variables relating to school characteristics, educational success, crime, school security measures and formal law enforcement policies in a stepwise fashion. I controlled for school characteristics based on location, size, and grade level. I used three dichotomous variables for location – *city*, *town*, and *rural*-, with schools in the suburb acting as the reference group. The three variables pertaining to school population size included – *less than 300*, *300-499*, and *500-999*-, with schools with more than *1,000* serving as the reference category. The three variables pertaining to grade level included – *primary*, *middle*, and *combined schools*-, with *high schools* serving as the reference group. The variables pertaining to school characteristics were included since student outcomes tend to be frequent in more diverse school settings (Finn & Servoss, 2014) and have also shown to be significant predictors of suspensions (Cruz & Rodl, 2018). The literature also suggests that SRO roles tend to vary based on school characteristics, with SROs perceiving students as potential threats in more diverse schools (Fisher et al., 2022; Rhodes, 2019). Therefore, controlling for such variables would test for any spurious relationships that may exist between SROs, teacher training, and student suspensions.

The variables on educational success included the *percent of students that are below the 15th percentile on standardized tests*, *percent of students that are likely to go to college*, the *percent of students who believe that academic achievement is important*, and *daily attendance rates*. The following variables were also included in the analysis because the existing literature suggests that poorer academically performing schools tend to report a higher use of exclusionary practices compared to schools who academically

perform better (Theriot et al., 2010). Controlling for academic success would therefore provide more accurate results between behavioral management strategies and student outcomes. Variables relating to crime rates where students lived included three dichotomous variables— *moderate*, *high*, *mixed* -, with students living in low crime rate areas serving as the reference group. Two dichotomous variables pertaining to crime where schools are located were used – *moderate*, and *high*-, with schools in low crime rates serving as the reference group. Crime near schools and where students live were included in the analysis because prior literature has shown that nearby school-crime significantly increases exclusionary practices like suspensions (Finn & Servoss, 2014; Gerlinger, 2020).

I also used 21 dichotomous variables relating to school security control measures and one measure on formal law enforcement policies. Specifically, schools were asked the following questions- whether schools: *require visitors to check in*, *control access to school grounds during school hours*, *lock grounds during school hours*, *whether students are required to pass through metal detectors*, *whether schools conduct random metal detector checks*, *equip classrooms with locked doors*, *close campus during lunch*, *conduct random sweeps for contraband*, *require drug testing for extracurricular activities*, *require students to wear uniforms*, *enforce strict dress codes*, *provide school lockers to students*, *have silent alarms connected to law enforcement*, *require students to use clear book bags or ban book bags*, *have an automatic school wide emergency parent notification system*, *require students to wear an ID badge*, *require faculty/staff to wear ID badges*, *use security cameras to monitor schools*, *provide an anonymous threat reporting system*, *provide two-way radios to staff*, and *prohibit non-academic use of*

cellphones. The following security measures were originally coded as 1 indicating yes and 2 indicating no, to which I subsequently recoded so that 0 indicated no. I included the following measures because existing studies suggest that security measures shape both SRO roles (Benitez et al., 2022) and exclusionary practices alike (Finn & Servoss, 2014). Not controlling for them could likely produce inaccurate results. I also used a dichotomous variable pertaining to *whether schools had formal law enforcement policies* because schools with law enforcement policies may have outlines as to how engaged SROs can be in student discipline, which could undermine relationships between behavioral management strategies and student outcomes.

Missing data

Before I removed any cases from the original dataset, the total sample size consisted of 2,762 schools. Since the current study pertains to three primary areas of interest – SROs, teacher training, and student disciplinary outcomes – any cases that would be included in the later analyses would have to have data for the three variables. I removed cases where schools had reported not having any SROs present, to which the sample size was then reduced to 1,859 schools. There were no missing data for any other variables used in the current study.

Analytical strategy

I used a count model regression since the focal dependent variable was also a count variable. Specifically, I used a negative binomial regression model since the variables distribution is over dispersed (Osgood, 2000). In other words, the variables variance significantly exceeded the mean. Using a regression model like ordinary least

squares (OLS) would have provided uncertain coefficients and standard errors since OLS assumes that the dependent variable is normally distributed. A negative binomial regression models fit can be assessed based on its likelihood-ratio (LR) test. The LR test tests the null hypothesis that all the coefficients are equal to zero. When the LR test is statistically significant, the null hypothesis is rejected, and that at least one of the coefficients in the model does not equal zero.

CHAPTER IV

RESULTS

Descriptive statistics

The descriptive statistics of the measures used in the analysis are shown in Table 4. On average, schools reported 7 school suspensions and nearly 16 incidents to the police. Schools median in the teacher behavioral intervention strategies was a 4, with roughly 25% of respondents reporting 2 or less. Approximately 14% of schools reported being primary schools, 39% were middle schools, 3% included a combination of school levels, and 44% were high schools. Nearly a quarter of schools were located in cities (24%), 15% in towns, and 21% in rural areas, and 39% in the suburbs. Schools population sizes varied, with nearly 7% of reporting less than 300 students, 17% between 300 and 499 students, 38% between 500 and 999, and 38% with at least 1,000 students. On average, schools also reported that approximately 18% of their students were below the 15th percentile on standardized exams, 62% were likely to attend college, 70% found student academic achievement to be important, and a 93% attendance rate.

Approximately 5% of schools were located in high crime areas, 20% were located in moderate crime areas, and 74% were located in low crime rate areas. About 7% of schools reported that students lived in areas with high crime rates, 14% reported students lived in mixed crime rate areas, 23% reported students lived in moderate crime areas, and 74% reported students lived in low crime areas. Schools use of security measures also

varied. About 98% of schools reported requiring visitors to check in before entering school grounds. Nearly 95% controlled access to school buildings during school hours. Nearly half of schools also reported controlling school grounds during school hours (48%). About 4% of schools reported having metal detectors, while nearly 10% of schools reported practicing random metal detector searches. Nearly 64% of schools reported classrooms were equipped with inside locks, while 72% of schools reported closing campus during lunch hours. More than half (55%) of schools reported practicing random contraband sweeps, and 16% of schools reported drug testing students for extracurricular activities. Only 15% of schools required student uniforms, 58% of schools reported enforcing strict dress codes. Approximately 71% of schools provided students with lockers, 34% reported having silent alarms that were connected to law enforcement. About 6% of schools required students to have clear book bags and 72% had electronic notification systems that sent alerts to parents. While only 16% of schools required students to carry student ID badges, 74% required faculty/staff to carry an ID badge. Roughly 62% of schools also had anonymous reporting systems. Approximately 81% of schools provided faculty with two-way radios, 60% of schools prohibited nonacademic use of phones, and 70% of schools reported having formal law enforcement policies.

Table 4. Descriptive statistics (N = 1,859)

Variable	Mean	SD	Min	Max
Dependent variables				
Suspensions	7.33	15.35	0	172
Independent variable				
LEO	0	1	-2.64	0.94
Mentor	0	1	-2.53	1.11
Authoritarian	0	1	-3.02	0.80
Teacher behavioral intervention strategies	3.12	1.10	0	4
Control variables				
Primary school	0.14	0.36	0	1
Middle school	0.39	0.49	0	1
High school	0.44	0.50	0	1
Combined school	0.03	0.17	0	1
City	0.24	0.43	0	1
Town	0.15	0.36	0	1
Rural	0.21	0.41	0	1
Suburb	0.39	0.49	0	1
Less than 300 students	0.07	0.25	0	1
300-499 students	0.17	0.38	0	1
500-999 students	0.38	0.49	0	1
1,000+ students	0.38	0.49	0	1
% Students below the 15th percentile	18.32	17.41	0	100
% Students likely to attend college	62.28	23.71	0	100
% Students academic achievement	70.68	21.65	0	100
% Daily attendance	93.12	6.83	2	100
School in high crime area	0.05	0.22	0	1
School in moderate crime area	0.20	0.40	0	1
School in low crime area	0.74	0.44	0	1
High crime where students live	0.08	0.26	0	1
Moderate crime where students live	0.23	0.42	0	1
Mixed crime where students live	0.14	0.34	0	1
Low crime where students live	0.56	0.50	0	1
Visitors check in	0.98	0.15	0	1
Building access controlled	0.95	0.23	0	1
Grounds access controlled	0.48	0.50	0	1
Metal detectors	0.04	0.19	0	1
Random metal detector checks	0.09	0.29	0	1
Rooms equipped with inside locks	0.64	0.48	0	1
Closed campus during lunch	0.72	0.45	0	1
Random contraband sweeps	0.55	0.50	0	1
Drug test extracurricular activities	0.16	0.37	0	1
Student uniforms required	0.15	0.36	0	1

Strict dress code enforced	0.58	0.49	0	1
Students provided lockers	0.71	0.46	0	1
Silent alarms connected to LEO	0.34	0.48	0	1
Clear book bags required	0.06	0.24	0	1
Electronic notification system	0.72	0.45	0	1
Student ID badges required	0.16	0.37	0	1
Anonymous reporting system	0.62	0.49	0	1
Faculty/staff ID badges required	0.74	0.44	0	1
Security cameras	0.93	0.26	0	1
Staff provided two-way radios	0.81	0.39	0	1
Prohibit non-academic use of phones	0.60	0.49	0	1
Formal LEO policies	0.70	0.46	0	1

Multicollinearity diagnostics

To ensure the data did not suffer from multicollinearity between the independent variables, I tested for multicollinearity using two approaches for greater assurance. First, I began with a pairwise correlation matrix. Pairwise correlation matrix coefficients range from zero to positive and negative one, with zero indicating no relationship, one indicating a perfect positive correlation, and negative one indicating a perfect negative correlation. Any correlation coefficients exceeding .90 could indicate the presence of collinearity. The correlation coefficients for the variables that are being used in the current study ranged from 0 to 0.69. This was the first indication that there was an absence of collinearity. The pairwise correlation matrix is found in Table 5.

Table 5 pairwise correlation matrix

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
(1) Authoritarian	1														
(2) Mentor	0.55***	1													
(3) LEO	0.45***	0.35***	1												
(4) Teacher BIS training	0.09***	0.14***	0.05*	1											
(5) Primary	-0.34***	-0.19***	-0.14***	0.02	1										
(6) Middle	-0.00	-0.04	-0.06*	0.03	-0.33***	1									
(7) Combined	-0.04	-0.02	-0.02	-0.05*	-0.07**	-0.14***	1								
(8) City	0.00	-0.07**	-0.09***	0.07**	0.01	-0.02	-0.04	1.00							
(9) Town	0.02	0.00	0.08**	-0.04	0.01	0.00	0.00	-0.24***	1.00						
(10) Rural	-0.00	0.01	0.04	-0.10***	0.01	-0.01	0.10***	-0.29***	-0.22***	1.00					
(11) < 300 students	-0.13***	-0.08***	-0.09***	-0.01	0.07**	0.03	0.02	-0.01	0.04	0.15***	1.00				
(12) 300-499 students	-0.11***	-0.10***	-0.03	-0.05*	0.15***	0.06*	-0.01	-0.05*	0.06**	0.16***	-0.12***	1.00			
(13) 500-999 students	-0.07**	-0.05	-0.04	-0.01	0.13***	0.23***	0.03	-0.05*	0.11***	-0.01	-0.21***	-0.35***	1.00		
(14) Students below 15th percentile	0.02	-0.03	-0.05*	-0.00	0.01	0.03	0.01	0.19***	-0.02	-0.07**	0.03	0.04	0.04	1.00	
(15) College expectancy	-0.03	0.04	-0.03	0.06*	-0.01	-0.07**	-0.03	-0.02	-0.13***	-0.12***	-0.08**	-0.06*	-0.05*	-0.35***	1.00
(16) Daily attendance	-0.03	0.02	-0.00	-0.04	0.05	0.07**	0.02	-0.05*	0.01	0.03	-0.06*	-0.00	0.03	-0.18***	0.09***
(17) Academic achievement	-0.03	0.03	-0.02	0.11***	0.04	-0.07**	-0.04	-0.03	-0.10***	-0.11***	-0.11***	-0.04	-0.03	-0.30***	0.67***
(18) School in high crime	-0.04	-0.10***	-0.06*	0.02	0.01	0.05*	0.00	0.22***	-0.08***	-0.09***	0.02	0.05	-0.01	0.27***	-0.17***
(19) School in moderate crime area	0.05*	-0.00	0.01	0.05*	-0.01	-0.01	-0.02	0.19***	-0.02	-0.13***	-0.01	-0.03	0.02	0.17***	-0.14***
(20) Students live in high crime area	-0.00	-0.09***	-0.05*	0.04	-0.00	0.01	-0.00	0.25***	-0.07**	-0.09***	0.02	0.03	-0.01	0.33***	-0.16***
(21) Students live in moderate crime area	0.03	0.01	0.00	0.02	-0.03	-0.02	0.02	0.13***	0.02	-0.10***	-0.02	-0.01	0.01	0.17***	-0.18***
(22) Students live in mixed crime area	0.02	-0.02	0.00	0.03	-0.02	0.00	0.00	0.05*	0.02	-0.02	-0.01	0.01	-0.05	-0.08***	0.04
(23) Visitors check in	0.11***	0.05	0.08***	0.05*	-0.01	0.02	0.01	-0.02	-0.04	-0.03	-0.10***	-0.07**	0.03	-0.02	0.05
(24) Building access controlled	-0.01	0.03	0.03	0.06*	0.07**	0.05*	-0.04	-0.02	-0.06*	0.01	-0.02	-0.01	0.06*	-0.03	0.04
(25) Grounds access controlled	0.07**	0.04	0.04	0.08**	0.07**	-0.05*	-0.06*	0.09***	-0.04	-0.05*	-0.01	-0.05*	-0.06*	0.11***	-0.01
(26) Metal detectors	-0.001	-0.09***	-0.05*	0.05*	-0.08**	-0.05*	0.01	0.23***	-0.06**	-0.08***	0.05*	0.02	-0.05	0.15***	-0.04
(27) Random metal detector searches	0.05	0.00	0.02	0.1***	-0.11***	-0.05*	0.04	0.17***	-0.06*	-0.05*	0.03	-0.05*	-0.05*	0.16***	-0.05
(28) Rooms equipped with locks	-0.02	-0.00	-0.01	0.00	0.02	-0.02	0.02	0.03	0.04	0.02	0.02	0.03	0.01	-0.03	0.02
(29) Closed campus during lunch	0.05*	0.03	0.03	0.07*	-0.05*	0.10***	-0.01	0.01	-0.01	-0.00	-0.02	-0.00	-0.01	0.04	-0.02
(30) Random contraband sweeps	0.26***	0.23***	0.19***	0.01	-0.37***	-0.00	0.06**	-0.09***	0.06*	0.13***	-0.03	-0.07**	-0.08***	-0.00	-0.05*
(31) Drug test for extracurricular activities	0.12***	0.06**	0.13***	-0.01	-0.15***	-0.08***	0.05*	-0.10***	0.11***	0.09***	0.02	0.04	-0.04	-0.06**	-0.11***
(32) Student uniforms required	-0.05*	-0.10***	-0.06*	0.08***	0.08***	0.06**	0.05*	0.23***	-0.07**	-0.11***	0.03	0.06*	0.04	0.20***	-0.10***
(33) Strict dress code enforced	0.08***	0.04	0.07**	0.10***	-0.08**	0.10***	0.02	0.02	0.04	0.02	0.00	0.02	0.02	0.06**	-0.08***
(34) School lockers provided	0.17***	0.12***	0.09***	0.00	-0.38***	0.09***	0.06*	-0.07**	0.01	0.05*	-0.01	-0.05	-0.03	-0.10***	0.12***
(35) Silent alarm connected to LEO	0.01	0.06*	0.03	0.06*	-0.02	0.05*	-0.06*	-0.09***	-0.03	0.05*	0.00	0.00	0.02	-0.10***	0.05
(36) Clear book bags required	0.03	0.02	0.01	0.04	-0.07**	0.09***	0.01	0.06**	-0.01	0.02	-0.03	0.05*	0.02	0.07**	-0.04
(37) Electronic notification system	0.06**	0.12***	0.05*	0.09***	-0.01	0.00	0.01	-0.01	-0.02	-0.04	-0.01	-0.03	-0.02	-0.02	0.05*
(38) Student ID badges required	0.04	0.02	0.02	0.08**	-0.09***	-0.01	-0.04	0.09***	-0.10***	-0.08***	-0.06*	-0.05*	-0.07**	0.09***	-0.04
(39) Anonymous reporting system	0.14***	0.11***	0.08***	0.12***	-0.11***	0.04	-0.07**	-0.00	-0.01	-0.07**	-0.05*	-0.09***	-0.01	-0.03	-0.03
(40) Faculty/staff ID badge required	0.03	0.09***	0.08***	0.07**	0.07**	0.02	-0.03	-0.08***	-0.03	-0.05*	-0.14***	-0.05*	0.05*	-0.07**	0.04
(41) Security cameras	0.12***	0.09***	0.12***	-0.00	-0.15***	0.01	0.04	-0.11***	0.04	0.06**	-0.06**	-0.01	-0.03	-0.08***	0.01
(42) Staff provided two-way radios	0.03	0.02	0.02	0.08***	0.04	0.04	-0.09***	0.03	-0.04	-0.05*	-0.10***	-0.03	0.01	0.04	0.06*
(43) prohibit non-academic use of cells	-0.06**	-0.04	0.01	0.08**	0.11***	0.20***	0.00	0.00	0.04	0.05*	0.05*	0.05*	0.12***	0.08***	-0.06**
(44) Formal LEO policies	0.27***	0.27***	0.21***	0.13***	-0.10***	-0.04	-0.04	0.02	-0.04	-0.03	-0.07**	-0.05*	-0.07**	-0.03	0.01

Note: * < .05, ** < .01, *** < .001

Variables	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
(1) Authoritarian															
(2) Mentor															
(3) LEO															
(4) Teacher BIS training															
(5) Primary															
(6) Middle															
(7) Combined															
(8) City															
(9) Town															
(10) Rural															
(11) < 300 students															
(12) 300-499 students															
(13) 500-999 students															
(14) Students below 15th percentile															
(15) College expectancy															
(16) Daily attendance	1.00														
(17) Academic achievement	0.09***	1.00													
(18) School in high crime	-0.10***	-0.10***	1.00												
(19) School in moderate crime area	-0.04	-0.14***	-0.12***	1.00											
(20) Students live in high crime area	-0.11***	-0.13***	0.69***	0.05*	1.00										
(21) Students live in moderate crime area	-0.07**	-0.17***	-0.10***	0.59***	-0.16***	1.00									
(22) Students live in mixed crime area	0.02	0.03	-0.03	-0.03	-0.11***	-0.22***	1.00								
(23) Visitors check in	0.02	0.06*	-0.01	-0.01	-0.03	-0.00	-0.05	1.00							
(24) Building access controlled	-0.00	0.02	0.01	0.02	-0.02	0.02	0.02	0.07	1.00						
(25) Grounds access controlled	-0.01	0.00	0.09***	0.07**	0.07**	0.05*	0.03	0.02	0.17***	1.00					
(26) Metal detectors	-0.13***	-0.04	0.17***	0.10***	0.25***	0.05*	0.00	-0.03	0.04	0.03	1.00				
(27) Random metal detector searches	-0.07**	-0.03	0.11***	0.12***	0.19***	0.06*	0.02	-0.00	0.01	0.07**	0.45***	1.00			
(28) Rooms equipped with locks	0.02	0.04	0.02	-0.00	0.03	-0.02	-0.04	-0.00	0.05*	0.03	0.02	0.03	1.00		
(29) Closed campus during lunch	0.04	-0.02	-0.01	0.04	0.03	-0.00	0.02	0.05*	0.10***	0.07**	0.00	0.03	0.03	1.00	
(30) Random contraband sweeps	-0.00	-0.06**	-0.06**	-0.04	-0.04	0.00	-0.01	0.02	0.04	0.03	0.03	0.14***	0.02	0.09***	1.00
(31) Drug test for extracurricular activities	-0.00	-0.10***	-0.04	-0.07**	-0.04	-0.03	-0.02	-0.04	-0.02	0.01	0.02	0.03	0.04	0.04***	0.17***
(32) Student uniforms required	-0.03	-0.07**	0.16***	0.19***	0.18***	0.15***	0.02	-0.03	0.01	0.12***	0.21***	0.23***	0.03	0.03	-0.03
(33) Strict dress code enforced	-0.00	-0.05*	0.01	0.10***	0.03	0.08**	-0.02	0.02	0.09***	0.10***	0.06*	0.11***	0.07**	0.08***	0.12***
(34) School lockers provided	0.00	0.06*	-0.10***	-0.10***	-0.09***	-0.08***	0.02	0.01	0.02	-0.17***	-0.00	-0.03	0.00	-0.02	0.23***
(35) Silent alarm connected to LEO	0.02	0.06*	-0.06*	-0.05*	-0.09***	-0.04	0.00	0.03	0.07**	-0.02	-0.06*	-0.05*	0.04	-0.01	0.04
(36) Clear book bags required	-0.02	-0.03	0.01	0.04*	0.04	0.02	-0.03	-0.02	0.04	0.04	0.11***	0.13***	0.04	0.01	0.08***
(37) Electronic notification system	-0.01	0.06**	0.01	-0.02	-0.00	-0.00	-0.02	0.01	0.01	0.04	0.02	0.04	0.04	0.02	0.03
(38) Student ID badges required	-0.02	-0.03	0.10***	0.12***	0.09***	0.09***	0.04	0.04	-0.02	0.09***	0.11***	0.21***	0.01	0.08**	0.08**
(39) Anonymous reporting system	0.02	0.00	-0.02	0.02	-0.05*	0.03	0.02	0.05*	0.02	0.03	-0.04	0.05*	0.00	0.05*	0.13***
(40) Faculty/staff ID badge required	0.03	0.08***	-0.02	-0.01	-0.07**	-0.02	0.00	0.12***	0.06*	0.01*	-0.06*	-0.02	0.03	-0.00	-0.00
(41) Security cameras	-0.04	0.01	-0.05*	-0.05*	-0.06*	-0.04	0.01	0.03	0.11***	-0.04	0.00	0.04	0.07**	-0.03	0.16***
(42) Staff provided two-way radios	0.02	0.06*	0.03	0.03	0.03	0.04	0.02	0.06*	0.02	0.03	0.01	0.01	0.03	0.07**	-0.01
(43) prohibit non-academic use of cells	-0.03	-0.04	0.03	0.02	0.05*	-0.00	0.02	0.02	0.03	0.07**	0.04	0.04	0.04	0.03	-0.05*
(44) Formal LEO policies	-0.03	0.03	0.01	-0.01	0.02	-0.05*	0.03	0.07**	-0.01	0.04	-0.01	0.02	0.00	0.01	0.09***

Note: * < .05, ** < .01, *** < .001

Variables	31	32	33	34	35	36	37	38	39	40	41	42	43	44
(1) Authoritarian														
(2) Mentor														
(3) LEO														
(4) Teacher BIS training														
(5) Primary														
(6) Middle														
(7) Combined														
(8) City														
(9) Town														
(10) Rural														
(11) < 300 students														
(12) 300-499 students														
(13) 500-999 students														
(14) Students below 15th percentile														
(15) College expectancy														
(16) Daily attendance														
(17) Academic achievement														
(18) School in high crime														
(19) School in moderate crime area														
(20) Students live in high crime area														
(21) Students live in moderate crime area														
(22) Students live in mixed crime area														
(23) Visitors check in														
(24) Building access controlled														
(25) Grounds access controlled														
(26) Metal detectors														
(27) Random metal detector searches														
(28) Rooms equipped with locks														
(29) Closed campus during lunch														
(30) Random contraband sweeps														
(31) Drug test for extracurricular activities	1.00													
(32) Student uniforms required	-0.01	1.00												
(33) Strict dress code enforced	0.13***	0.28***	1.00											
(34) School lockers provided	0.08**	-0.15***	-0.01	1.00										
(35) Silent alarm connected to LEO	0.00	-0.10***	-0.02	0.09***	1.00									
(36) Clear book bags required	0.08***	0.12***	0.08**	0.03	-0.01	1.00								
(37) Electronic notification system	0.02	-0.02	0.06**	0.04	0.03	0.04	1.00							
(38) Student ID badges required	0.04	0.18***	0.08***	-0.08***	-0.03	0.02	0.04	1.00						
(39) Anonymous reporting system	0.03	-0.03	0.07**	0.00	0.03	-0.01	0.11***	0.08***	1.00					
(40) Faculty/staff ID badge required	-0.05*	-0.03	0.02	-0.00	0.07**	0.04	0.07**	0.21***	0.07**	1.00				
(41) Security cameras	0.09***	-0.04	0.06*	0.17***	0.11***	0.04	0.02	0.04	0.06*	0.06*	1.00			
(42) Staff provided two-way radios	-0.06*	0.04	0.03	-0.05*	0.01	0.02	0.03	0.06*	0.07**	0.04	-0.01	1.00		
(43) prohibit non-academic use of cells	-0.03	0.11***	0.16***	-0.06**	-0.02	0.08***	0.02	0.01	-0.01	0.04	0.00	0.02	1.00	
(44) Formal LEO policies	0.01	-0.01	0.03	0.04	0.03	-0.02	0.08***	0.01	0.10***	0.06**	0.07**	0.04	-0.03	1.00

Note: * < .05., ** < .01., *** < .001

For reassurance, I followed up with a collinearity diagnostics test in STATA using the *collin* command (StataCorp, 2019). The benefit to this approach is that it provides reports on collinearity. For example, the *collin* command reports the variance inflation factors (VIF), which also indicate the presence of collinearity. Secondly, it also provides the tolerance levels, which are the inverse of VIFs. Specifically, VIF values greater than four and tolerance values less than .40 would indicate that there are multicollinearity issues (Allison, 1999). The multicollinearity diagnostics tests reported results of VIF values ranging from 1.03 to 2.46, and tolerance values ranging from 0.41 to 0.97. With the following results, I proceeded with my regression analyses. The collinearity diagnostics test results are found in Table 6.

Table 6. Multicollinearity diagnostics

Variable	VIF	Tolerance
Authoritarian	1.87	0.54
Mentor	1.59	0.63
LEO	1.34	0.75
Teacher behavioral intervention strategies	1.12	0.89
Primary	2.15	0.47
Middle	1.74	0.58
Combined	1.11	0.90
City	1.43	0.70
Town	1.39	0.72
Rural	1.53	0.66
Less than 300	1.40	0.71
300-499 students	1.67	0.60
500-999 students	1.80	0.56
Students below the 15 th percentile	1.41	0.71
Expected college enrollment	2.07	0.48
Student academic achievement	1.92	0.92
Daily attendance	1.08	0.52
School in high crime rate area	2.17	0.46
School in moderate crime rate area	1.83	0.55
Students live in high crime rate area	2.46	0.41
Students live in mixed crime rate areas	1.16	0.51
Students moderate crime	1.96	0.41
Visitors check in	1.06	0.51
Building access	1.12	0.86
Grounds locked	1.14	0.94
Metal detectors	1.38	0.89
Random metal detector search	1.40	0.88
Locked doors	1.03	0.72
Closed campus during lunch	1.06	0.71
Random sweeps for contraband	1.35	0.97
Drug test extracurricular activities	1.16	0.94
Students required to wear uniforms	1.36	0.74
Strict dress code enforced	1.20	0.83
Schools provide student lockers	1.31	0.77
Silent alarms connected to authorities	1.06	0.84
Students required to use clear bags	1.08	0.93
Electronic system	1.05	0.95
Student required to wear ID/badges	1.21	0.83
Anonymous reporting system	1.12	0.91
Faculty/staff required to wear ID/badges	1.10	0.95
Security cameras	1.16	0.89
Two-way radios	1.06	0.95
Prohibit nonacademic use of cellphones	1.15	0.87
Formal law enforcement officer policies	1.15	0.87
Mean VIF	1.41	

Negative binomial regression models

Models without controls

All regression models are shown in table 7. In model 1, I regressed suspensions on SRO roles and teacher behavioral intervention strategies without any control variables. SROs' authoritarian role is positively and significantly associated with student suspensions (IRR = 1.523, $p < .001$). Specially, for each one unit increase in SROs' authoritarian role, the count of student suspensions increase by 52.3% $[(1.523-1) * 100 = 52.3\%]$. No significant associations emerged between SROs' mentor, law enforcement roles, and student suspensions. Teachers' behavioral intervention strategies is negatively and significantly associated with student suspensions (IRR = .885, $p < .01$). Specifically, for each one unit increase in teacher behavioral intervention strategies, the count of suspensions decreased by 11.5% $[(1-.885) * 100 = 11.5\%]$.

Models with controls

I controlled for school characteristics like school level, urbanicity, and student population size in model 2. SROs' authoritarian role remained significantly and positively associated with student suspension (IRR = 1.277, $p < .001$). Specifically, for each one unit increase in SROs' authoritarian role, the count of student suspensions increased by 27.7% $[(1.277-1) * 100 = 27.7\%]$. No significant relationship emerged between SROs' mentor and law enforcement roles and student suspensions. Teacher behavioral intervention strategies remained significantly and positively associated to student suspension (IRR = .917, $p < .05$). Specifically, for each one unit increase in teacher behavioral intervention strategies, student suspensions decreased by 8.3% $[(1-$

.917) * 100 = 8.3%]. Primary schools have a significantly lower count of suspensions than high schools (IRR = .133, $p < .01$). Specifically, primary schools have an 86.7% lower count of suspensions than high schools, net of controls [(1-.133) * 100 = 86.7%]. Middle schools have a significantly lower count of suspensions than high schools (IRR = .670, $p < .01$). Specifically, middle schools have a 33% lower count of suspensions than high schools, net of controls [(1-.670) * 100 = 33%]. Schools with combined levels have a significantly lower count of suspensions than high schools (IRR = .229, $p < .001$). Specifically, combined leveled schools had a 77.1% lower count of suspensions than high schools, net of controls [(1-.229) * 100 = 77.1%]. City schools had a significantly higher count of suspensions than schools in the suburbs (IRR = 1.442, $p < .01$). Specifically, city schools a 44.2% higher count of suspensions than suburb schools, net of controls [(1.442-1) * 100 = 44.2%]. Schools with less than 300 students had a significantly lower count of suspensions than schools with more than 1,000 students (IRR = .216, $p < .001$). Specifically, schools with less than 300 students had a 78.4% lower count of suspensions than schools with more than 1,000 students, net of controls [(1-.216) * 100 = 78.4%]. Schools with 300 to 499 students had a significantly lower count of suspensions than schools with more than 1,000 students (IRR = .291, $p < .001$). Specifically, schools with 300 to 499 students had a 70.9% lower count of suspensions than schools with more than 1,000 students, net of controls [(1-.291) * 100 = 70.9%]. Schools with 500-999 students had a significantly lower count of suspensions than schools with more than 1,000 students (IRR = .571, $p < .001$). Specifically, schools with 500-999 students had a 42.9% lower count of suspensions than schools with more than 1,000 students, net of controls [(1-.571) * 100 = 42.9%]. No other significant associations emerged.

I included variables relating to student success in model 3. SROs' authoritarian role remained significantly and positively associated with suspensions ($IRR = 1.205, p < .01$). Specifically, a one unit increase in SROs' authoritarian role increased the count of suspensions by 20.5%, net of controls $[(1.205-1) * 100 = 20.5\%]$. No significant associations emerged between SROs' mentor and law enforcement role, and suspensions. The association between teacher behavioral intervention strategies and student suspensions was attenuated to non-significance. Primary schools have a significantly lower count of suspensions than high schools ($IRR = .123, p < .01$). Specifically, primary schools have an 87.7% lower count of suspensions than high schools, net of controls $[(1-.123) * 100 = 87.7\%]$. Middle schools have a significantly lower count of suspensions than high schools ($IRR = .654, p < .01$). Specifically, middle schools have a 34.6% lower count of suspensions than high schools, net of controls $[(1-.654) * 100 = 34.6\%]$. Schools with combined levels have a significantly lower count of suspensions than high schools ($IRR = .212, p < .001$). Specifically, combined leveled schools had a 78.8% lower count of suspensions than high schools, net of controls $[(1-.212) * 100 = 78.8\%]$. The relationship between city schools and student suspensions was attenuated to non-significance. Schools with less than 300 students had a significantly lower count of suspensions than schools with more than 1,000 students ($IRR = .188, p < .001$). Specifically, schools with less than 300 students had an 81.2% lower count of suspensions than schools with more than 1,000 students, net of controls $[(1-.188) * 100 = 81.2\%]$. Schools with 300 to 499 students had a significantly lower count of suspensions than schools with more than 1,000 students ($IRR = .280, p < .001$). Specifically, schools with 300 to 499 students had a 72% lower count of suspensions than schools with more

than 1,000 students, net of controls $[(1-.280) * 100 = 72\%]$. Schools with 500-999 students had a significantly lower count of suspensions than schools with more than 1,000 students (IRR = .512, $p < .001$). Specifically, schools with 500-999 students had a 48.8% lower count of suspensions than schools with more than 1,000 students, net of controls $[(1-.512) * 100 = 48\%]$. Poor standardized test schools is significantly and positively associated with student suspensions (IRR = 1.011, $p < .001$). Specifically, for each one unit increase in poor standardized test scores, the count of suspensions increased 1.1%, net of controls $[(1.011-1) * 100 = 1.1\%]$. Expected college enrollment rates is significantly and negatively associated with student suspensions (IRR = .992, $p < .05$). Specifically, for each one unit increase in students likely to attend college, the count of student suspensions is lowered by .8%, net of controls $[(1-.992) * 100 = .8\%]$. Daily attendance is significantly and negatively associated with student suspensions (IRR = .977, $p < .05$). Specifically, for each one unit increase in student attendance, the count of suspensions decreased by 2.3%, net of controls $[(1-.977) * 100 = 2.3\%]$. No other significant associations emerged.

Model 4 included controls pertaining to crime rates near schools and where students live. SROs' authoritarian role remained significantly and positively associated with suspensions (IRR = 1.210, $p < .01$). Specifically, for each one unit increase in SROs' authoritarian role the count of suspensions increased by 21%, net of controls $[(1.210-1) * 100 = 20.5\%]$. No significant associations emerged between SROs' mentor and law enforcement role, and suspensions. The association between teacher behavioral intervention strategies and suspensions remained non-significant. Primary schools have a significantly lower count of suspensions than high schools (IRR = .120, $p < .01$).

Specifically, primary schools have an 88% lower count of suspensions than high schools, net of controls $[(1-.120) * 100 = 88\%]$. Middle schools have a significantly lower count of suspensions than high schools (IRR = .614, $p < .01$). Specifically, middle schools have a 38.6% lower count of suspensions than high schools, net of controls $[(1-.614) * 100 = 38\%]$. Schools with combined levels have a significantly lower count of suspensions than high schools (IRR = .228, $p < .001$). Specifically, combined leveled schools had a 77.2% lower count of suspensions than high schools, net of controls $[(1-.228) * 100 = 77.2\%]$. Schools with less than 300 students had a significantly lower count of suspensions than schools with more than 1,000 students (IRR = .197, $p < .001$). Specifically, schools with less than 300 students had an 80.3% lower count of suspensions than schools with more than 1,000 students, net of controls $[(1-.191) * 100 = 80.3\%]$. Schools with 300 to 499 students had a significantly lower count of suspensions than schools with more than 1,000 students (IRR = .275, $p < .001$). Specifically, schools with 300 to 499 students had a 72% lower count of suspensions than schools with more than 1,000 students, net of controls $[(1-.275) * 100 = 72.5\%]$. Schools with 500-999 students had a significantly lower count of suspensions than schools with more than 1,000 students (IRR = .526, $p < .001$). Specifically, schools with 500-999 students had a 44.4% lower count of suspensions than schools with more than 1,000 students, net of controls $[(1-.512) * 100 = 47.4\%]$. Poor standardized test schools is significantly and positively associated with student suspensions (IRR = 1.007, $p < .001$). Specifically, for each one unit increase in poor standardized test scores, the count of suspensions increased by .7%, net of controls $[(1.011-1) * 100 = 1.1\%]$. Expected college enrollment rates is significantly and negatively associated with student suspensions (IRR = .994, $p < .05$). Specifically, for

each one unit increase in students likely to attend college, the count of student suspensions is lowered by .8%, net of controls $[(1-.992) * 100 = .8\%]$. The association between daily attendance and student suspensions was attenuated to non-significant. Schools with students living in high crime rate areas is significantly and positively associated with student suspensions (IRR = 2.256, $p < .001$). Specifically, schools with students living in high crime rate areas had a 125.6% higher count of suspensions than schools with student living in low crime rate areas, net of controls $[(2.256-1) * 100 = 125.6\%]$. Schools with students living in mixed crime rate areas is significantly and positively associated with student suspensions (IRR = 1.435, $p < .001$). Specifically, schools with students living in mixed crime rate areas had a 43.5% higher count of suspensions than schools with student living in low crime rate areas, net of controls $[(1.435-1) * 100 = 43.5\%]$. Schools with students living in moderate crime rate areas is significantly and positively associated with student suspensions (IRR = 1.740, $p < .001$). Specifically, schools with students living in high crime rate areas had a 74% higher count of suspensions than schools with student living in low crime rate areas, net of controls $[(1.740-1) * 100 = 74\%]$. No other significant associations emerged.

Model 5 included control variables relating to school security measures and formal law enforcement officer policies. SROs' authoritarian role remained significantly and positively associated with suspensions (IRR = 1.147 $p < .05$). Specifically, for each one unit increase in SROs' authoritarian role the count of suspensions increased by 14.7%, net of controls $[(1.147-1) * 100 = 14.7\%]$. No significant associations emerged between SROs' mentor and law enforcement role, and suspensions. The association between teacher behavioral intervention strategies and student suspensions again reached

statistical significance ($IRR = .907, p < .05$) Specifically, for each one unit increase in teacher behavioral intervention strategies, the count of suspensions decreased by 9.3%, net of controls $[(1-.917) * 100 = 9.3\%]$. Primary schools have a significantly lower count of suspensions than high schools ($IRR = .127, p < .01$). Specifically, primary schools have an 87.3% lower count of suspensions than high schools, net of controls $[(1-.127) * 100 = 87.3\%]$. Middle schools have a significantly lower count of suspensions than high schools ($IRR = .600, p < .01$). Specifically, middle schools have a 40% lower count of suspensions than high schools, net of controls $[(1-.600) * 100 = 40\%]$. Schools with combined levels have a significantly lower count of suspensions than high schools ($IRR = .235, p < .001$). Specifically, combined leveled schools had a 76.5% lower count of suspensions than high schools, net of controls $[(1-.235) * 100 = 76.5\%]$. Schools with less than 300 students had a significantly lower count of suspensions than schools with more than 1,000 students ($IRR = .221, p < .001$). Specifically, schools with less than 300 students had an 77.9% lower count of suspensions than schools with more than 1,000 students, net of controls $[(1-.221) * 100 = 77.9\%]$. Schools with 300 to 499 students had a significantly lower count of suspensions than schools with more than 1,000 students ($IRR = .298, p < .001$). Specifically, schools with 300 to 499 students had a 70.2% lower count of suspensions than schools with more than 1,000 students, net of controls $[(1-.298) * 100 = 70.2\%]$. Schools with 500-999 students had a significantly lower count of suspensions than schools with more than 1,000 students ($IRR = .575, p < .001$). Specifically, schools with 500-999 students had a 42.5% lower count of suspensions than schools with more than 1,000 students, net of controls $[(1-.575) * 100 = 42.5\%]$. Poor standardized test schools is significantly and positively associated with student

suspensions (IRR = 1.007, $p < .05$). Specifically, for each one unit increase in poor standardized test scores, the count of suspensions increased by .7%, net of controls [(1.007-1) * 100 = .7%]. Expected college enrollment rates is significantly and negatively associated with student suspensions (IRR = .993, $p < .05$). Specifically, for each one unit increase in students likely to attend college, the count of student suspensions is lowered by .7%, net of controls [(1-.993) * 100 = .7%]. Schools with students living in high crime rate areas is significantly and positively associated with student suspensions (IRR = 2.454, $p < .001$). Specifically, schools with students living in high crime rate areas had a 145.4% higher count of suspensions than schools with student living in low crime rate areas, net of controls [(2.454-1) * 100 = 145.4%]. Schools with students living in mixed crime rate areas is significantly and positively associated with student suspensions (IRR = 1.372, $p < .05$). Specifically, schools with students living in mixed crime ate areas had a 37.2% higher count of suspensions than schools with student living in low crime rate areas, net of controls [(1.372-1) * 100 = 37.2%]. Schools with students living in moderate crime rate areas is significantly and positively associated with student suspensions (IRR = 1.777, $p < .001$). Specifically, schools with students living in high crime rate areas had a 77.7% higher count of suspensions than schools with student living in low crime rate areas, net of controls [(1.777-1) * 100 = 77.7%]. Schools that provide students with lockers had a significantly and positive association with student suspensions (IRR = 1.296, $p < .05$). Specifically, schools that provide students with lockers had a 29.6% higher count in suspensions than schools that do not provide students with lockers, net of controls [(1.296-1) * 100 = 29.6%]. Schools that have an anonymous reporting system have a significant and positive association with student suspensions (IRR = 1.373, $p <$

.01). Specifically, schools that have an anonymous reporting system had a 37.3% higher count in suspensions, net of controls $[(1.373-1) * 100 = 37.3]$. No other significant associations emerged.

Table 7. Regressing suspensions on SRO roles and teacher behavioral intervention strategies (N = 1,859)

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
	Suspension	Suspension	Suspension	Suspension	Suspension
Authoritarian	1.523*** (0.095)	1.277*** (0.075)	1.205** (0.070)	1.210** (0.069)	1.147* (0.068)
Mentor	1.021 (0.057)	.950 (0.050)	1.032 (0.054)	1.042 (0.055)	1.046 (0.057)
LEO	.925 (0.053)	.903 (0.049)	.920 (0.049)	.929 (0.048)	.945 (0.051)
Teacher behavioral intervention	.885** (0.040)	.917* (0.038)	.929 (0.038)	.926 (0.037)	.907* (0.037)
Control variables					
Primary school		.133*** (0.023)	.123*** (0.021)	.120*** (0.020)	.127*** (0.024)
Middle school		.670** (0.077)	.654*** (0.074)	.614*** (0.068)	.600*** (0.072)
Combined school		.229*** (0.063)	.212*** (0.057)	.228*** (0.061)	.235*** (0.064)
City		1.442** (0.165)	1.155 (0.133)	1.024 (0.117)	1.082 (0.128)
Town		1.283 (0.179)	1.220 (0.168)	1.243 (0.170)	1.239 (0.173)
Rural		1.123 (0.146)	1.079 (0.138)	1.242 (0.160)	1.246 (0.163)
Less than 300 students		.216*** (0.047)	.188*** (0.043)	.197*** (0.042)	.221*** (0.049)
300-499 students		.291*** (0.046)	.280*** (0.043)	.275*** (0.042)	.298*** (0.047)
500-999 students		.571*** (0.070)	.512*** (0.061)	.526*** (0.063)	.575*** (0.071)
Students below 15 th percentile			1.011*** (0.003)	1.007* (0.003)	1.007* (0.003)
Students likely to attend college			.992** (0.003)	.994* (0.003)	.993** (0.003)
Student academic achievement			.995 (0.003)	.997 (0.003)	.998 (0.003)
Daily attendance			.977* (0.010)	.987 (0.009)	.988 (0.009)
school in high crime area				1.222 (0.320)	1.175 (0.310)
School in moderate crime area				1.145 (0.154)	1.189 (0.161)
High crime where students live				2.256*** (0.525)	2.454*** (0.583)
Mixed crime where students live				1.435** (0.188)	1.372* (0.183)
Moderate crime where students live				1.740*** (0.239)	1.777*** (0.247)
Visitors check in					1.515 (0.475)
Building access locked					.841

					(.165)
Grounds access controlled					1.142 (0.104)
Metal detectors					.933 (0.251)
Random metal detector checks					1.022 (0.182)
Rooms equipped with locks					.901 (0.082)
Closed campus during lunch					.992 (0.975)
Random contraband sweeps					1.109 (0.109)
Drug tests for extracurricular activities					.831 (0.102)
Student uniforms required					.781 (0.118)
Strict dress code enforced					1.166 (0.118)
Students provided lockers					1.296* (0.143)
Silent alarms connected to LEO					.867 (0.081)
Clear book bags required					.845 (0.161)
Electronic notification system					.993 (0.098)
Student ID badges required					1.016 (0.128)
Faculty/staff ID badges required					.996 (0.104)
Anonymous reporting system					1.373** (0.129)
Security cameras					.835 (0.155)
Staff provided two-way radios					1.031 (0.118)
Prohibit non-academic use of phones					.977 (0.093)
Formal LEO policies					1.087 (0.110)
	LR $x^2 =$	LR $x^2 =$	LR $x^2 =$	LR $x^2 =$	LR $x^2 =$
	56.21	380.15	456.40	503.28	536.31
	$p < .001$	$p < .001$	$p < .001$	$p < .001$	$p < .001$

Note: * $p < .05$. ** $p < .01$. *** $p < .001$

Sensitivity analysis

I ran additional alternative models as a sensitivity analysis, to examine whether the results were consistent regardless of how the variables were measured. Rather than treating the SRO latent roles as the predictors, I used individual SRO measures. I did this because there may be a possibility that certain SRO measures had a larger influence in the relationship between SRO roles and student suspensions. Specifically, some measures may be driving the relationships in certain direction, whereas others might have attenuated relationships. I then compared the original and alternative models coefficients to determine whether there were any significant differences. The results were mostly consistent with some changes in the focal independent predictor variables. For example, individual SRO authoritarian measures started off significant, but two were attenuated to non-significant after including the first set of controls and the third after including the second set of controls and remained nonsignificant through the remaining models. No significant associations emerged between independent SRO mentor measures and suspensions. Only one SRO law enforcement officer measures, traffic control, was statistically significant but was shortly attenuated to non-significant after the third set of controls. Teacher behavioral intervention strategies was significantly and negatively associated with suspensions throughout all the models. The control variables were almost identical in their significance and magnitude. The sensitivity analysis models are found in the appendix in Table 8.

CHAPTER V

DISCUSSION

Summary of the current study

Prior research suggests that students face detrimental outcomes when being exposed to disciplinary actions, and that these outcomes can be impacted by school security measures and behavioral management strategies alike. For example, SROs have been described as having a criminalizing effect on discipline, particularly when engaging in law enforcement roles. Alternatively, studies have shown that behavioral intervention strategies have mitigating effects on student behavioral outcomes. The purpose of the current study was to examine the extent to which SRO roles and teacher behavioral intervention strategies shape student outcomes, including suspensions. The three SRO roles that emerged in the current analysis were slightly different than the three roles which NASRO uses and those found in prior literature (Benitez et al., 2021). The consistent role that emerged were the law enforcement role, which includes SROs being involved in traffic controlling and patrolling schools, and the mentor role. However, I named the third role authoritarian since it was composed of roles that included SROs being involved in defining student offenses, actively problem solving, and engaging in discipline. Of the three SRO roles, only the authoritarian role positively and significantly predicted suspensions. Moreover, teacher behavioral intervention strategies started off

significant, was attenuated to nonsignificance and then again reached statistical significance.

Though all three SRO roles were not theoretically identical, the study's findings do partially support the existing literature on SROs, in that their presence alone can have detrimental effects on student discipline. The relationship that emerged however, was somewhat unexpected. The literature would suggest that SROs' law enforcement roles would have a negative impact on exclusionary practices, since this produces criminalization effects from the overlap between schools and the criminal justice system (Hirschfield, 2008). Instead, the current study revealed no significant relationship involving SROs' law enforcement role and student outcomes but one including the authoritarian role. Specifically, SROs' authoritarian role increased suspensions. This is likely the case because all measures in this role related to being involved in or defining student discipline. The findings on teacher behavioral intervention strategies reduced suspensions are also consistent with the existing literature, which posits that behavioral management strategies align with students best interests by relying on alternative disciplinary actions that minimize student negative outcomes (Bradshaw et al., 2010). SROs law enforcement may have also not had a significant relationship because it could be that such SROs are not thoroughly engaged in student discipline unlike the authoritarian role.

Although only one SRO role predicted an increase in student suspensions, it is still worth noting that such instances reflect the effects of school criminalization. Specifically, when SROs engage in discipline, they are bringing student misconduct to the attention of school administrators and could very well bring them to the attention of

their police departments. Therefore, alternative behavioral management strategies like that of teacher behavioral intervention may be one potential avenue that could mitigate the school-to-prison pipeline. The current study aligns with existing literature in that SROs increase the use of school discipline (Fisher & Hennesey, 2016). Moreover, the effect that teacher behavioral intervention strategy had on student suspensions also theoretically aligns with the literature.

One unexpected outcome was that the relationship between teacher training scale and student suspensions would be attenuated to nonsignificance in the process of introducing control variables in a stepwise fashion and again reaching statistical significance in models four and five. The relationship between teacher behavioral intervention strategies and the student suspensions again emerged as significant after security measures and law enforcement policies were introduced. This could be attributed to teacher behavioral intervention strategies having a more meaningful impact in schools that require greater surveillance. For example, schools that typically require greater surveillance are disadvantaged schools where there is likely to be more student discipline. Therefore, a greater emphasis on behavioral intervention strategies may be capable of influencing suspensions. Moreover, it is likely that the teacher behavioral intervention strategy scale did negatively predicted student suspensions because it relates to student management. Additional control variables in the analysis pertaining to schools context in the analysis revealed what has been consistent with the existing literature. Specifically, as schools levels of heterogeneity decrease, so too do the use of exclusionary practices (Cruz & Rodl, 2018; Finn & Servoss, 2018; Gerlinger 2020). This is evident in the current study in that lower grade level schools, those found in less urban areas, and

smaller student populations, resulted in significantly lower use in student suspensions. This might suggest that schools' characteristics might influence schools' decision to discipline students than police and teacher behavioral intervention strategies alone.

Limitations

There are some limitations to the current study that are worth mentioning. One major limitation to the current study is that the data are cross-sectional in nature, making it difficult to fully establish temporal order between the main predictor variables and the outcome variables. Specifically, it is difficult to determine whether student outcomes were high net of SROs and whether high student outcomes resulted in schools implementing SROs. Another limitation to the current study is that the suspensions variable only includes suspensions that are a minimum of five days, leaving out the many suspensions that were fewer than five days. Additionally, the data collected from school administrators, despite it pertaining to SROs, administrators simply perceive them to be involved in such roles. Despite the school administrators providing information on SROs, one study has found that there is existing overlap between SRO behavior and what school administrators expect from them (Coon & Travis, 2012). Moreover, the predictor variables are all composed of dichotomous measures, which limits the richness of the data and the extent to which we know how engaged SROs engage in each measure and to what extent training is available. I was also unable to control for racial and ethnic demographics because there were no direct measures available in the dataset. Having racial and ethnic measures would have been insightful, as the literature suggests that it predicts schools' use of behavioral management and discipline (Crawford & Burns, 2022). The current study is also limited in its ability to predict the extent to which student

size predicts outcomes. For example, the dataset uses binary variables to measure student size rather than a count variable. Having a count variable for student body size would provide more reliable estimates. Finally, the current study used school characteristics like school size as control variables rather than examining any moderating effects that it might have on the main predictor variables. Future studies could examine how the relationships between the focal predictors and outcomes might change while schools' size increases.

Policy implications

The current study's findings provide us with a greater understanding as to how SRO roles and behavioral intervention strategies influence student suspensions, though should be taken with some precaution. These findings can help school administrators to make conscientious decisions regarding behavioral management. The current study found that providing teachers with training on behavioral intervention strategies may be more in line with students' interest compared to SROs. Given the results of the current study, schools might consider removing SROs, particularly from areas related to discipline. The roles in which SROs are allowed to engage in and those prohibited could be outlined in documents like memorandums of understanding (MOUs), which explicitly state how school administrators will work with SROs and stakeholders alike. For example, SROs could be limited to providing school safety, that which emphasizes a gap between the two entities, law enforcement and educational institutions. Specialized SRO training has also been strongly recommended, where the training curriculum strongly emphasizes working in school environments. Specifically, SROs could learn how to work with developing adolescents and effective communicating skills (Counts et al., 2018). Schools could also

further implement teacher behavioral intervention strategies that emphasize restorative approaches juxtapose to student removal. Although behavioral intervention strategies have been found to be effective in improving school settings, its effectiveness can vary based on implementation. For example, schools who implement PBIS training programs where there was consistent feedback and support from administrators as well as the appropriate time in which it is implemented (Palmer & Noltemeyer, 2019). Therefore, schools who choose to implement behavioral intervention strategies should do so in ways that will produce promising results.

One major limitation to the overall use of behavioral intervention strategies, however, is that it is specifically designed to only address negative student behavior (Bradshaw et al., 2010). Therefore, the only logical and expected results of implementing behavioral intervention strategies might only consist of seeing reductions in these student outcomes and may not necessarily be translated into seeing improvements in other areas like academic achievement. Implementing behavioral intervention strategies also does not indicate that if there are fewer students involved in exclusionary practices will result in improved student learning opportunities (Scott & Barret, 2004). Instead, schools that are looking to make additional improvements that extend outside of discipline, like academic success, would have to further consider strategies that target improvement in those areas and not particularly expect it to improve with the use of behavioral intervention strategies. For example, when implementing behavioral intervention strategies in addition to school programs that emphasize educational success might have these improved outcomes (McIntosh et al., 2006). Although this is one major limitation to behavioral

intervention strategies, it should not be undermined as an overall potential alternative strategy to student discipline since it still has positive effects for students.

Future research

To further this line of research, future studies could examine additional datasets that also include variables pertaining to schools' racial and ethnic composition. Though the current study used the most recent SSOCS dataset which did not include these pertinent variables, perhaps future versions may include them. If so, similar analyses could be conducted to examine whether the results would change in any way. Moreover, longitudinal studies could be done to examine the patterns of student outcomes when schools chose to add or remove SROs and the extent to which teacher behavioral intervention strategies might be useful. Furthermore, subsequent studies could also examine whether school characteristics like school size has a moderating effect between SRO roles, teacher behavioral intervention strategies, and suspensions.

Conclusion

There have been large debates as to whether SROs should remain in schools, with proponents and advocates providing their own justifications for their decisions. Others have similarly called for the use of alternative approaches to deal with student discipline. Although using SROs and behavioral intervention strategies tend to contradict one another, no study has pitted the two disciplinary approaches against one another to determine which approach is best suitable for schools and students alike. I addressed this gap in the literature by examining the effects that both SRO roles and behavioral intervention training has on student outcomes. Although the literature suggests that SROs

negatively impacts student outcomes, this was only partially evident in the current study. Moreover, teacher behavioral intervention strategies was significantly and negatively associated with suspensions, consistent with the literature on behavioral intervention strategies. Specifically, an increase in teacher behavioral intervention strategies decreased student suspensions. The results suggest that schools and students alike would benefit from schools using behavioral intervention strategies for dealing with student discipline than having SROs engaged in discipline. Schools choosing to place a greater emphasis on behavioral intervention strategies rather than allowing SROs to be involved in discipline could facilitate undermining the school-to-prison pipeline. Specifically, schools could focus on student reintegration rather than removal. However, behavioral intervention strategies only target disciplinary actions and may not directly improve school performance.

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APPENDIX

Table 8. Regressing suspensions on SRO measures and teacher behavioral intervention strategies (N = 1,859)

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
	Suspension	Suspension	Suspension	Suspension	Suspension
Authoritarian roles					
Recording/reporting discipline	1.412* (0.194)	1.383* (0.180)	1.224 (0.157)	1.246 (0.158)	1.216 (0.159)
Providing legal definitions	1.855*** (0.252)	1.117 (0.113)	1.202 (0.167)	1.170 (0.160)	1.078 (0.155)
Participates in discipline	1.254* (0.138)	1.198 (0.168)	1.092 (0.109)	1.111 (0.110)	1.066 (0.107)
Mentor roles					
Student mentoring	1.082 (0.139)	1.013 (0.118)	1.084 (0.122)	1.101 (0.123)	1.061 (0.121)
Solving school problems	1.018 (0.171)	.878 (0.139)	.945 (0.145)	.972 (0.150)	.992 (0.156)
Prevention training	1.064 (0.116)	1.047 (0.108)	1.122 (0.114)	1.117 (0.112)	1.137 (0.115)
LEO roles					
Traffic control	.774* (0.090)	.766* (0.082)	.799* (0.085)	.821 (0.086)	.848 (0.091)
Patrol school	1.294 (0.249)	1.078 (0.196)	1.096 (0.197)	1.074 (0.191)	1.068 (0.193)
Teacher behavioral intervention	.876** (0.040)	.908* (0.038)	.922* (0.038)	.921* (0.037)	.904* (0.037)
Control variables					
Primary school		.135*** (0.023)	.125*** (0.021)	.121*** (0.021)	.127*** (0.024)
Middle school		.680** (0.079)	.660*** (0.075)	.622*** (0.069)	.604*** (0.072)
Combined school		.225*** (0.062)	.213*** (0.058)	.228*** (0.062)	.233*** (0.064)
City		1.475** (0.170)	1.181 (0.137)	1.044 (0.121)	1.102 (0.132)
Town		1.312 (0.186)	1.236 (0.173)	1.255 (0.174)	1.253 (0.178)
Rural		1.161 (0.152)	1.104 (0.142)	1.265 (0.165)	1.270 (0.168)
Less than 300 students		.204*** (0.045)	.181*** (0.039)	.190*** (0.041)	.213*** (0.048)
300-499 students		.286*** (0.045)	.277*** (0.043)	.272*** (0.042)	.293*** (0.046)
500-999 students		.563*** (0.069)	.509*** (0.061)	.272*** (0.042)	.572*** (0.070)
Students below 15 th percentile			1.011*** (0.003)	1.007* (0.003)	1.007* (0.003)
Students likely to attend college			.992** (0.003)	.994* (0.003)	.993** (0.003)
Student academic achievement			.995 (0.003)	.997 (0.003)	.998 (0.003)

Daily attendance	.978*	.987	.988
	(0.010)	(0.009)	(0.009)
School in high crime area		1.204	1.168
		(0.317)	(0.309)
School in moderate crime area		1.137	1.176
		(0.153)	(0.160)
High crime where students live		2.209**	2.392***
		(0.517)	(0.569)
Mixed crime where students live		1.426**	1.367*
		(0.188)	(0.183)
Moderate crime where students live		1.769***	1.814***
		(0.244)	(0.253)
Visitors check in			1.566
			(0.493)
Building access locked			.829
			(0.164)
Grounds access controlled			1.143
			(0.104)
Metal detectors			.931
			(0.252)
Random metal detector checks			.999
			(0.179)
Rooms equipped with inside locks			.904
			(0.083)
Closed campus during lunch			.992
			(0.097)
Random contraband sweeps			1.112
			(0.110)
Drug tests for extracurricular activities			.823
			(0.101)
Student uniforms required			.774
			(0.118)
Strict dress code enforced			1.176
			(0.113)
Students provided lockers			1.290*
			(0.144)
Silent alarms connected to LEO			.865
			(0.081)
Clear book bags required			.856
			(0.163)
Electronic notification system			1.001
			(0.099)
Student ID badges required			1.010
			(0.128)
Faculty/staff ID badges required			.997
			(0.104)
Anonymous reporting system			1.349**
			(0.128)
Security cameras			.831
			(0.156)
Staff provided two-way radios			1.039

Prohibit non-academic use of phones					(0.119)
					.977
					(0.093)
Formal LEO policies					1.093
					(0.112)
	LR $x^2 =$	LR $x^2 =$	LR $x^2 =$	LR $x^2 =$	LR $x^2 =$
	62.32	384.05	459.72	505.96	538.67
	$p < .001$	$p < .001$	$p < .001$	$p < .001$	$p < .001$

Note: * $p < .05$. ** $p < .01$. *** $p < .001$

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Publications

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Benitez, I. Symbolic representation: police traffic stops involving Hispanic drivers.

Laskovtsov, A., & **Benitez, I.** An interaction between gender and race: biases and perceptions of police misbehavior from a critical feminist approach.

Lapsey Jr. D. S., Campbell, B.A., & **Benitez, I.** Understanding the focal concerns of prosecutorial decision-making in sexual assault cases: A meta-analytic review. In progress: For submission to the Journal of Interpersonal Violence

Lapsey Jr., D. S., Campbell, B.A., & **Benitez, I.**, A quasi-experimental assessment of the impact of training and agency characteristics on police perceptions of victims. For submission to Policing: An International Journal.

Research interests

Police studies, police subculture, police in schools, and the intersectionality of race, class, gender in crime.

Grant experience

April 2021 – current

Research assistant

An experimental evaluation of a trauma-informed interviewing training for police investigators.

Supervisor: Dr. Bradley A. Campbell

Funded by the National Institute of Justice

Duties: data collection, qualitatively coding for themes in officer interviews, and writing up findings.

May 2020 – December 2020

Research assistant

School resource officers report to congress. A review of the empirical literature on school resource officers and their effects on student outcomes.

Funded by the National Institute of Justice

Supervisor: Dr. Anthony Petrosino

Duties: Conducting a thorough systematic review on the literature on police in schools for a report to congress on school policing.

University positions and research services

Graduate Assistant: Department of Criminal Justice, University of Louisville.

Dr. Bradley A. Campbell – May 2021 – present

Graduate Assistant: Department of Criminal Justice, University of Louisville
Dr. Benjamin W. Fisher – July 2019 – July 2021

Graduate Assistant: School of Justice Studies, Eastern Kentucky University
Dr. Bill McClanahan – July 2017 – June 2019

Member: Vice President of the Graduate Student Associations. School of Justice Studies, Eastern Kentucky University. (2018-2019).

Facilitator: Midwest Criminal Justice Association (2019).

Facilitator: The New Directions of Critical Criminology (2018)

Internship: Montgomery County, Kentucky. Office of Pretrial Diversions – (Jan-May 2017).

Undergraduate research fellow: Department of Sociology, Social Work, and Criminology, Morehead State University.
Dr. Rebecca Katz - (2015-2017).

Teaching experience

Course	Semester
Introduction to Criminal Justice	Spring 2022
Quantitative analysis	Fall 2021
School to prison pipeline	Spring 2020
Criminological theory	Spring 2020

Conference presentations

Prim, J., Fisher, B. W., **Benitez, I.**, Higgins, E., & Mayer, J. (2021). Examining Overlaps between the Education and Justice Systems.

Mayer, J., Fisher, B. W., Higgins, E., **Benitez, I.**, Prim, J. (November 2021). Schools and SROs Since George Floyd.

Benitez, I., Fisher, B. W., Tolles, T., Wright, E. (November 2020). School-related outcomes associated with seeing someone shot: do friends make a difference? Presented at the Criminology Consortium, online.

Benitez, I. (November 2018). The Culture of Policing. “Body Worn Cameras and Pacification: Legitimizing 21st Century Policing”. Presented at the American Society of Criminology, Atlanta, GA.

Denny, T., **Benitez, I.**, Embry, K., and Williams, J. (November 2018). Female Incarceration Experiences and Impacts. "A Qualitative Understanding of Women's Incarceration Experiences". Presented at the annual meeting of the American Society of Criminology, Atlanta, GA.

Barrett, K. A., Diaz, R. A., Smithers, K. D., Reeves, A., Denney, T., Embry, K., **Benitez, I.** Hall, M., Williams, J., Myers, T., Pace, A., & Wells, J. (November 2018). Understanding violence against women. "An examination of perceived violence and conflict in female correctional facilities: Results from a 2018 student administered survey." Presented at the American Society of Criminology, Atlanta, GA.

Myers, T., Hall, M., Denney, T., Pace, A., Williams, J., **Benitez, I.**, & Wells, J. (November 2018). Female incarceration Experiences and Impacts. "Incarcerated women's perceptions of staff and peer physical violence." Annual meeting of the American Society of Criminology, Atlanta, GA.

Katz, R., **Benitez, I.** (November 2016). Activism and Criminal Justice. "Black Lives Matter: Police militarization and misconduct". Presented at the annual meeting of the American Society of Criminology, New Orleans, LA.

Conference Panel discussions

Discussants: Turner, J., Pitman, B., Young, S., **Benitez, I.** (November 2017). Roundtable: "humanizing" the badge: how blue lives matter means black lives don't. The annual meeting of the American Society of Criminology, Philadelphia, PA.

Academic memberships

American Society of Criminology
Academy of Criminal Justice Sciences