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THE THIN BLUE LINE IN THE BLUEGRASS SCHOOLS: A QUANTITATIVE
STUDY ON HOW SCHOOL RESOURCE OFFICERS IMPACT A SCHOOL AND
DISTRICT'S USE OF EXCLUSIONARY DISCIPLINE IN KENTUCKY

DISSERTATION

A dissertation submitted in partial fulfillment of the
requirements for the degree of Doctor of Philosophy in the
College of Education
at the University of Kentucky

By

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Lexington, Kentucky

Director: Dr. R. Joseph Waddington, Associate Professor of Education Policy Studies and
Evaluation

Lexington, Kentucky

2023

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ABSTRACT OF DISSERTATION

THE THIN BLUE LINE IN THE BLUEGRASS SCHOOLS: A QUANTITATIVE STUDY ON HOW SCHOOL RESOURCE OFFICERS IMPACT A SCHOOL AND DISTRICT'S USE OF EXCLUSIONARY DISCIPLINE IN KENTUCKY

Legislatures across the country have been developing laws and policies to place police officers, also known as School Resource Officers (“SROs”), in schools. A recent piece of legislation in Kentucky, entitled the School Safety and Resiliency Act, requires all school campuses in Kentucky contain at least one SRO. Researchers have found relationships between the presence of SROs and the use of exclusionary discipline, and this research expands on that foundation by looking statewide at school- and district-level variables.

Using a multiple regression model, this research examined the presence of SROs in schools and the ratio of number of SROs to 100 students in districts and those variables’ impact on the use of exclusionary discipline. The results indicated a positive relationship between the number of SROs per 100 students and exclusionary discipline, excluding in-school suspension, significant at the 0.051 level. Additionally, the model found associations between exclusionary discipline and community-level variables. This research suggests both schools and future research should consider proportions of populations and community variables when assessing equitable uses of exclusionary discipline.

KEYWORDS: School Resource Officers, Social Control Theory, Education Policy

Mia Morales

04/02/2023

Date

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CHAPTER 1. INTRODUCTION

1.1 Introduction

In 2020, Metcalfe County Schools applied for a national grant funded by the COPS School Violence Prevention Program. The grant included a narrative, which described an incident in the winter of 2019 in which a man was spotted 100 yards from the elementary school who was suspected to be involved in a stabbing and believed to be armed and dangerous. When the man was subsequently arrested, the police found a knife in his truck (See File 1).

The district requested some of the funds be used to purchase metal detectors, window film, radios, and laptops, install panic buttons and key card door locks, and integrate surveillance systems so local law enforcement would have access to school cameras. To support the grant, used Infinite Campus data to list student behavioral incidents and emphasized the economically disadvantaged students composed 80% of the students involved in behavioral incidents. The district was successful and awarded over \$400,000 (Shortt, 2020).

Schools across the country have invested in measures believed to increase school safety. These measures include site hardware, such as metal detectors and cameras, as well as new staff. In Kentucky, school resource officers (“SROs”) are police officers who work at schools. Until 2020, Kentucky school districts made decisions whether SROs were appropriate for their school ("School Safety and Resiliency Act," 2019). The bill mandated that every school campus contains at least one SRO, as funds became available. In 2022, the governor signed another bill, HB 63, which require SROs on every school campus by August 1, 2022 with no funding consideration (2022). The issue of

SROs and school safety is an evolving one that receives significant consideration from the legislature regularly.

The first instance of SROs in the United States is found in Flint, Michigan in the 1950s (Weiler & Cray, 2011). The concern around gang violence and the active shooting in Columbine High School led to a large increase in the adoption of SRO programs across the nation (Addington, 2009). The federal government provided nearly \$724 million for SRO hiring through the Community Oriented Policing Services between 1999 and 2005 ("The COPS Office: 20 years of community oriented policing," 2014).

The National Center for Education Statistics found 49.2% of public schools have one or more full-time or part-time SROs for the 2019-20 school year (Wang et al., 2022), which grew from 32% of schools in the 2005-06 school year (Sawchuk, 2021). That number is expected to grow because during the state legislative sessions between the years 2021 and 2022, 25 bills across 14 states were enacted relating to SRO and policing in schools ("State education policy tracking," 2023).

Currently, 41 states and the District of Columbia have statutes that define a school-level safety position with 31 states and the District of Columbia explicitly requiring those positions be sworn police officers ("K-12 school safety 2022: School resource officers," 2022). The states and districts that require positions to be sworn police officers are statutorily similar to those in Kentucky (i.e. carries a firearm, has specialized training) ("K-12 school safety 2022: School resource officers," 2022). States that do not require sworn police officers as a school-level safety position either do not specify SRO requirements or have an alternative safety-position in place.¹

¹ See Pennsylvania which allows armed security guards as independent contractors so long as they received training required by statute (24 P.S Education 13-1341-C, 2019a), and Missouri who allows teachers or

Research on the impact of school resource officers has found associations with SROs and the increased use of exclusionary discipline (Fisher & Hennessy, 2016; Gottfredson et al., 2020; Sorensen et al., 2021), increased contact with the formal criminal system (Na & Gottfredson, 2013; Sorensen et al., 2021), and a disproportionate negative impact on students of color (Pentek & Eisenberg, 2018). There has been limited research on the impact of the quantity of SROs. This research seeks to fill the gap in that research.

This research will look at SROs at the school and district level. The school-level research will analyze the impact of the presence of an SRO in high schools, and the district-level research will analyze impact of the ratio of SROs to 100 students and the use of exclusionary discipline in that district. For the purpose of this research, exclusionary discipline occurs when a student is punished by in-school suspensions (“ISS”), out-of-school suspensions (“OSS”), expelled, receiving services, or expelled not receiving services. The sample will include all school districts and A1 high schools in Kentucky for the school years 2016-17, 2017-18, and 2018-19.

1.2 Purpose

Kentucky enacted two laws related to SROs within three years of each other. The first law, the School Safety and Resiliency Act, was signed into law in 2019 and was the first instance of requiring SROs on school campuses as funds became available ("School Safety and Resiliency Act," 2019). In 2022, the governor signed into law a bill that

administrators to have the same authority to detain or use force as against any person as peace officers and conceal carry firearm so long as training requirements are met (160.665 Missouri Revised Statutes, 2014).

amended the language of the 2019 statute that removed the funding prepositional phrase and required SROs on all school campuses (22RS HB 63, 2022).²

Given researchers' findings regarding SROs and the negative impact on students, such as increased contact with the formal criminal system (Na & Gottfredson, 2013; Sorensen et al., 2021), requiring SROs on campus appears counterproductive to student wellness. If the research continues to show that SROs are associated with negative student outcomes, then considerations should be taken when other states contemplate whether they should pass laws similar to Kentucky that mandate SROs' presence in schools.

The purpose of this study is to fill in the gap of existing SRO literature. Much of the current literature addresses the impact of the presence of SROs in schools. Therefore, my first research question will examine if that relationship is true in Kentucky through statewide data. I will look at the presence of SROs in high schools and its impact on the school's use of exclusionary discipline.

My second research question will look at the ratio of number of SROs to 100 students in each district in Kentucky and its impact on the district's use of exclusionary discipline. This question quantifies SROs in a way that has been limitedly researched.

The independent variables are the presence of an SRO and the SRO to 100 student ratio. The dependent variable is the number of times the school or district used exclusionary discipline. Prior research has established a relationship between SROs and

² By mandating the presence of SROs regardless of funds, the state created a difficult situations with schools as the state did not provide any additional funding and requiring the schools to find funding to be compliant (Harkins, 2022). Approximately one and a half months after the deadline issued by the statute, 527 campuses out of 1,087 did not have an SRO (Harkins, 2022).

the use of exclusionary discipline, and this research will add to the literature by incorporating the number of SROs into the independent variable.

1.3 Positionality Statement

I am a white, non-binary person. My first career was as a high school math teacher, and I left the profession because of policies developed by people not in the classroom and that, I believe, negatively impacted my students' ability to learn math.

During my law school and graduate classes, I started reading the feminist, intersectionality scholars and shifted view from individuals to systems and structures of oppression based on white supremacy. It was these readings in conjunction case law about the 4th and 5th Amendment and my experience as an educator with SROs in the building that formulated my belief that police officers in school create an environment that negatively impacts students.

Additionally, my previous education and experiences have trained me to be an advocate. As an educator, I advocated for my students. And I was trained during my law school career to "write like an advocate." You always had to keep your client and their best interests in mind. Academic research, however, is not advocacy. It involves collecting data and information and letting it speak for itself.

To be mindful of my bias and my advocacy tendencies throughout this work, I had to be mindful and thoughtful. I collected my independent variable data and had to make decisions about which schools and districts had to be removed from the dataset for analysis. For transparency, the list of schools and districts along with the reason they were not included is in the appendix. I also used previous research to help decide which

covariates are necessary for this topic and included them. Because I was aware of my biases and tendencies, I was extra mindful of my decisions throughout this research.

1.4 Research Questions

My first research question is whether the schools with the SROs are associated with greater uses of exclusionary discipline.

RQ1: Is there a relationship between the presence of SRO in high schools and that school's use of exclusionary discipline?

I hypothesize that the presence of SROs in a high school will be associated with greater uses of exclusionary discipline by the school. Previous research has indicated that the presence of SROs in high schools are associated with greater uses of exclusionary discipline (see Sorensen et al., 2021 & Zhang, 2019). Thus, I foresee this research to find similar findings to previous research.

My second research question considers the association of the SRO to 100 students and its association to that district's use of exclusionary discipline.

RQ2: Is there a relationship between the ratio of SRO to 100 students in the district and that district's use of exclusionary discipline?

Similar to the justification above, previous research has indicated that the presence of SROs in high schools are associated with greater uses of exclusionary discipline (see Sorensen et al., 2021 & Zhang, 2019). That research in conjunction with social control theory leads me to believe that the more SROs in high schools, the more frequently the school will use exclusionary discipline.

Under social control theory, schools use exclusionary discipline in a similar manner as the State uses prisons. The State uses prison as an exclusionary practice to remove

individuals from society, which is similar to schools using suspensions and expulsions to remove students from the student population. And because SROs are police officers, which are agents of the State, I anticipate the greater the SRO presence, the higher the use of exclusionary discipline.

Each of these research questions will contain three models containing different types of exclusionary discipline as the dependent variable. The school and district level will contain models with a total exclusionary discipline dependent variable, non-ISS exclusionary discipline dependent variable, and ISS only dependent variable.

1.5 Organization of Dissertation

The next chapter will provide the literature review. First it will introduce the theoretical framework and then it will provide the history and impact of state and federal SRO legislation and conclude with the description and impact of exclusionary discipline on students. The third chapter will share the research questions and hypotheses, as well as address the variables and methodology. Chapter four provides the data, data analysis, and discussion of the findings. And, finally, chapter five will include policy implications, future work, and limitations.

CHAPTER 2. LITERATURE REVIEW

2.1 Introduction

In this section, I will discuss the theoretical framework and the current literature regarding SROs and exclusionary discipline. I will first discuss the theoretical framework and the history of SROs through federal and Kentucky state legislation. I will then discuss exclusionary discipline and its impact on students. Finally, I will discuss the current research on the relationship between SROs and the use of exclusionary discipline.

2.2 Theoretical Framework

2.2.1 Social Control

Social control is a theory to describe the influence and power of the state to survey and govern behaviors determined deviant by the state with the goal of influencing individuals to act in a certain way (Zompetti, 2019). Under social control theory, deviance can be governed through formal, medical, or informal processes (Heitzeg, 2015). This research will be focusing on the formal mechanisms of social control which involves the state and its sanctioning power.

The state has power to influence individuals' actions through law and the enforcement of those laws. Although the laws are facially neutral and describe deviant behaviors, in reality, the law governs those considered deviant rather than the behaviors (Heitzeg, 2015). The individuals with power to dictate laws and policies have been mostly white and male which has framed our society to view white men as the norm (Feagin, 2013). Thus, anyone who is not considered white or a man is "othered" (Heitzeg, 2015). It is these "othered" populations, that are considered deviant and most oppressed by the state's power and highest at risk of being subject to its control.

Historical examples of social theory exemplify the role that race plays in the state's "othered" classification. One of the earliest instances of social control in American history is the use of "slave patrollers" to regulate the behavior and movement of the enslaved population (Bass, 2001). Enslavers feared insurrections of enslaved people, so used power and force, granted to them by the Fugitive Slave Act, to maintain order (Bass, 2001). Enslaved individuals were considered deviant and othered as property and thus enslavers and enslaver sympathizers developed laws to control them.

Additionally, during the 1940s, Japanese Americans were forced to relocate to concentration camps. After Japan attacked Pearl Harbor, President Roosevelt signed an executive order which forced the relocation of Japanese-descent American citizens³ to concentration camps (Mizuno, 2003). Before being moved to a permanent concentration camp, those citizens were placed in an assembly camp that provided a temporary location inside a military location before the concentration camp (Mizuno, 2003). The law viewed Japanese-descent American citizens as others and deviants and forcibly removed them from their home.

It is important to note that the previous two examples relied on laws that were not facially neutral. It is unconstitutional for a law to distinguish on the basis of race absent a compelling government interest and narrow tailoring to achieve that interest ("Adarand Constructors, Inc. v. Peña," 1995). However, the state still has laws that disproportionately impact groups of individuals even with facially neutral laws and thus ostensibly controls them.

³ Dialogue around citizenship also creates othering and deviants, as it creates a class of people who are deserving of rights and protections (El-Enany, 2020). Those who are considered United States citizens have more rights and protection than those who are on a visa or a resident, so it is significant that the United States government forcibly removed Japanese-descent American citizens from their homes (Mizuno, 2003).

2.2.2 Social Control Through Policing

The Thirteenth Amendment abolished slavery except for when a person is “duly convicted” (Amendment XIII United States Constitution). Since slavery can only exist when individuals are imprisoned, the system focused on imprisoning Black people (Alexander, 2010; Davis, 2003). When individuals are imprisoned, it allows the people in power to continue social control.

Even though we are no longer able to enslave people or use racially explicit laws to subordinate people, social control still exists through facially neutral laws that focus on imprisoning people. Michelle Alexander (2010) illustrates how the Jim Crow laws, which were explicit about race, morphed into a tough on crime political platform. The tough on crime platform became popular after the Civil Rights Act of 1964, and it moved the focus from race to crime (Alexander, 2010). The War on Drugs shortly followed, which “cloaked in race-neutral language, offered whites opposed to racial reform a unique opportunity to express their hostility towards blacks and black progress, without being exposed to the charge of racism” (Alexander, 2010, p. 62).

Within a social control construct, police officers are the individuals whose role is to enforce those laws. Although police are not involved in the lawmaking process, police officers are the individuals who enforce the laws with large discretion of when they are enforceable and how they are enforced (Farmer et al., 2019; Schuck, 2019).

We see the extent of their discretion through broken window policing. The broken window theory argues that physical deterioration of a neighborhood results in the deterioration of law and order in the neighborhood (Kelling & Wilson, 1982). The role of police officers in broken window policing shifted from catching criminals to enforcing

norms (Walker, 1984). Police officers walked the streets and enforced neighborhood norms like “drunks” and “addicts” could sit on stoops but not lie down, could drink on side streets but not main intersections, could drink from paper bags, could not talk to, bother, or beg from people (Kelling & Wilson, 1982). Any violation of these rules resulted in a vagrancy arrest (Kelling & Wilson, 1982). It was within the police officer’s discretion to decide whether an individual was vagrant.

2.2.3 Social Control in Controlled Environment

Although social control is used by police in neighborhoods, schools are inherently different than neighborhoods. Schools are controlled environments which dictate to the student what they learn, when they learn it, when they eat, etc. Although norms and laws might exist to govern how late a person in a neighborhood can listen to music outside, people in neighborhoods are more or less free to act how they want when they want.

Social control by the State in controlled environments has not been widely researched. Prisons are highly controlled spaces and research as focused on social control as a tool for prison guards to do their job (Hepburn, 1989; Marquart, 1986) and also how incarcerated people use social control within the incarcerated community (Ekland-Olson, 1986). This is a nascent area of research.

2.2.4 Policing and SROs in Schools

The tough on crime rhetoric permeated the education system. The War on Drugs popularized zero tolerance laws, which developed into zero tolerance school policies through the Drug Free Schools Act (Mallett, 2016; Teske et al., 2013). The Gun-Free Schools Act required any education agency receiving federal funds have a policy

requiring the expulsion of a student for at least a year if that student brought a gun to school ("Gun-Free Schools Act," 1994). Schools enacted the mandated zero-tolerance policies and expanded expulsion reasons to include other weapons and drugs (Birkland & Lawrence, 2009; Mallett, 2016).

Other legislation, such as the No Child Left Behind Act ("NCLB") and the Omnibus Crime Control and Safe Streets Act of 1968 ("OCCSSA"), encouraged the expansion of police officers in schools. Schools received funding from NCLB for "drug and violence prevention and education programs" (20 USCA 7114, 2001b), which included installing metal detectors, electronic locks, surveillance cameras, reporting criminal offenses committed on school property, hiring and training school security personnel or SROs, and alternative education programs (20 USCA 7115, 2001a). In 1998, Congress amended OCCSSA and included a definition for SRO and provisions encouraging the collaboration between law enforcement agencies and school systems ("Omnibus Crime Control and Safe Streets Act of 1968," 1998). This amendment also expanded the use of public safety and community policing grants by allowing those policing grants to be used to establish partnerships between schools and law enforcement by using SROs ("Omnibus Crime Control and Safe Streets Act of 1968," 1998).

Researchers hypothesize those zero-tolerance policies led to the development of the prison-school nexus (Reynolds et al., 2008). The administrators' use of exclusionary punishment in schools (e.g., suspension, expulsions) performs the same role as prisons for society. Similar to how prisons removed Black people from society, exclusionary punishments removed Black students from schools. By removing students, we were also

able to contribute to the prison industrial complex through the prison-school nexus (Gerlinger et al., 2021; Hirschfield, 2008; Skiba, 2008).

Safety was the main justification for the national expansion of the SRO programs through federal legislation. School resource officers may have been used as a tool to increase school safety, but their role has been transformed to compliance enforcement (Bleakley & Bleakley, 2018). This may be due to SROs mentoring administrators, and 76% of sampled administrators using SROs to maintain discipline (Counts et al., 2018; Na & Gottfredson, 2011). School resource officers' role shifted from responding to emergency situations to maintaining order.

Administrators using SROs as a way to maintain discipline is problematic, because SROs tend to hold a punishment-based mindset compared to administrators who hold a prevention-based mindset (Gottfredson et al., 2020). The criminal system is based on punishing individuals, so the punishment-based mindset of SROs transforms schools with SROs into spaces that resemble the criminal system. Prisons are used as punishment to remove individuals from society in the criminal system, and exclusionary discipline is used as punishment to remove individuals from the classroom and school.

In this research, I anticipate finding the presence of an SRO in a high school is associated with higher uses of exclusionary discipline in that school, and districts with a larger SRO to 100 student ratio value will be associated with higher uses of exclusionary discipline. School resource officers are positively associated with increase rates of exclusionary discipline (Fisher & Hennessy, 2016; Sorensen et al., 2021).⁴ Given the mindset of SROs and the evidence of increased exclusionary discipline, I believe the

⁴ But also see Zhang (2019) found increases and decreases of OSS depending on the action.

environment of the school changes such that the school is more likely to use exclusionary discipline when SROs are present. Thus, the presence of an SRO and the larger the ratio of SROs to 100 students, the more frequently the district will use exclusionary discipline.

2.3 School resource officer legislation

2.3.1 Federal school resource officer legislation

The federal government also has adopted SRO legislation. Congress amended the Omnibus Crime Control and Safe Streets Act of 1968 (“OCCSSA”) in 1998. The amendment included a definition for SRO and provisions encouraging the collaboration between law enforcement agencies and school systems (“Omnibus Crime Control and Safe Streets Act of 1968,” 1998). This amendment also expanded the use of public safety and community policing grants by allowing those policing grants to be used to establish partnerships between schools and law enforcement by using SROs (“Omnibus Crime Control and Safe Streets Act of 1968,” 1998).

Funding from OCCSSA comes from the Community Oriented Policing Services (“COPS”) program. In 1994, President Clinton signed into law the Violent Crime Control and Law Enforcement Act of 1994 (“Violent Crime Control and Law Enforcement Act of 1994,” 1994). The bill created the COPS program and increased the amount of officers within communities with the goal of increasing community policing (“Violent Crime Control and Law Enforcement Act of 1994,” 1994).

The COPS program offered grants to state, local, and tribal agencies to increase the number of police officers and focus the officers on community policing (James, 2013). In 2002, the COPS Office started a school safety initiative entitled Secure Our

Schools (“SOS”) (Crowley, 2013). The COPS Office offered SOS grants to state, local, and tribal government agencies to purchase and develop school safety programs (Crowley, 2013). Grants could be used for metal detectors, security assessments, security training of personnel and students, coordination with law enforcement, and other measures that provided significant security improvements (Crowley, 2013).

School resource officer programs increased in the 2000s due to the No Child Left Behind Act of 2001 (“NCLB”). The NCLB provided funds for schools to increase their policing and security programs. Section a, subsection 1 allowed the state to distribute funds given to the state by the federal government to local educational agencies for “drug and violence prevention and education programs” (20 USCA 7114, 2001b). The NCLB provided a list of activities that would be acceptable for those programs to be eligible for funds (20 USCA 7115, 2001a). The list included installing metal detectors, electronic locks, surveillance cameras, reporting criminal offenses committed on school property, hiring and training school security personnel or SROs, and alternative education programs (20 USCA 7115, 2001a). The list did also allow for the expansion of school-based mental health related to illegal drug use and violence and counseling, mentoring, and referral services for students at-risk of violent behavior and illegal drug use (20 USCA 7115, 2001a); however, the vagueness of the NCLB’s provisions around mental health was a barrier for districts to access that funding (Daly et al., 2006).

The NCLB was effective from 2002 to 2015. In 2015, NCLB was replaced by the Every Student Succeeds Act (“ESSA”). The Every Student Succeeds Act removed policing and surveillance from the education statutes (“The Every Student Succeeds Act,” 2014).

2.3.2 Kentucky school resource officer legislation

In 1998, the Kentucky Legislature passed H.B. 330, which codified the SRO definition and employment terms (98 RS HB 330, 1998). The SRO definition contained two parts. The first part defines an SRO. It stated that an SRO is “a sworn law enforcement officer who has specialized training to work with youth at a school site” (98 RS HB 330, 1998). Since the beginning of SRO legislation, SROs were required to be a sworn law enforcement officer.

The second part of the bill allowed for SROs to be employed through contracts between school districts and local law enforcement agencies. The legislation stated “[t]he school resource officers shall be employed through a contract between a local law enforcement agency and a school district.” (98 RS HB 330, 1998).

That section allowed schools to enter into contracts with local law enforcement agencies, which would expand the SRO program. Without this section, schools would only be able to employ SROs if the school also had means to train them. By allowing school districts to enter into contracts for SRO employment, it allowed local law enforcement agencies to provide the training for the SROs and the school would only have to pay for the services of an already qualified SRO. The 1998 bill created some uniformity across the state regarding SROs and police in schools.

2.3.3 Subsequent Kentucky legislation

In 2019, the Kentucky Governor signed into law the “School Safety and Resiliency Act” (“School Safety and Resiliency Act,” 2019). This Act contained multiple parts, but most significantly it mandated that each school campus have an SRO, as funds

allowed, and be armed ("School Safety and Resiliency Act," 2019). This provision of the bill standardized the SRO landscape of Kentucky by requiring each school campus to have an SRO, as funds allowed. It also created uniformity by requiring all SROs be armed with a firearm (KRS 158.4414, 2019b).

In addition, the bill also required that each school district report the “number and placement of school resource officers working in school districts in Kentucky and the source of funding and method of employment for each position...” ("School Safety and Resiliency Act," 2019). This portion of the bill will standardize reporting of SROs. The reporting portion of the bill took effect July 1, 2020, and the districts will have to report their SRO status on July 1 of every subsequent year ("School Safety and Resiliency Act," 2019).

The School Safety and Resiliency Act also updated the definition of SRO in KRS 158.441. Kentucky Revised Statutes 158.441, as updated by the School Safety and Resiliency Act, defines SRO as

an officer whose primary job function is to work with youth at a school site ..., who has specialized training to work with youth at a school site..., and is

- (a) (1) a sworn law enforcement officer; or,
- (2) a special law enforcement officer ...; and

(b) employed:

- (1) through contract between local law enforcement agency and a school district;

- (2) through contract as secondary employment for an officer ...
between the Department of Kentucky State Police and a school
district; or
- (3) directly by local board of education.

Compared to the 1998 definition of an SRO, the legislature has expanded the types of individuals eligible to be an SRO but still requires they are a law enforcement officer. The SRO can be a law enforcement officer or a special law enforcement officer. A special law enforcement officer is a an officer commissioned by the secretary of Justice and Public Safety Cabinet (KRS 61.902, 2020). Additionally, they also expanded the way the SRO can be employed, including direct employment from the school board.

Depending on how an SRO is employed, their duties, responsibilities, and expectations can be found either in a memorandum of understanding (“MOU”) or as a policy adopted by the board of education within the code of conduct. If the SRO is employed by the local law enforcement agency or the Department of Kentucky State Police, then the local school board will enter into a contract (an MOU) to use those police officers as SROs (KRS 158.4414, 2019b). The MOU will define the purpose of the SRO program and the roles and expectations of both parties (KRS 158.4414, 2019b). If the SRO is employed by the local school board, then the school board must adopt policies and procedures dictating the purpose of the SRO program and the roles and expectations of the SRO and other school employees (KRS 158.4414, 2019b). These policies and procedures are found in the school’s code of conduct.

In 2022, the governor signed 2 3RS HB 63, which amended KRS 158.4414. The School Safety and Resiliency Act created KRS 158.4414 and required SROs on every

school campus as funds allowed. The 2022 bill, 23 RS HB 63, amended KRS 158.4414 by removing the funding portion (2022). All Kentucky school campuses now require an SRO.

2.4 School resource officers in Kentucky

2.4.1 First documentation of SRO

Police and SROs were present in schools before the codification but existed in different forms throughout the state. The first SRO program started in Jefferson County in 1977 (May et al., 2004; Morrison, 2018). Fayette County Public Schools (“FCPS”) did not have an SRO program, but rather placed unarmed security guards in its schools in 1971 (Fahey, 1971; Sutphin, 1971). The FCPS board of education adopted a Division of School Safety and Security which placed unarmed, uniformed security guards in all FCPS high schools (Fahey, 1971; Sutphin, 1971). The security force was adopted due to racial violence within the schools ("Howard to head police in schools?," 1971).

To understand the reason for the racial violence, four parents of Lexington students filed a civil lawsuit against the Board of Education of Fayette County claiming it had not desegregated the elementary and junior high schools ("Jefferson et al. v. Board of Ed. of Fayette County, Ky," 1972). The court agreed and held that Fayette County School System was violating the Equal Protection Clause by not “eliminating all vestiges of segregation within elementary and junior high schools” and ordered a desegregation plan ("Jefferson et al. v. Board of Ed. of Fayette County, Ky," 1972, p. 693).

White parents were not happy with the decision and protested the changes claiming “their children shouldn’t be exposed to more crime, disease, and a lower quality of education” (Wolfford, 2003, p. 262). Black parents were upset, because they believe

the decision forced the closure of five neighborhood schools and placed the burden on their children (Wolfford, 2003). The burden was not only physical by demanding Black students be bused to schools farther away but also psychological, because the closure of the schools sent a message that only students can receive an adequate education at schools that were predominately white (Wolfford, 2003). Although the high schools were adequately desegregated for the purposes of the Equal Protection Clause, racial tensions were very high within Lexington, which the FCPS Board of Education believed was sufficient to place security officers in its high schools.

2.4.2 Current Kentucky school resource officers

As required by statute, SROs are sworn law enforcement officers who are assigned to a school (KRS 158.441, 2019c). In Kentucky, SROs have an association called Kentucky Association of School Resource Officers (“KYASRO”). In its mission statement, KYASRO states its goal is to support SROs within Kentucky by providing a network to exchange “knowledge, ideas, and information regarding best practices for School Based Law Enforcement Officers” (*Kentucky Association of School Resource Officers*).

Kentucky Association of School Resource Officers believes SROs have three roles within a school: to provide safety; to educate; and to support (*Kentucky Association of School Resource Officers*). Primarily, SROs are responsible for the safety and security of staff and students (*Kentucky Association of School Resource Officers*). Additionally, SROs can be used to provide expertise and supplement education within the classroom through their own education, training, and experience (*Kentucky Association of School*

Resource Officers). Finally, KYASRO believes SROs can behave as an informal counselor for students (*Kentucky Association of School Resource Officers*).

These roles, however, are not mandatory. The actual roles of SROs are determined by the MOU between the school district receiving SROs and the city that is providing the law enforcement officers or within the school's code of conduct (KRS 158.4414, 2019b). Although KYASRO may state SROs have three duties, the MOU is the authority regarding the duties of the SROs in the school district. A review of a sample MOU provided by KYASRO between school districts and the law enforcement offices show that the duty section of the contract only lay out when SROs are required to be on campus or the duties are vague by stating the officer is to serve as a law enforcement officer (*MOA/MOU*).

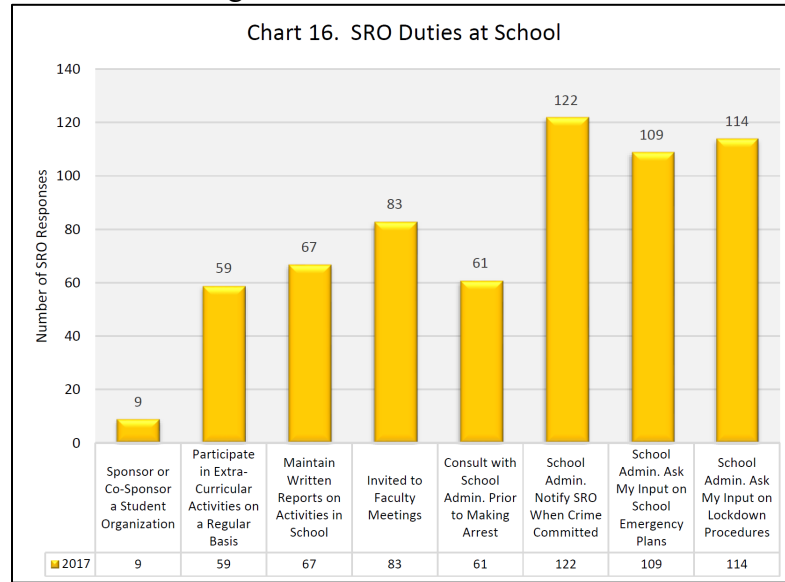
2.4.3 School resource officers' daily responsibilities

Biennially, the Kentucky Center for School Safety ("KCSS") conducts a report on the demographics and activities of SROs. The survey was sent to 260 SROs, and KCSS received 130 responses (Morrison, 2018). Of the information provided in the report, two questions are relevant to the roles and responsibilities of SROs: time spent on SRO duties and daily activities.

2.4.3.1.1 SCHOOL RESOURCE OFFICERS' DAILY ACTIVITIES

The survey asked about SRO's duties at school (Morrison, 2018). The results are below.

Figure 1 – *SRO duties at school*

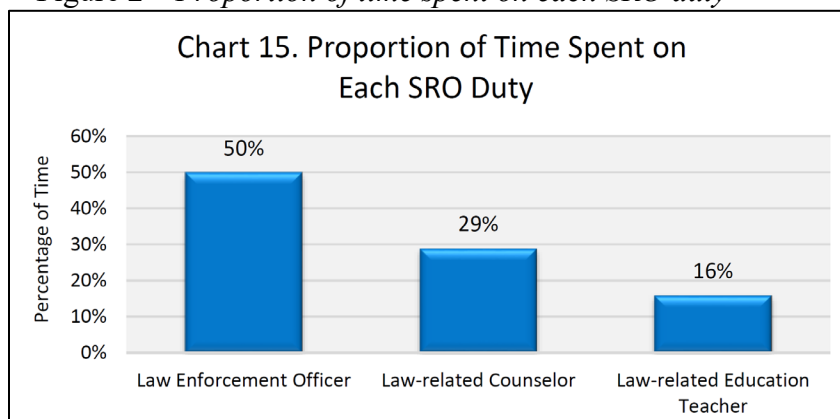


Although not clarified in the report, the survey must have asked for the SRO to indicate which activities they perform, and each count represents an SRO who performs that duty. The duties that most SROs perform relate to law enforcement and school safety. The only duties that would contain positive interactions with students would be sponsoring a student organization and participating in extra-curricular activities. Both of those activities, however, had the lowest response rate from the SROs.

2.4.3.1.2 TIME SPENT ON SCHOOL RESOURCE OFFICERS' DUTIES

The KYASRO's website list the three main duties of an SRO: law enforcement officer; law-related counselor; and law-related education teacher (*Kentucky Association of School Resource Officers*). These duties are called the "SRO triad" (*Kentucky Association of School Resource Officers*). The survey conducted by KCSS asked the SRO "how much of their time was spent on each SRO duty" (Morrison, 2018). The results are below.

Figure 2 – *Proportion of time spent on each SRO duty*



The results indicate that SRO spend 50% of their time being a law enforcement officer, 29% of their time being a law-related counselor, and 16% of their time being a law-related education teacher. The phrase “triad” implies that the time spent in each activity is even split, but that is not represented in the SRO self-reported data. According to these results, at least half of an SRO’s time is spent being a law enforcement officer.⁵

The second bulk of their time is spent as a law-related counselor. KYASRO describes the counselor role as a counselor for students, but if the survey just said “law-related counselor” without additional context, then law-related counselor could be interpreted as counsel to the principal for legal advice or counselor to the students.

2.5 Exclusionary discipline

2.5.1 School characteristics

Much research has found a relationship between the demographic of the school and the school’s exclusionary practices. The percentage of Black and Hispanic students within a school and percent of students receiving free/reduced lunch are significantly and

⁵ I am not sure how this data was calculated. My best guess is each officer estimated the amount of time they spent performing each duty, and the researcher took the average of each duty. This would also account for why the percentages do not add to 100%.

positively related to a school's use of expulsion (Welch & Payne, 2012). The percentage of Black students is also significantly related to the school's use of OSS and ISS (Morris & Perry, 2016; Welch & Payne, 2012).

When controlling for the size and the socioeconomic composition of the schools, each additional percentage increase in the student body of Black students is associated with an increase in the annual number of school suspensions by ten (Morris & Perry, 2016). These research articles suggest that exclusionary discipline is used more frequently in schools with greater Black, Hispanic, and free/reduced lunch percentages.

2.5.2 Individual characteristics

Other research has analyzed individual student characteristics to find associations between those characteristics and receiving exclusionary discipline. When controlling for socioeconomic status, parent characteristics and home environment, externalizing behavior problems, and school characteristics of elementary students in large cities, Black girls and Black boys are twice as likely as Hispanic students and three times as likely as white students or students in other race categories to be suspended or expelled (Jacobsen et al., 2019). Specifically, Black girls are more likely to receive ISS and OSS than same sexed peers (Blake et al., 2011; Morris & Perry, 2017) and the exclusionary punishment disparity is greater between Black-white girls than Black-white boys (Morris & Perry, 2017).

When the research sample size is expanded to an entire state rather than individual cities, similar trends exist. Bal et al. (2019) studied the entire state of Wisconsin and found students who are Black, Native American, Latino, and receive free/reduced lunch have increased odds of receiving expulsions, OSS, and ISS.

Additionally, some non-race individual characteristics also subject students to higher rates of receiving exclusionary discipline. Students who receive special education services and qualify for free/reduced lunch are more likely to receive out-of-school suspensions (Bal et al., 2019; Morris & Perry, 2016). All of these research articles suggest there are certain individual characteristics that subject them to being excluded from school in higher rates. Specifically, students who are not white, from a family with a low socioeconomic status, and receiving special education services are more likely to be subject to the school's use of exclusionary discipline.

2.5.3 School resource officers and exclusionary discipline

School resource officers in Kentucky spend most of their time working and training as law enforcement officers, and that trend is true across the nation (Rhodes, 2017). This is possibly due to the law enforcement training that SROs tend to hold a punishment-based mindset compared to a preventative-based mindset of administrators (Gottfredson et al., 2020).

Researchers have studied the impact of SROs measuring a variety of different outcomes. Because this research was focused on exclusionary discipline, I will discuss the impact of SROs on exclusionary discipline.

Schools that implement SRO programs see higher uses of exclusionary discipline after implementation of the program (Fisher & Hennessy, 2016; Gottfredson et al., 2020). Although some research has found that the increase uses of exclusionary discipline was limited to specific types of offenses or only occurred when the school also contained a security officer (Pigott et al., 2018; Zhang, 2019).

Certain students were subject to these increased uses of exclusionary discipline. Black and Hispanic students were more likely to receive exclusionary discipline after an SRO was placed in the school (Sorensen et al., 2021); however, white, Native American, and multiple races students had higher rates of exclusionary discipline after an SRO placement when the discipline data was self-reported by students (Pentek & Eisenberg, 2018).

The research shows that the actual impact of SROs is still unknown. Several studies have shown that SROs are associated with increased use of exclusionary discipline; however, some research has shown that SROs have no impact on the use of exclusionary discipline. Studies that look at pre- and post-implementation tend to show greater uses of exclusionary discipline (see Fisher & Hennessey, 2016), and the research that compares schools with and without SROs or use student reported data did not show a significant increase in use of exclusionary discipline (see Pentek & Eisenberg, 2018; Fisher & Hennessy, 2016). These differing results demonstrate that research is still inconclusive on the impact of SROs and exclusionary discipline, but it should be noted that no research found that the presence of SROs decreased the use of exclusionary discipline.

2.5.4 Impact of exclusionary discipline

Researchers measure which characteristics are associated with higher rates of receiving exclusionary discipline, because the consequences of receiving exclusionary discipline can be deleterious for those students. Researchers found that OSS is linked to reduced academic achievement of students who are suspended (Lacoe & Steinberg, 2019;

Morris & Perry, 2016; Perry & Morris, 2014) and of students who are not suspended (Lacoe & Steinberg, 2019; Perry & Morris, 2014).

Relatedly, students who have received OSS have decreased odds of graduating high school and enrolling in a post-secondary institution (Balfanz et al., 2014) and increased odds of dropping out of high school (Christle et al., 2007).

In addition to academic consequences, exclusionary discipline is associated with subsequent contact with the juvenile justice system. A systematic review of seven articles regarding the relationship between exclusionary discipline and juvenile justice system found that exclusionary punishment increased the odds of coming in contact with the criminal system, even when accounting for academic outcomes, prior behavior/discipline experiences, mental health concerns, demographic factors, school commitment, drug use, and other risk factors (Novak, 2018). All seven of the articles found receiving exclusionary discipline increases the odds of encountering the criminal system (Arum & Beattie, 1999; Cuellar & Markowitz, 2015; Fabelo et al., 2011; Jagers et al., 2016; Monahan et al., 2014; Mowen & Brent, 2016; Wolf & Kupchik, 2017).

Other researchers examined the impact of exclusionary discipline on students. Jones et al. (2018) interviewed students who received exclusionary discipline, and the students said they felt disconnected with school and teachers. The students acknowledged they required discipline, but felt the problem could be solved by talking (Jones et al., 2018). Consistent with the association between academic achievement and exclusionary discipline, interviewed students were frustrated because their grades dropped, because they were out of school (Jones et al., 2018).

The odds of being a recipient of exclusionary discipline varies based on individual-level and school-level characteristics. The negative consequences that follow from exclusionary discipline are thus also skewed because certain populations are more likely to be recipients of exclusionary discipline (i.e. perhaps one of the reasons Black students are more likely to come into contact with the juvenile justice system, because Black students are more likely to be recipients of exclusionary discipline). The disproportionate distribution of exclusionary discipline based on individual-level and school-level characteristics can be explained by social control theory.

This research adds to the current literature by addressing whether the impacts of SROs seen at the school-level are able to be replicated across an entire state and over several years. It also addresses whether this impact can be seen at the district-level when the quantity of SROs is considered.

CHAPTER 3. METHODOLOGY

3.1 Hypothesis and research questions

My research questions ask if there is a relationship between the presence of SROs and the school's and district's use of exclusionary discipline. The hypothesis is based on social control theory, which states the State uses its power to control people the State believes are deviant. In this case, I anticipate increased use of exclusionary discipline when an SRO is present. Because police officers are used by the State as a tool of social control, and exclusionary discipline is used by schools as a tool of social control, I anticipate the more police officers (SROs), the more exclusionary discipline used by the school and district.

My two hypotheses are

Hypothesis 1:

H₀: No significant relationship exists between the presence of SROs in a school and the quantity of exclusionary discipline used by the school.

H_a: A significant, positive relationship exists between the presence of SROs in a school and the quantity of exclusionary discipline used by the school.

Hypothesis 2:

H₀: No significant relationship exists between the ratio of SRO to 100 students in a district and the quantity of exclusionary discipline used by the district.

H_a: A significant, positive relationship exists between the ratio of SRO to 100 students in a district and the quantity of exclusionary discipline used by the district.

3.2 Variables

3.2.1 Independent variables

Because I am running two models, one at the school level and the other at the district level, I have two independent variables. The independent variable at the school level is the presence of SROs. The independent variable at the district level is the ratio of quantity of SROs per 100 students.

During the years of concern in this research, the number of SROs present in a school was not reported to any state agency. That changed in 2020 when Kentucky passed a bill which mandated schools report number of SROs at their school ("School Safety and Resiliency Act," 2019). Thus, to obtain the quantity of SROs in a district or if SROs are present at a school, I created a Kentucky Freedom of Information Act request to obtain the contract between the school district and the local police agency. For the SROs to 100 students at the district level, the number of students in a district is publicly available information.

3.2.2 Dependent variables

For the school and district level data, I ran three models. The first model contained the dependent variable of number of times the school or district used exclusionary discipline per 100 students, and exclusionary discipline includes the number of in-school suspension, out-of-school suspensions, expulsions receiving services and expulsion not receiving services. The second model contained the dependent variable of number of times the school or district used exclusionary discipline per 100 students, excluding in-school suspensions. And the third model contained the dependent variable of number of times the school or district used exclusionary discipline per 100 students,

only in-school suspensions. Most studies that look at exclusionary discipline only focus on OSS and expulsions, but I included ISS exclusions as a category of exclusionary punishment in two of my models due to my theoretical framework and scaled the variable per 100 students to eliminate the impact of schools and districts with larger populations.

Because I am using social control theory as a theoretical framework, I include the use of ISS two models. In-school suspension is used when a student misbehaves but does not act so egregiously to warrant an OSS or expulsion. Although the student is not removed from the school as punishment, they are removed from the classroom as punishment. The use of ISS still seeks to control the behavior of students by removing them from access to education. Because the school still seeks to control behavior by removing students from their state constitutional right to an education, ISS is included within the exclusionary discipline variable.

3.2.3 Covariates

To ensure that I am measuring the impact of my independent variable, I included several covariates.

3.2.3.1 Size of school or district per 100 students

The size of the school or district is included to ensure the more frequent uses of exclusionary discipline is not caused by the greater population. This value was collected from the Kentucky School Report Card. This variable is scaled per 100 students because the range of the population is very large, so scaling creates a more understandable variable.

3.2.3.2 Demographics

My race variable is limited to the collection categories of the Kentucky Department of Education. The Department of Education has seven categories: African American; American Indian or Alaska Native; Asian; Hispanic or Latino; Native Hawaiian or Pacific Islander; Two or more races; and White (non-Hispanic). Thus, my six covariate categories for race and ethnicity are the percentage of students within the high schools or districts that are African American, American Indian or Alaska Native, Asian, Hispanic or Latino, Native Hawaiian or Pacific Islander, or Two or more races.

I am using percentage of students rather than the count of students for several reasons. First, by using a percentage of students, I am eliminating the impact the size of the school or district may have on the variable. Additionally, using percentage of demographic provides a better idea of the composition of the school and/or district than using raw count, because inherent to the percentage is the relation of that population to the whole.

3.2.3.2.1 DEMOGRAPHICS AND EXCLUSIONARY DISCIPLINE

Students who are a racial or ethnic minority, qualify for free/reduced lunch, or receive special education services are more likely to be subjected to exclusionary discipline (Perry & Morris, 2014). Research has shown that the racial composition of the school population is associated with the school's use of exclusionary discipline. The percentage of Black students is significantly and positively related to the use of ISS, OSS, and expulsion, and percentage of Hispanic students is significantly and positively related to expulsion (Bal et al., 2019; Welch & Payne, 2012).

3.2.3.3 Percentage of students eligible for free/reduced lunch

The Kentucky Department of Education classifies students eligible for free/reduced lunch as “economically disadvantaged.” The Kentucky Department of Education defines economically disadvantaged as “being program or income eligible for free or reduced-priced meals” (*Glossary*, 2020). Although KDE calls the variable “economically disadvantaged,” it is still measuring the number of students who are eligible for free/reduced lunch. Once again, I used percentage rather than raw count to address a disproportionate impact by schools with larger populations.

3.2.3.3.1 FREE AND REDUCED LUNCH AND EXCLUSIONARY DISCIPLINE

Students who are eligible for free or reduced cost lunch are overrepresented in office referrals (Perry & Morris, 2014; Skiba et al., 1997). The increase in socioeconomic status in Asian, Black, and white families is negatively associated with teacher referrals, ISS, OSS or probation, or transfer to another school for disciplinary reasons (Peguero et al., 2015). This research indicates the fewer families with low socioeconomic status within the school’s population is associated with lower uses of all types of punishments. This has been collaborated by research that has indicated that the percent of students receiving free/reduced lunch increases the odds that the school will use exclusionary discipline (Bal et al., 2019; Welch & Payne, 2012). Due to this association, I included a variable that measures the proportion of students who qualify for free/reduced lunch.

3.2.3.4 Percentage of students receiving special education services

The Kentucky Department of Education reports the number of students with an Individualized Education Program (“IEP”). Exclusionary punishment is used in different rates within the students with disability population based on the type of disability

(Sullivan et al., 2014); however, because KDE only collects whether an IEP exists, my variable would have to be limited to that measurement.

It should also be noted that this variable as reported is flawed, because the only disabilities that are reported are the ones that are documented. Thus, a student may have an intellectual disability but does not receive services. Additionally, only the disabilities that have documentation filed with the school are reported in the data. Students with intellectual disability are an important control because of the pushout they receive, but, as reported, it is a flawed variable.

3.2.3.4.1 STUDENTS WITH DISABILITIES AND EXCLUSIONARY DISCIPLINE

Students with intellectual disabilities also experience higher rates of exclusionary discipline. The United States Department of Education found students receiving services under the Individuals with Disabilities Education Act (“IDEA”) represented 13.2% of students but represented 20.5% of ISS counts and 24.5% of the OSS counts (*An overview of exclusionary discipline practices in public schools for the 2017-2018 school year*, 2021). Academic research has also found students with disabilities are more likely to receive exclusionary discipline and corporal punishment (Hurwitz et al., 2021; Macsuga-Gage et al., 2020).

3.2.3.5 Percentage of English-language learner students

The Kentucky Department of Education reports the number of English-language students (“EL students”) in schools and districts. The Kentucky Department of Education has suppressed this data for several schools and districts due to such low numbers of English-language learners that public reporting of that data would be identifying.

3.2.3.5.1 *ENGLISH-LANGUAGE LEARNERS AND EXCLUSIONARY DISCIPLINE*

Limited research exists regarding the relationship between EL students and exclusionary discipline. One study suggests EL students are subject to higher rates of exclusionary discipline. English-language students who are in secondary education are subjected to higher risk of exclusionary discipline compared to native-English speakers (Losen et al., 2014).

3.2.3.6 Student support services money per student

School resource officers are funded at the district level. Districts can also provide funding for other services, such as school psychologists, counselors, and other support staff. In Kentucky, districts can allocate money to student support services. These services include attendance, social work, guidance, health, psychological, and parent involvement (*Kentucky Department of Education: Uniform Chart of Accounts*, 2019). Although no empirical evidence exists, it can be argued that districts that invest in student support services may be less likely to use exclusionary discipline because they are fiscally invested in supporting the student and thus may have more reparative services available for that student.

Because student support is funded at the district level, this variable is only used in the district-level model. In order to account for districts that invest more in student support services, I included the amount of money spent on student support services per student in the district. Because it is calculated per student, this variable is insulated from potential biases from larger spending in larger districts. This data is reported annually within the Kentucky Report Card published by the Kentucky Department of Education.

3.2.3.7 Ratio of police officers per community population (scaled to 10,000)

In addition to district variables, I created two datasets to include community variables. The first dataset I created is the proportion of police officers to the population of the town or county in which the district sits. The number of police officers employed by a county was obtained through reports created by the Kentucky State Police, and the population of the county is public information. Because police officers are agents of the State, under social control theory, we can expect that the more police officers, the more the State seeks to control the behavior of its residents. This variable is also scaled to per 10,000 residents to address issues with larger counties having larger police forces.

This variable is only used at the district level, because I would not be able to account for the difference in police presence near different school locations. For the counties with bifurcated school districts, meaning the county seat and the county have their own school districts, the ratio is the same. The quantity of police officers is reported by county and delineates the quantity of police officers at each organization within the county.⁶ If I were to use data reported by the county and the county seat, I would have to adjust my community population for each police force, which leads to a jurisdiction problem.

County police officers have jurisdiction anywhere in the county. City police officers have jurisdiction anywhere in the city. On average, city police agencies have more police officers than county agencies. Due to this, although county police officers

⁶ The word “organization” is used, because other state-operated entities have police officers. A common example found in this data is universities.

have jurisdiction for the entire county, practically, they are primarily patrol non-city areas, as the city contains enough police resources to address issues within the city limits. Instead of predicting where a county or city police officer will patrol, I use the same ratio for each school district within the county. For districts that are the only district in the county, I sum the county officers and the city officers.

3.2.3.7.1 POLICE OFFICERS AND IMPACT ON SCHOOLS

Previous research has indicated that the number of police officers in the community has an inverse relationship with some students' academic achievement as indicated by test scores. Operation Impact was a policing program used by New York Police that increased policing in select neighborhoods (Legewie et al., 2019). Researchers examined students' test scores before, during, and after Operation Impact was implemented and found that Black boys, starting at the age of 12, saw a significant decrease in academic achievement (Legewie et al., 2019). Because there is some evidence that the level of policing impacts the inside of the classroom academically, then it seems reasonable that the level of policing will impact the school in other ways, such as the use of exclusionary discipline.

3.2.3.8 Ratio of number of arrests to community population

The second dataset I created is the ratio of the number of arrests in the county per community population. The State has granted police officers power to arrest individuals if the officer has probable cause that the individual is breaking or broke a law. The arrest rate within counties provides context to the area in which the district sits. If the district sits in a county with large numbers of police and high arrests rates, the school may have high uses of exclusionary discipline because that is the environment in which it sits. To

ensure I am not measuring the size of the county, I include the number of arrests per county resident.

3.3 Methodology

To measure the relationship between the presence of SROs and the use of exclusionary discipline, I used quantitative methods. Education researchers that have measured the impact of SROs through school-related incidences opted for count-based models of regression (Jennings et al., 2011; Pigott et al., 2018). For this research, however, count-based regression models are not appropriate.

This research analyzes schools and districts across Kentucky. The range of the population variable of the school and district is over 1800 and 96,000, respectively. To account for the large range in data, my dependent variable is measured per 100 students. By scaling the dependent variable, the new variable created, exclusionary discipline per 100 students, is no longer count data required for count-based regression.

Instead of count-based regression models, I used a multiple regression model. Multiple regression is a flexible tool used to determine if a quantitative variable is a function of or contains a relationship to independent variables (Cohen & Cohen, 1983). Due to the multiple variables used in this research, multiple linear regression is an appropriate tool.

The models are based on the following equations. The model for the first research question is

$$\text{exclusionary discipline} = \hat{B}_0 + \hat{B}_1(\text{SRO.Present}) + \hat{B}_i(\text{covariates}) + \hat{\epsilon}_i$$

The model for the second research question is

$$\text{exclusionary discipline} = \hat{B}_0 + \hat{B}_1(\text{SRO per 100 students}) + \hat{B}_i(\text{covariates}) + \hat{\epsilon}_i$$

3.3.1 Population and sample

The population of the data set is all Kentucky public schools. I only collected information from public high schools. The Kentucky Department of Education lists public schools as A1 schools (*School classification*). The Kentucky Department of Education created six other classifications (A2-A7), which represent public programs such as career and technical centers, special education programs, preschool programs, alternative programs, detention centers, and home/hospital bound children (*School classification*). Special education programs (A3), preschool programs (A4), alternative programs (A5), detention centers (A6), and home/hospital bound (A7) are not included due to the population held in each category. Those A3-A7 programs are a subset of the Kentucky student population which requires special needs. Due to this, they would not be demonstrative of the general population of students in A1 schools and are removed from the sample.

Career and technical centers (A2) programs are removed from the sample, because they operate parallel to traditional schools. The Kentucky Department of Education oversees and promulgates regulations for A1 schools, whereas the Office of Career and Technical Education oversees and promulgates regulations for A2 schools (780 KAR 2:010, 2018).

3.3.2 Validity and reliability

The validity and reliability of this research is dependent on the validity and reliability of the data collected. Most of the data was collected from publicly available sources, such as the Kentucky School Report Card and Commonwealth of Kentucky

Crime Report, both of which are published by state agencies. Other information was collected through contact with the school districts.

I ensured validity in this research by running multiple models. The theory of social control would warrant a data analysis with exclusionary discipline, including ISS; however, I have also included an additional model of exclusionary discipline, excluding ISS, to provide robustness to the model. Although multiple regression is used as the data analysis model, I have also attached a negative binomial regression model in the appendix.

The American economic system was founded on white supremacy and its structures and systems continue to this day. Because of this, the variable of economic disadvantaged and percentage of Black students may contain quite a bit of overlap. Thus, the appendix contains models without any race categories but identical findings.

3.3.3 Data collection and management

3.3.3.1 Collection

I collected the independent variable, the presence and quantity of SROs, through Kentucky Freedom of Information Act requests. I sent a Kentucky Freedom of Information Act request to the custodian of records for the district. I requested the MOU between the local school board and the local law enforcement agency. Those contracts indicated how many SROs were employed by the district.

I collected the dependent variable, number of exclusionary discipline, through the Kentucky School Report Card. This information is published annually under school safety. I collected information from the exclusionary discipline categories of expelled and

receiving services, expelled and not receiving services, out-of-school suspension, and in-school suspension.

Most of the covariates were collected through the Kentucky School Report Card. The size of the school, racial composition of the school, proportion eligible for free/reduced lunch, proportion of population receiving special education services, proportion of English-language learners, and money per pupil spent on student support services is information published annually by the Department of Education through the Kentucky School Report Card, and I collected the proportion of police officer and arrests to the public through an annual report by the Kentucky State Police.

3.3.3.2 Management

All the data was collected, stored digitally, and kept in a spreadsheet before it was uploaded to a statistical modeling software. Each of the MOUs collected by the district are stored in its own school district digital folder. Once the desired information was obtained from that source, the information was placed in the spreadsheet.

3.3.4 Data analysis procedure

Once the data is collected, I organized the data by school and district and inserted that data into SPSS. Before I ran a linear regression for school-level data, I created the independent variable. To do that, I determined if an SRO was present at the high school from the MOUs and created a dummy variable, such 0 represents no presence and 1 represents presence.

I calculated the dependent variable, number of ISS, OSS, and expulsions per 100 students, by dividing the total exclusion by the population of the school or district and multiplying that quotient by 100. For the variable without ISS, I used the same procedure

except the number of ISS administered was subtracted from the total exclusion numerator. For the ISS only variable, I used the ISS value that was reported by the Kentucky Department of Education. Percentage of students with IEPs, free and reduced lunch, and English language learners was calculated by taking the raw count of the category and dividing it by the district population. The same was true for the demographic categories.

Number of police officers and arrests per resident was calculated by collecting the number of police officers and number of arrests and dividing it by the number of residents in that town or county. In the case of police officers, that quotient was multiplied by 10,000.

3.3.5 Limitations

The district level model was limited with larger school districts. Some of the larger school districts have multiple A1 high schools, so the community covariates may not accurately reflect the community surrounding the high school. Some high schools may be surrounded by an area with higher police activity and arrest rates. And given the research of Legewie et al. (2019), the policing levels of the surrounding community impacts the school academic outcomes, so the differentiation might show a meaningful difference.

The number of police officers per 10,000 community residents in bifurcated areas pose a limitation. As discussed when introducing the variable, the jurisdiction of county police and the actual areas of policing are not necessarily the same. Without delving into the patrol areas of police officers in bifurcated school counties, I would be estimating the

number of police and the number of people policed. Instead, I have opted to use the same ratio for both school districts in bifurcated counties.

An additional limitation is the rate of arrests in the county. The number of police officers is reported per town and county. The number of arrests is only reported by county. Thus, in the counties with bifurcated town and county schools, the arrest rate was the same.

To avoid the arrest limitation, I would have to know where an individual was arrested and the average number of patrol officers in the area within a decided radius. That data is collected but would require analyzing all the arrests made within the larger counties for the three years and requesting officer patrol shifts for everyday during the three years. It is not feasible to obtain either of these pieces of information in a reasonable time period.

3.4 Conclusion

This chapter introduced the variables and analysis tool used to answer the research questions. It explained the significance of the variables in the context of social control theory and its expected results. Additionally, this chapter discussed the methodology used for this research, collection management, and limitations.

CHAPTER 4. RESULTS

4.1 Introduction

This chapter will present the findings of the data collected and analyze the findings of that data. The chapter will begin with the findings, the discussion of the findings, and conclude with the implications of the findings and how it contributes to the current literature.

4.2 Data

I ran six linear regression analyses. At both the school and district-level, I ran a model with a dependent variable of total exclusionary discipline, a dependent variable of total exclusionary discipline, excluding ISS, and a dependent variable of ISS only.

During the independent variable data collection, several schools and districts were removed from the data set for a variety of reasons. The complete list of schools and districts, as well as the reason for their removal from the dataset, are attached as an appendix.

4.2.1 School-level analysis

4.2.1.1 Descriptive analysis

Table 1 represents the descriptives for the school-level data.

Table 1 – *School-level descriptives*

	N	Minimum	Maximum	Mean	Std. Dev.	Variance
Total Exclusion	419	9	3406	410.37	413.973	171373.263
Total Exclusion per 100	419	1.867	179.500	50.364	34.932	1220.234
Total Exclusion no ISS	418	0	521	82.70	69.794	4871.264
Total Exclusion no ISS per 100	418	0	49.44	11.133	7.652	58.564
Total ISS	413	0	2885	332.40	369.950	136862.804
Total ISS per 100	413	0	154.74	39.835	31.956	1021.182
Total Student	419	121	1972	785.32	411.993	169737.916
# SRO	419	0	4	0.510	0.600	0.361
White	419	90	1685	680.07	357.524	127823.330
Black	419	0	475	39.91	72.243	5218.983
AI/AN	419	0	11	1.04	1.559	2.429
Asian	419	0	78	8.27	12.391	153.531
Hispanic	419	0	231	34.52	40.355	1628.489
NH/PI	419	0	25	0.86	2.177	4.738
Two or more	419	0	131	20.65	21.537	463.821
# Economically disadvantaged	419	76	1056	427.23	210.375	44257.604
# EL	356	0	122	12.62	21.770	473.939
# SPED	418	5	266	84.26	46.057	2121.212

4.2.1.2 Regression analysis

Table 2 displays the linear regression model at the school level. Model 1 contains the dependent variable of total exclusion per 100, model 2 contains the dependent variable of total exclusion per 100, excluding ISS, and model 3 contains the dependent variable of only ISS.

Table 2 – *School-level regression analysis*

Parameter	Model 1 – total exclusion	Model 2 – total exclusion excluding ISS	Model 3 – ISS only
Intercept	32.816 (11.866)	2.605 (2.879)	31.526 (10.842)
SRO.present	2.418 (3.620)	1.550 (0.872)	0.579 (3.304)
Total Student per 100	1.357* (0.456)	-0.121 (0.111)	1.397** (0.418)
Black (as %)	1.762** (0.288)	0.055 (0.069)	1.708** (0.261)
AIAN (as %)	15.940 (10.709)	1.125 (2.655)	16.708 (10.017)
Asian (as %)	-5.039* (1.883)	-0.634 (0.453)	-4.373* (1.706)
Hispanic (as %)	0.195 (0.828)	-0.066 (0.200)	0.193 (0.755)
NHPI (as %)	-5.949 (8.606)	-1.169 (2.071)	-4.850 (7.801)
Two or more (as %)	-2.611* (0.976)	0.004 (0.235)	-2.673* (0.888)
% economically disadvantaged	0.630** (0.158)	0.133** (0.038)	0.476** (0.144)
% EL	0.269 (1.536)	0.275 (0.370)	0.130 (1.399)
% SPED	-2.765** (0.502)	0.114 (0.121)	-2.777** (0.472)
R ²	0.264	0.150	0.267
Adjusted R ²	0.241	0.123	0.244
Std Error of Estimate	30.1845	7.26367	27.33456
* p-value ≤ 0.05, ** p-value ≤ 0.001			

Models 1 contained three covariates significant at the 0.05 level and three covariates significant at the 0.001 level. Model 2 contains only one significant covariate at the 0.001 level. Models 3 contained two covariates significant at the 0.05 level and four covariates significant at the 0.001 level. The independent variable, SRO.present, is not significant in any of the models.

Model 1 and model 3 had identical significant variables. In both models, the total student per 100 and percentage of Black students and economically disadvantaged students variables all have a positive relationship with the number of exclusionary disciplined used by a school, whereas the percentage of Asian students, two or more races students, and special education students variables have a negative relationship with the number of exclusionary discipline used by a school.

Model 2 only had one significant variable. The percentage of economically disadvantaged students is positively associated with exclusionary discipline, excluding ISS, used by a school.

None of the models support my hypothesis that the presence of SROs is positively and significantly related to the use of exclusionary discipline.

4.2.1 School-level data

The SRO.presence variable was not significant in models 1, 2, or 3. Thus, I cannot reject the null hypothesis that the presence of SROs has no significant relationship with the quantity of exclusionary discipline used by the school.

For models 1 and 3, the total student per 100, percentage of Black students, Asian students, two or more races students, economically disadvantaged students, and special education students had a significant association with the dependent variable, total exclusion and ISS only, respectively.

In model 1, which contained the dependent variable of total exclusionary discipline, the total student per 100 variable showed that on average, a one student increase per 100 is associated with a 1.357 increase in exclusionary discipline per 100 students. The percentage of Asian and two or more races variable showed that on

average, a one percentage point increase in each population is associated with a 5.039 and 2.611 decrease, respectively, in exclusionary discipline per 100 students. All these variables are significant at the 0.05 level.

The percentage of Black students and economically disadvantaged students showed on average, a one percentage point increase in those populations is associated with a 1.762 and 0.630, respectively, in exclusionary discipline per 100 students. For special education students, on average, a one percentage point increase in the population of special education students showed a 2.765 decrease in the use of exclusionary discipline per 100 students. These variables were significant at the 0.001 level.

In model 3, which contained only ISS, the percentage of Asian and two or more races variable showed that on average, a one percentage point increase in each population is associated with a 4.373 and 2.673 decrease, respectively, in ISS per 100 students. Both these variables were significant at the 0.05 level.

The total student per 100 variable showed that on average, a one student increase per 100 is associated with a 1.397 increase in ISS per 100 students. The percentage of Black students and economically disadvantaged students showed on average, a one percentage point increase in each respective population is associated with a 1.705 and 0.476 increase in ISS per 100 students. For special education students, on average, a one percentage point increase in the population of special education students showed a 2.777 decrease in the use of ISS per 100 students. These variables were significant at the 0.001 level.

Model 2 contained the total exclusion per 100, excluding ISS. Only one variable showed significance. The model showed, on average, a one percentage point increase in

economically disadvantaged students showed a 0.133 increase in the use of non-ISS exclusionary discipline.

The error levels and the standard error in Models 1 and 3 are very similar and much larger than Model 2. The size in the error and may be due to the variance of the independent variable in each model. The variance of exclusion per 100 and ISS per 100 are both over 1000, 1220.234 and 1021.182, respectively. The variance of non-ISS exclusion is 58.564. The standard deviation also shows large differences between the ISS inclusive variable and the ISS exclusive variable. Total exclusion per 100 and total ISS per 100 are 34.932 and 31.956, respectively. Whereas the standard deviation for non-ISS exclusion is 7.652. The independent variable of Model 1 and 3 has a high level of variance which be reflective in the Model's errors of coefficients and standard error or regression.

Additionally, the lower standard of errors may be caused by the type of behavior that is reserved for non-ISS exclusionary discipline. Fighting is a violation of a school's code of conduct, but it could also be classified as an assault. Because a fight could be classified as an assault, SROs might be present more consistently and thus would show less variance in the data.

The r^2 , adjusted r^2 , and standard error of the three models are difficult to discern which model is the best predictor of the use of exclusionary discipline per 100 students. The r^2 and adjusted r^2 values are largest in model 3, which suggests that the model explains more variance than model 1 and 2. The standard error, however, is lowest in model 2. The individual variable errors are also lowest in model 2. The standard deviation and variance are much lower for the total exclusion without ISS variable than

the total exclusion variable and only ISS variable, but its r^2 and adjusted r^2 are also lower than model 1 and 3.

4.2.2 District-level analysis

4.2.2.1 Descriptive analysis

Table 3 represents the descriptives for the district-level data.

Table 3 – *District-level descriptives*

	N	Minimum	Maximum	Mean	Std. Dev.	Variance
Total Exclusion	370	9	112423	2052.39	9565.507	91498918.11
Total Exclusion per 100	370	1.87	125.45	32.887	22.656	513.284
Total Exclusion no ISS	370	2	23519	432.15	1998.346	3993386.479
Total Exclusion no ISS per 100	370	0.10	32.17	7.539	4.904	24.054
Total Exclusion only ISS	366	0	91983	1637.94	7627.187	58173978.43
Total Exclusion only ISS per 100	366	0	98.46	25.625	20.109	404.356
Total Student	370	319	96774	4181.59	9404.995	88453923.61
SRO per 100	370	0.00	0.85	0.1927	0.13545	0.018
White	370	314	43661	3130.48	4591.096	21078162.08
Black	370	0	34944	502.68	3199.027	10233771.76
AI/AN	370	0	122	5.34	13.309	177.135
Asian	370	0	4098	76.37	393.210	154613.888
Hispanic	370	0	11129	300.89	1128.261	1272973.684
NH/PI	370	0	151	5.00	16.371	267.995
Two or more	370	0	4527	160.82	440.067	193658.591
# Economically disadvantaged	370	180	63498	255.08	5929.871	35163368.54
# EL	339	0	9451	144.45	797.726	636366.680
# SPED	370	37	12680	627.74	1203.283	1447889.082
Student support per pupil	370	3.88	1127.92	509.7240	171.10167	29275.782
Police per 10K	370	0.88	23.70	7.441	4.479	20.057
Arrest per pop	370	0.02	0.26	0.1135	0.04513	0.002

4.2.2.2 Regression analysis

Table 4 displays the linear regression model at the district level. Model 4 contains the dependent variable of total exclusion per 100, model 5 contains the dependent variable of total exclusion per 100, excluding ISS, and model 6 contains the dependent variable of ISS only.

Table 4 – District-level regression analysis

Parameter	Model 4 – total exclusion	Model 5 – total exclusion excluding ISS	Model 6 – ISS only
Intercept	4.589 (7.369)	-1.524 (1.714)	6.156 (6.783)
#SRO:100students	7.901 (8.138)	3.705† (1.893)	4.472 (7.474)
Total Student per 100	0.023 (0.014)	0.015** (0.003)	0.008 (0.013)
Black (as a %)	1.171** (0.198)	0.137* (0.046)	1.040** (0.182)
AIAN (as a %)	-7.462 (10.392)	-3.587 (2.418)	-3.716 (9.720)
Asian (as a %)	-1.799 (1.379)	-0.341 (0.321)	-1.451 (1.264)
Hispanic (as a %)	-0.237 (0.336)	0.026 (0.078)	-0.281 (0.308)
NHPI (as a %)	-0.487 (7.128)	-2.824 (1.658)	2.233 (6.530)
Two or more (as a %)	0.573 (0.496)	0.191 (0.115)	0.348 (0.456)
% economically disadvantaged	0.404** (0.112)	0.129** (0.026)	0.270* (0.103)
% EL	-0.285 (0.544)	0.090 (0.126)	-0.335 (0.499)
% SPED	-1.241** (0.297)	-0.031 (0.069)	-1.179** (0.273)
Student support	0.023** (0.006)	0.004* (0.001)	0.019** (0.006)
Police per 10k comm pop	1.189* (0.389)	-0.261* (0.090)	1.427** (0.357)
Arrest comm pop	-6.575 (23.938)	-13.280* (5.569)	6.172 (22.114)
R ²	0.453	0.380	0.414
Adjusted R ²	0.430	0.353	0.388
Std Error of Estimate	17.19229	3.99982	15.74949
† p-value is 0.051, * p-value ≤ 0.05, ** p-value ≤ 0.001			

The SROs:100students variable was not significant at the 0.05 level for any of the models; however, the SROs:100students variable was significant at the 0.051 level in

Model 5. Model 4 contained one covariate significant at the 0.05 level and four covariates significant at the 0.001 level. Model 5 contained four covariates at the 0.05 level, two covariates significant at the 0.001 level, and the independent variable, SROs:100students, contained a p-value of 0.051. Model 6 contained one covariate significant at the 0.05 level and four covariates significant at the 0.001 level.

In model 4, the percentage of Black students and economically disadvantaged students, student support per pupil, and police per 10,000 community resident variables all had a positive relationship with the number of exclusionary discipline used by a district, whereas the percentage of special education students variable had a negative relationship with the number of exclusionary discipline used by a district.

In model 5, the number of SROs per 100 students, the total student per 100, percentage of Black students and economically disadvantaged students, and student support per pupil variables all have a positive relationship with the number of exclusionary discipline, excluding ISS, used by a district, whereas the two community variables, police per 10,000 and arrest to community population, had a negative relationship with the number of exclusionary discipline, excluding ISS, used by a district.

In model 6, the percentage of Black students and economically disadvantaged students, student support per pupil, and police per 10,000 community resident variables all had a positive relationship with the number of ISS used by a district, whereas the percentage of special education students variable had a negative relationship with the number of ISS used by a district.

The independent variable in model 5 contained a p-value of 0.051. Although this research has used 0.05 as a significance level, I wanted to point out the p-value of the

independent variable in this case, because it is one one-thousandth away from the standard p-value for significance indicating that it is significant at the 94.9% confidence level.

4.2.1 District-level data

The SROs:100students variable was not significant at the 0.05 level for any of the models. Thus, I cannot reject the null hypothesis that no significant relationship exists between the ratio of SRO to 100 students in a district and the quantity of exclusionary discipline used by the district. The SROs:100students variable was significant at the 0.051 level.

Model 4, total exclusionary discipline, showed the percentage of Black students, percentage of economically disadvantaged, percentage of special education students, the student support dollars per pupil, and the ratio of police to community population per 10,000 residents were significant.

The percentage of Black students and economically disadvantaged students showed on average, a one percentage point increase in those populations is associated with a 1.171 and 0.404, increase, respectively, in exclusionary discipline per 100 students. Additionally, the student support per pupil variable indicated that a one dollar increase per pupil in spending for student support is associated with a 0.023 increase in the use of exclusionary discipline per 100 students. For special education students, on average, a one percentage point increase in the population of special education students is associated with a 1.241 decrease in the use of exclusionary discipline per 100 students. These variables were significant at the 0.001 level.

Only one of the community variables showed significance, police to community population per 10,000. The model showed that for every one additional police officer per 10,000 is associated with a 1.89 increase in use of exclusionary discipline per 100 students. This variable was significant at the 0.05 level.

Model 5 contained the exclusionary discipline per 100, excluding ISS. The total student per 100, percentage of Black students, percent of economically disadvantaged students, the student support dollars per pupil, police per 10,000 community population, and arrest per community population variables showed significance.

The model showed that a one student increase per 100, on average, is associated with a 0.015 increase in the use of non-ISS exclusionary discipline per 100 students, and a one percentage point increase in the percent of economically disadvantaged students, on average, is associated with a 0.129 increase in the use of exclusionary discipline per 100 students. Both variables are significant at the 0.001 level.

The percentage of Black students and student support spending per pupil were significant at the 0.05 level. The model showed that for every one percentage point increase in Black students is associated with, on average, a 0.137 increase in the use of non-ISS exclusionary discipline per 100 students. The model showed that, on average, a one dollar increase in student support per pupil is associated with a 0.004 increase in the use of non-ISS exclusionary discipline per 100 students.

In this model, both of the community variables showed significance. This model found that, on average, a one arrest increase per community population showed a 13.280 decrease in the use of non-ISS exclusionary discipline per 100 students, and a one police

officer increase is associated with a 0.261 decrease in non-ISS exclusionary discipline. These variables were significant at the 0.05 level.

The independent variable in model 5 contained a p-value level that is worth noting. This model showed that for every one additional SRO per 100 students is associated with a 3.705 increase in non-ISS exclusionary discipline. This variable was significant at the 0.051 level.

Model 6, ISS only, had identical significant variables as model 4. Model 6 showed the percentage of Black students, economically disadvantaged, and special education students, the student support dollars per pupil, and the ratio of police to community population per 10,000 residents were significant.

The percentage of Black students showed on average, a one percentage point increase in the Black student population was associated with a 1.040 increase in ISS per 100 students. Additionally, the student support per pupil variable indicated that a one dollar increase per pupil in spending for student support is associated with a 0.019 increase in the use of ISS per 100 students. For special education students, on average, a one percentage point increase in the population of special education students was associated with a 1.179 decrease in the use of ISS per 100 students. These variables were significant at the 0.001 level.

Similar to model 4, the police to community population per 10,000 was significant. The model showed that for every one additional police officer per 10,000 was associated with a 1.427 increase in ISS per 100 students. This variable was significant at the 0.001 level.

The percentage of economically disadvantaged students was also significant. It showed that every one percentage point increase in the economically disadvantaged population was associated with 0.270 increase in ISS per 100 students. This is the only model such the economically disadvantaged variable was significant at the 0.05 level.

Similar to model 1, 2, and 3, the r^2 , adjusted r^2 , and standard error of models 4, 5, and 6 are difficult to discern which model is a better predictor of the use of ISS per 100 students. The r^2 and adjusted r^2 values are largest in model 4, which suggests that the model explains more variance than model 5 and 6. The standard error, however, is lowest in model 5. The individual variable errors are also lowest in model 5. It is likely that much of this error comes from the variance within each dependent variable. The standard deviation and variance are much lower for the total exclusion without ISS variable than the total exclusion variable and the ISS only variable.

The error levels and the standard error in Models 4 and 6 are very similar and much larger than Model 5. The size in the error and may be due to the variance of the independent variable in each model. The variance of exclusion per 100 and ISS per 100 was much larger compared to non-ISS exclusion per 513.284, 404.356, and 24.054, respectively.

The standard deviation also shows large differences between the ISS inclusive variable and the ISS exclusive variable. Total exclusion per 100 and total ISS per 100 are 22.656 and 20.109, respectively. Whereas the standard deviation for non-ISS exclusion is 4.904. The independent variable of Model 4 and 6 has a high level of variance which be reflective in the Model's errors of coefficients and standard error or regression.

Similar to Model 2, because they are the same dependent variable, lower standard of errors may also be caused by the type of behavior that is reserved for non-ISS exclusionary discipline. The overlap of fighting and assault, for example, within the school's code of conduct and the criminal law may engage SROs more consistently than ISS behaviors.

Compared to the school-level models, the r^2 and adjusted r^2 values are larger in all the district-level models. The standard error values in the district-level models are also lower than in the school-level models. This would suggest that the district-level model is a better predictor of the use of exclusionary discipline per 100 compared to the school-level model.

4.3 Findings

This research sought to analyze the relationship, if any, between school resource officers and use of exclusionary discipline at the school and district level. My hypothesis was that the presence of SROs in schools has a positive relationship with the school's use of exclusionary discipline. A similar hypothesis was developed for districts.

My first hypothesis was

H_0 : No significant relationship exists between the presence of SROs in a school and the quantity of exclusionary discipline used by the school.

H_a : A significant, positive relationship exists between the presence of SROs in a school and the quantity of exclusionary discipline used by the school.

The null hypothesis cannot be rejected. None of the models showed a significant relationship between the presence of SROs and the use of any exclusionary discipline per 100 students.

My second hypothesis was

H₀: No significant relationship exists between the ratio of SRO to 100 students in a district and the quantity of exclusionary discipline used by the district.

H_a: A significant, positive relationship exists between the ratio of SRO to 100 students in a district and the quantity of exclusionary discipline used by the district.

The null hypothesis cannot be rejected for models 4 and 6; however, model 5 showed SROs had a positive relationship with the use of non-ISS exclusionary discipline per 100 students at the 0.051 significance level. For model 5, the null hypothesis can be limitedly rejected due to the unique confidence level and with acknowledgement additional investigation should be conducted into this relationship.

4.4 Discussion of findings

4.4.1 School-level models

The SRO.presence variable was not significant in models 1, 2, or 3. Thus, I cannot reject the null hypothesis that the presence of SROs has no significant relationship with the quantity of exclusionary discipline used by the school.

In model 1 and 3, the percentage of Black students and percentage of economically disadvantaged student showed a positive, significant relationship with the quantity of exclusionary discipline used by a school. Kentucky's schools are similar to school and district nationwide that finds an identical result (see Bal et al. 2019; Welch & Payne, 2012). Model 2, however, found that the percentage of Black students became non-significant. This finding supports Theirot's (2009) work which found the population of Black students becoming nonsignificant when socio-economic status is included as a variable.

The percentage of Asian students and two or more races students both showed a negative relationship with the use of exclusionary discipline per 100 students in models 1 and 3. The magnitude was fairly large for percentage of Asian students with 5.039 and 4.373 in models 1 and 3, respectively. This relationship supports findings of Wallace Jr. et al. who found that Asian American boys and girls had third lowest and lowest, respectively, punishment rates of children (2008).

One surprising and interesting finding of this research was the relationship between the percentage of special education students and the use of exclusionary discipline. Models 1 and 3 showed that the percentage of special education students had a negative, significant relationship with the quantity of exclusionary discipline. This is in contrast to the students of Hurtwitz et al (2021) and Macsuga-Gage et al. (2020).

The results indicating percentage of special education students is negatively and significantly related to use of exclusionary discipline is contrary to the expectation based on the research of Hurwitz et al. (2021) and Macsuga-Gage et al. (2020). This research differs, however, from Hurwitz et al. (2021) and Mascuga-Gage et al. (2020), because they looked at the number of special education students receiving exclusionary discipline, whereas this research looked that percentage of special education students in the building and the total number of exclusionary discipline.

This negative relationship from my models may be explained by Kentucky statute, which was enacted to be compliant with IDEA. Kentucky Revised Statutes 158.150 governs the suspension or expulsion of students. Section 7 of that statute governs the use of exclusionary discipline of students with disabilities. Specifically, if a student with disabilities receives suspensions or expulsions that total more than ten days, then the

admission and release committee must meet to determine if a change of placement is necessary. If the committee finds the behavior is related to the student's disability, then the school cannot suspend the student unless the current placement would result in harm to other individuals in the school.

These findings may be explained by KRS 158.150 and its possible influence on the discipline structure of schools. Two situations may be happening simultaneously. First, if a school has a larger population of students identified as special education then that school has fewer students who can receive exclusionary discipline for any offense without consideration of the ten-day limit. Secondly, because the school has a larger population of special education students, that school may have invested, financially, structurally or otherwise, into alternatives to exclusionary discipline to be mindful of that ten-day limit for special education students. And it is that investment into alternatives that lowers that use of exclusionary discipline for all students, because the school has alternatives in place to address issues with students.

4.4.2 District-level models

The null hypothesis cannot be rejected for models 4 and 6; however, model 5 showed SROs had a positive relationship with the use of non-ISS exclusionary discipline per 100 students at the 0.051 significance level.

Model 5 was the only model that found an association between total students per 100 and exclusionary discipline. Total student population per 100 was positive and significant, but the coefficient was rather small, 0.015. Because this relationship only occurred with one model, this finding may indicate that larger schools and districts are

not more or less likely to use exclusionary discipline compared to smaller schools and districts.

The district level data had similar trends as the school-level data. Model 4, 5, and 6 contained a positive association between the percentage of Black students and economically disadvantaged students and the use of exclusionary discipline, although the coefficient of each was larger in the school-level models. And the percentage of special education students was also significant in models 4 and 6 with a lower coefficient than the school-level models.

The percentage of Black students in the district was positive and significant for five out of six models. This finding is expected given the amount of research that has found disproportionate uses of exclusionary discipline on Black students. Although additional research is needed to explain why percentage of Black students is non-significant at the school-level for non-ISS exclusionary discipline.

Kentucky's schools and districts and their relationship to economically disadvantage students is reflective of what is found in the literature. The percentage of economically disadvantaged students was also positive and significant. This variable was significant within all six models. This finding is not surprising given the findings of Skiba et al. 1997, Welch & Payne, 2012, Perry & Morris, 2014, Peguero et al. 2015, and Bal et al., 2019.

Model 4 introduced a district-level variable, student support per pupil, and two community variables, police officers per 10,000 residents and arrest to community population. The student support variable was positive and significant in all the district-level models. This is contrary to my expectations.

As discussed in Chapter 3, student support funds are funds that are provided to schools to provide services including attendance, social work, guidance, health, psychological, and parent involvement. I hypothesized the model would show that districts that spent more funds on these programs would use fewer exclusionary discipline punishments. The model actually showed a positive relationship between student support spending and exclusionary discipline. This may be a result that districts that need those funds, and thus are allocated more by the state, already display higher uses of exclusionary discipline. Additional research needs to be conducted to explain this finding.

Only one community variable in model 4 and 6 was significant. Police officers per 10,000 residents had a positive and significant relationship at the 0.05 level in model 4 and 0.001 in model 6. This variable indicates that the community in which the district sits may have an impact on how the local school district uses punishments. Legewie et al. (2019) found presence of police officers in a community impacted the students' academic outcomes. My research's finding indicates the presence of police officers may also impact the use of exclusionary discipline in the school. Additional research to understand the school district and community's relationship.

Both of model 5's community variables were significant. The arrest to community population and the police per 10,000 residents were negative and significant. This finding is very surprising. It suggests that higher arrest rates and more police officers are associated with lower instances of non-ISS exclusionary discipline. I was not anticipating this finding and seems contradictory to the finding in model 4 and 6, which indicated that

the relationship between the number of police officers and the number of exclusionary discipline had a positive relationship.

The finding in model 5 may be explained by deterrence theory. General deterrence theory in crime and punishment suggests that people will behave differently when there is a threat of punishment and/or societal condemnation (Andenaes, 1974). This result may suggest that in areas with high arrests rates, we see lower out-of-school suspensions because of the societal threat of punishment. The threat of arrests and the criminal system influenced children's behavior inside of schools. Much more research will be required to determine if this relationship is evidence of deterrence theory.

The appendix contains count-based models which were originally used as the model for this research, but then ultimately abandoned for the linear regression model, because it was a better fit for this data. The count-based models contain findings that are very similar to the linear regression model. The variables that were significant in the count-based model are also significant in the linear regression model, but I opted to use the linear regression model, because my dependent variable changed from a count-based variable to continuous variable to account for the sizes of districts and schools.

CHAPTER 5. CONCLUSION

The results of this research presents implications for social control theory as applied in schools, as well as expanding upon previous research. This research did not find that SROs were associated with the use of exclusionary discipline at the school level, so I was unable to reject the null hypothesis. This finding is contrary to what would be expected under social control theory, because the presence of the police is used as a tool to exclude people from the population. However, as discussed in the literature review, schools are already heavily controlled environments and how social control theory works in heavily controlled environments has not been sufficiently researched. Additionally, the survey sent to SROs found that SROs' roles and responsibility vary widely, so their presence and impact on the environment of the school and how they school uses exclusionary discipline may vary by school.

The research found SROs were not associated with higher uses of total exclusionary discipline and ISS only exclusionary discipline. School resource officers were positively associated with non-ISS exclusionary discipline at a 0.051 significance level. Similarly, the findings were contrary to what was expected under social control theory. As discussed above, because non-ISS exclusionary discipline is used for more objective incidents that tend to overlap with criminal charges, it would be expected that, if any relationship existed, it would exist within between non-ISS exclusionary discipline and SROs because of the overlap between the schools' code of conduct and criminal law.

Social control theory states the State controls those whom the State deems deviant, which historically have been people of color (Heitzeg, 2015). In the school context, districts and legislatures have been placing police officers, agents of the State, in

schools. Previous research has identified that placing police officers in schools leads to increased uses of exclusionary discipline and criminal charges within the school (Fisher & Hennessy, 2016; Sorensen et al., 2021). Those results could only be limitedly replicated in one model; however, this research found a positive association with the number of police officers in the surrounding community and the use of exclusionary discipline, which supports the research of Legewie et al and calls for additional research in the area.

Similarly, the relationship between the number of arrests and community population creates a new area that requires additional research. This research showed a negative association between arrests per community population and police officers per 10,000 residents and the number of non-ISS exclusionary discipline. Not only was this result unexpected given the findings in model 4 and 6, but it is also contrary to social control theory. Under social control theory, out-of-school exclusionary discipline is analogous to arrests, because in both instances, the individuals are being ousted from their community. For out-of-school discipline, the student is being sent away from their school community, and in arrests, the individual is being sent away from their community. Thus, the observance of a negative relationship is unexpected. As stated above, however, it may be explained by general deterrence theory.

In support of previous findings, this research found that the variable most often associated with exclusionary discipline is the percentage of economically disadvantaged students. This variable was positive and significant in all six models. This relationship has been found significant since the late 1990's to the late 2010 to today (Skiba et al., 1997; Bal et al., 2019). This calls for not only additional research into why this

relationship exists, but also legislative, district-level, and school-level action to ensure economically disadvantaged students are not disenfranchised from the education system due to a situation the student cannot control.

Previous findings have also found that special education children are at higher risk of exclusionary discipline than non-special education children (Hurwitz et al., 2021; Macsuga-Gage et al., 2020). The findings in this research suggest the relationship may be more complicated. This research looked at the proportion of special education students and found that higher proportions of special education students is negatively associated with the use of exclusionary discipline in four of the six models. Additional research is needed to decipher why individuals with special education are subject to higher uses of exclusionary discipline, but the proportion of special education within the school is negatively associated with the use of exclusionary discipline.

5.1 Limitations

This research is subject to a number of limitations. First and foremost is the SRO variable. The role of an SRO is not uniform across schools and districts. My expectation of the existence and uniformity of MOUs between districts and local police agencies was optimistic. The contracts contained a large variance from detailed, role-specific contracts to no contract at all. Until the role of SRO is standardized across the state, it is difficult to use a state-level analysis to associate outcomes with their presence. As the role of an SRO becomes more uniform, state-level analysis can be used to learn about state-level impacts.

In addition to the SRO variable, the community variables posed limitations. I included community-level variables to learn about the impact of community policing on

school's and district's uses of exclusionary discipline. The limitation was discussed previously above, but the reality of policing is difficult to capture through data. Police officers' jurisdiction is different than the reality of where they police. Resources, population, and county size typically keep county police officers in the county rather than city, even though they have jurisdiction within the city. As research in this area develops, researchers should look to actual areas of policing to create a more accurate representation of the variable.

Similarly, the arrest to community population posed a limitation. Counties with bifurcated school districts received the same value of this variable in this research. Especially in large counties, the arrest could have taken place on the east side of the county by one school district, but the arrest is accounted for the school district that is located on the west side of the county. Thus, this variable does not provide the most accurate representation of arrests in counties; however, given its magnitude and significance, more research is warranted in this area.

The quantitative, regression analysis model also creates some limitations. Regression analysis is limited in its application. Regression analyses discover associations between variables; however, it does not allow us to make causal inferences (Cohen & Cohen, 1983). Much more research is required, especially for community variables, before any causal claims could be made.

Additionally, this quantitative analysis looked at whether we would see a quantitative impact on exclusionary discipline. The model is only measuring exclusionary discipline. Social control may be at work in school in other ways outside of exclusionary discipline, which this quantitative model would not capture.

5.2 Policy Implications

This research and previous research highlight the importance of monitoring schools' and districts' exclusionary practices. This is especially true when certain populations compose higher proportions of the school. Schools and districts with higher proportions of Black students and economically disadvantaged students show higher uses of exclusionary discipline. Schools and districts should develop policies that allow for active monitoring of the uses of exclusionary discipline and ensure the school's or district's response is appropriate to the student's action.

As schools and districts develop their policies, they should look to the policies used in non-ISS exclusionary discipline, as that model did not contain a significant relationship between the percentage of Black students and the use of non-ISS exclusionary discipline. The policies and procedures used by schools to administer non-ISS exclusionary discipline might be able to be replicated for all types of punishments. If that policy is replicated, it might eliminate the disproportionate impact on Black students.

Based on this research and previous research, additional policies need to be in place to support students who are considered economically disadvantaged. This variable was consistently associated with the use of exclusionary discipline. Current policies exist that consider the level of low-income students for additional funding, but additional support strategies and programs should be considered.

5.3 Future Work

Future work should continue to focus on the impact of SROs in schools. This research analyzed the impact of SROs across an entire state and found one model, district-level, non-ISS exclusionary discipline, that found a positive association that was

significant at the 0.051 level. That, however, does not negate previous research which looked at individual schools. Student resource officer research should continue to determine which schools are more likely to have negative outcomes with SROs present, and, if removal of those officers is not an option, how to minimize those negative outcomes.

Similarly, researchers may need to be creative in how we quantitatively measure control in schools. Schools are a highly controlled environment, and if SROs are adding to that control and environment, quantitative researchers will have to distinguish between a baseline amount of control that exists at school and the additional multiplier of SROs. Qualitative work will be able to observe the relationship and immediate impact of SROs presence and their interaction with students and staff. It would provide insight into the additional control component with the presence of an SRO.

Future work should also consider the use and impact of community variables, such as quantity of police officers and arrest rates, and its impact on different types of punishments. All the district-level models found at least one of the community variables significant. Additional research can determine if this finding can be replicated and delineate the differences between those variables to determine why each dependent variable is associated with each covariate.

Additionally, future research should focus on what community variables lower uses of exclusionary discipline. Outside of criminalizing the community, the research can examine the number of public services readily available or the strength of community outreach programs from libraries or other non-profit organizations. If we know that the

community impacts the inside of the school, how can we develop the community to create positive change within schools.

Finally, this research used race and ethnicity as a covariate. Future research can look at statewide data with an interaction term of race and exclusionary discipline to determine if the presence of SROs is associated with exclusionary discipline of students of a particular race or ethnicity.

In sum, the presence of SROs in schools and districts is a developing area of study that warrants additional research. The stakes of policing children are high and merits careful consideration. This research built upon previous research and its findings and also found other avenues of research worthy of consideration by researchers. This research will not only benefit other researchers, but also schools and districts who want to be mindful of their punishment practices.

APPENDICES

APPENDIX 1. SCHOOLS AND DISTRICTS REMOVED AND REASONING

District	District, school, or both	Reason
Anderson County	Both	Never responded
Augusta Independent	Both	Never returned phone call
Barbourville Independent	Both	Had SROs but no documentation
Bardstown Independent	Both	MOU unclear; did not respond to emails for clarification
Bourbon County	Both 16/17 only	Had SROs but no documentation
Boyd County	Both	MOU unclear; did not respond to emails for clarification
Breathitt County	Both	MOU unclear; did not respond to emails for clarification
Campbell County	Both	Had SROs but no documentation
Casey County	Both	Did not reply
Clark County	Both	Never responded
Clay County	School	Did not know where SROs were placed
Crittenden County	Both	No documents
Cumberland County	Both	No response
Danville Independent	Both	Destroyed their contracts
Elliott County	Both	No response
Estill County	Both 16/17 & 17/18	Did not have documentation
Fairview Independent	Both	They sent an email with no attachment

Fayette County	Schools	Did not know where SROs were placed
Fleming County	Both	No response
Frankfort Independent	Both	No response
Franklin County	Both 16/17 & 17/18	Cannot find those documents
Fulton Independent	Both	No response
Gallatin County	Both 16/17	No written document
Garrard County	Both	Couldn't find all the records
Glasgow Independent	Both 16/17 & 17/18	No documents for those years
Grant County	School	Did not know where SROs were placed
Green County	Both	No written documents
Greenup County	Both	Cannot find documents
Hardin County	Both 16/17	Unsure when one of the schools started their SRO program
Hart County	Both	No written documents
Hazard Independent	Both	No written documents
Jefferson County	Schools	Did not know where SROs were placed
Johnson County	Both	Emailed for clarification and no response
Kenton County	Both	Could not find documents
Mason County	Both	No documents
McCreary County	Both	No response
Metcalfe County	Both 16/17 & 17/18	No documents for those years
Middlesboro Independent	Both	No longer has documents
Monroe County	Both	No response
Newport Independent	Both	No documents

Nicholas County	Both	Didn't respond to follow up questions
Ohio County	School	Didn't respond to follow up questions
Pike County	Both	Never responded
Pineville Independent	Both	Never responded
Pulaski County	Schools	Not sure where SRO located
Raceland-Worthington Independent	Both	Didn't respond to follow up questions
Rowan County	Both	Never responded
Scott County	Both	Unable to locate their records
Simpson County	Both	Didn't respond to follow up question
Walton-Verona Independent	Both	Never responded
Warren County	Both	Did not respond
Wolfe County	Both	Never responded
Woodford County	Both	No records

APPENDIX 2. NEGATIVE BINOMINAL REGRESSION MODEL

School-level data – exclusion dependent variable includes ISS

	b	SE	Exp(b)
SRO.present	0.002	0.0038	1.002
Total student per 100	0.001*	0.0005	1.001
Race (as %)			
Black	0.001*	0.0002	1.001
AIAN	0.015	0.0107	1.016
Asian	-0.005*	0.0022	0.995
Hispanic	0.000	0.0007	1.000
NHPI	-0.003	0.0085	0.997
Two or more	-0.001	0.0009	0.999
% Economically disadvantaged	0.001**	0.0002	1.001
% EL	0.000	0.0012	1.000
% SPED	-0.003**	0.0006	0.997
* p-value is 0.05, ** p-value is 0.001			

School-level data – exclusion dependent variable excludes ISS

	b	SE	Exp(b)
SRO.present	0.032	0.0172	1.032
Total student per 100	-0.002	0.0024	0.998
Race (as %)			
Black	0.001	0.0011	1.001
AIAN	0.021	0.0499	1.022
Asian	-0.019	0.0109	0.981
Hispanic	0.001	0.0033	1.001
NHPI	-0.015	0.0414	0.985
Two or more	0.000	0.0041	1.000
% Economically disadvantaged	0.003**	0.0008	1.003
% EL	0.000	0.0056	1.000
% SPED	0.001	0.0020	1.001
* p-value is 0.05, ** p-value is 0.001			

District-level data – exclusion variable includes ISS

	b	SE	Exp(b)
#SRO:100students	0.240	0.2569	1.272
Total Student	0.000	0.0004	1.000
Race (as %)			
Black	0.014*	0.0061	1.014
AIAN	0.155	0.3380	1.167
Asian	-0.022	0.0402	0.978
Hispanic	0.000	0.0107	1.000
NHPI	0.090	0.2337	1.094
Two or more	0.027	0.0156	1.028
% economically disadvantaged	0.020**	0.0038	1.021
% EL	-0.010	0.0170	0.991
% SPED	-0.046**	0.0097	0.955
Student support	0.001*	0.0002	1.001
Police:comm pop	0.046**	0.0117	1.047
Arrest comm pop	0.036	0.7456	1.037
* p-value is 0.05, ** p-value is 0.001			

District-level data – exclusion variable excludes ISS

	b	SE	Exp(b)
#SRO:100students	0.431	0.2328	1.539
Total Student	0.001*	0.0004	1.001
Race (as %)			
Black	0.009	0.0054	1.009
AIAN	-0.329	0.3147	0.719
Asian	-0.017	0.0405	0.983
Hispanic	0.006	0.0096	1.006
NHPI	-0.352	0.2095	0.703
Two or more	0.025	0.0138	1.025
% economically disadvantaged	0.021**	0.0035	1.021
% EL	0.003	0.0151	1.003
% SPED	-0.009	0.0088	0.991
Student support	0.000	0.0002	1.000
Police:comm pop	-0.024*	0.0116	0.976
Arrest comm pop	-1.538*	0.7121	0.215
* p-value is 0.05, ** p-value is 0.001			

APPENDIX 3. MULTICOLLINEARITY

School-level data

Parameter	total exclusion	total exclusion excluding ISS	ISS only
Intercept	6.232 (9.620)	0.239 (2.212)	6.529 (8.904)
SRO.present	3.778 (3.798)	1.568 (0.862)	1.828 (3.493)
Total Student per 100	1.689** (0.463)	-0.109 (0.106)	1.756** (0.425)
% economically disadvantaged	0.996** (0.135)	0.164** (0.031)	0.815** (0.126)
% EL	1.186 (0.794)	0.146 (0.180)	1.040 (0.725)
% SPED	-2.749** (0.525)	0.117 (0.119)	-2.748** (0.497)
R ²	0.165	0.143	0.156
Adjusted R ²	0.153	0.130	0.143
Std Error of Estimate	31.871326	7.232212937	29.08565
* p-value ≤ 0.05, ** p-value ≤ 0.001			

District-level data

Parameter	total exclusion	total exclusion excluding ISS	ISS only
Intercept	-8.469 (6.247)	-3.681 (1.379)	-4.853 (5.761)
#SRO:100students	15.866 (8.672)	5.040* (1.914)	10.909 (7.877)
Total Student per 100	0.046** (0.013)	0.017** (0.003)	0.030* (0.012)
% economically disadvantaged	0.674** (0.099)	0.172** (0.022)	0.495** (0.091)
% EL	0.296 (0.406)	0.219* (0.090)	0.088 (0.369)
% SPED	-1.862** (0.309)	-0.108 (0.068)	-1.712** (0.218)
Student support	0.030** (0.006)	0.005** (0.001)	0.026** (0.006)
Police per 10k comm pop	1.243* (0.411)	-0.230* (0.091)	1.446** (0.373)
Arrest comm pop	14.910 (24.963)	-12.217* (5.509)	26.961 (22.847)

R ²	0.338	0.324	0.304
Adjusted R ²	0.322	0.308	0.287
Std Error of Estimate	18.74687	4.13688	17.00609
* p-value ≤ 0.05, ** p-value ≤ 0.001			

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PUBLICATIONS

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