Making Schools Safer and/or Increasing Student Involvement in the Criminal Justice System: A Study of Police Officers in North Carolina Schools.

Over the last 25 years, school districts across the United States have increasingly made the choice to place police officers, commonly known as School Resource Officers (SROs), in high schools and middle schools to create safer environments for students and teachers. The evidence on whether SROs met those objectives is limited. According to a 2013 report from the Congressional Research Service, no methodologically rigorous evaluations of SRO programs exist at this time, defined as studies making use of any type of treatment and control group (James and McCallion, 2013).

There are recent exceptions, however. A 2017 study by Emily Owens exploits variation in the use of SROs generated by federal hiring grants placing law enforcement in schools to uncover evidence that could confirm or challenge the school-to-prison pipeline phenomenon. She finds that while SROs increase school safety and help law enforcement agencies make arrests for drug crimes occurring on and off school grounds, they also are more likely to learn about crimes in schools and more likely to make arrests of students under the age of 15.

Na and Gottfredson (2011) use data from multiple waves of the School Survey on Crime and Safety to compare student outcomes in schools before and after they hired a school resource officer. Their study looks at effects on the number of crimes recorded by the school; percentage of these crimes reported to law enforcement; and percentage of these crimes for which the offending student was removed, transferred, or suspended for five or more days. Their analyses indicate that as schools increase their use of police, they record more crimes involving weapons and drugs and report a higher percentage of non-serious violent crimes to law enforcement.

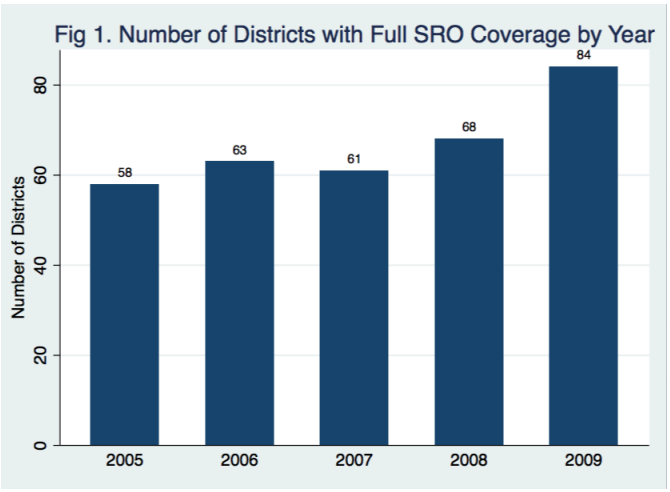
This evidence implies contradictory policy recommendations. SROs are effective at reporting school crimes and enforcing consequences, which could reduce the overall level of violent behavior at schools (largely through removing troublesome students). But to the extent that SROs criminalize student behavior that could otherwise be dealt with through less serious disciplinary channels, they may also reinforce pathways into the formal criminal justice system. If school resource officers ultimately result in more students entering this system for relatively minor offenses, the costs of providing school safety may be too high.

Research Design

The current study builds off of existing research, with a new emphasis on identifying long-term consequences. It links extensive administrative data from the North Carolina public school system with detailed conviction data from the North Carolina criminal justice system. This individual-level longitudinal dataset from 2005 through 2016 allows us to ask whether the use of school resource officers in middle school causally decreases school disciplinary incidents in the short run and/or increases student conviction and incarceration in the long run. This data is unique both for its breadth, as we have detailed records for every student disciplinary offense and associated consequence, and for its length, as we can track individuals from their school-aged years through young adulthood.

Our research design makes use of within-district variation over time in student exposure to school resource officers, facilitated by the fact that the state of North Carolina invested heavily in SROs in middle schools through a graduated rollout during the observed time period of interest. To be exact, between the 2005 and 2009 school years, the number of SROs in state public middle schools grew from 353 to 416, an increase of 18 percent. The number of districts with full SRO coverage in public middle

schools increased 45% from 58 in 2005 to 84 in 2009. In 2009, 70% of middle schools had exclusive SROs, and 22% of middle schools shared an SRO with another school.



The short-term analysis estimates effects of exposure to full SRO coverage for each cohort of students within each district on the following outcomes: number of violent offenses, number of unlawful possession offenses, number of short-term out of school suspensions, number of expulsions or long-term out of school suspensions, number of assignments to alternative learning programs or schools, and test score achievement in math and reading. These regressions take the form below for each outcome Y_{dgt} for district *d*, grade *g*, and year *t*:

$$Y_{dgt} = \beta_0 + \beta_1 SROexposure_{dgt} + X_{dgt}\beta 2 + \gamma_d + \delta_g + \varphi_{g\times t} + \varepsilon_{dgt} \quad (1)$$

The variable of interest $SROexposure_{dgt}$ equals the number of years each cohort of students (*gt*) have spent under full SRO coverage in district *d* from grade 6 to *g*. X_{dgt} is a vector of time-varying control measures, γ_d are district fixed effects, δ_g are grade fixed effects, and $\varphi_{g\times t}$ are grade-by-year interaction effects.

The long-term analysis proceeds with a similar method, but examines effects of individual exposure over the entire middle school career to school resource officers on likelihood of high school dropout and/or criminal conviction by age 21. These two outcomes, now measured at the individual- rather than district-level, are modeled as follows:

$$Y_{idc} = \alpha_0 + \alpha_1 SROexposure_i + X_{idc}\alpha 2 + \gamma_d + \rho_c + \mu_{dgt} \quad (2)$$

$SROexposure_{idc}$ changes to measure the total years individual *i* spent under full SRO coverage during middle school, X_{idc} includes individual-level control variables, and grade and year fixed effects have been replaced by cohort fixed effects ρ_c. For both the short-term and long-term analyses, we employ linear regression for continuous normally-distributed outcomes (e.g. test scores), logistic regression for dichotomous outcomes (e.g. conviction), and negative binomial regression for zero-inflated count outcomes (e.g. offenses).

Preliminary Results

Table 1. Negative Binomial Regression of School Offenses on Exposure to SRO

	(1) Serious violence	(2) Non-serious violence	(3) Unlawful possession
1.Exposure	0.701^	1.001	0.986
	(-1.69)	(0.01)	(-0.18)
2.Exposure	0.665	0.921	0.994
	(-1.19)	(-0.54)	(-0.06)
3.Exposure	0.648	0.803	0.941
	(-1.02)	(-0.88)	(-0.48)
% Black	1.105	1.115*	1.027
	(1.23)	(1.96)	(1.43)
% Hispanic	1.106	1.095	0.989
	(0.80)	(0.82)	(-0.26)
Teacher student ratio	0.992	0.959	0.960
	(-0.05)	(-0.37)	(-0.66)
lnalpha	0.0621	0.0416**	0.0814***
	(-1.58)	(-2.74)	(-10.19)
N	1121	1121	1121

Incidence rate ratios; *t* statistics in parentheses
Note: (1) Control variables not presented in the table due to space limit include: grade, year, cohort, and district dummy variables. (2) The natural log of the population is used as offset.
^ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 1 shows the estimated incidence rate ratios and test statistics from three negative binomial regression models of the effect of exposure to full SRO coverage on the number of school offenses recorded, controlling for grade, year, cohort and district dummy variables. Models (1) through (3) test whether an increase in exposure to SRO improves average school safety. The preliminary finding is that exposure to SRO substantially decreases the rate of recorded serious violence incidents, but with marginal statistical significance. Increasing exposure from 0 to 1 year is expected to decrease the rate of recorded serious violence by 30 percent, controlling for all the other variables. Given that schools with full SRO coverage may be more likely to detect offenses, the negative relationship provides a signal that SROs can improve school safety, at least in terms of serious violent offenses and for students who are not removed by school disciplinary actions.

Table 2. OLS Regression of End of Grade Test Score on Exposure to SRO

	(1) Math score	(2) Reading score
1.Exposure	-0.029*	-0.021^
	(-2.03)	(-1.70)
2.Exposure	-0.049**	-0.021
	(-2.79)	(-1.60)
3.Exposure	-0.044^	-0.017
	(-1.74)	(-1.04)
% Black	-0.004	-0.002
	(-1.22)	(-0.53)
% Hispanic	0.001	-0.005
	(0.19)	(-0.92)
Teacher to student ratio	0.005	0.003
	(0.94)	(0.54)
Constant	0.036	-0.010
	(0.30)	(-0.10)
N	1121	1121

t statistics in parentheses
Note: Control variables not presented in the table due to space limit include: grade, year, cohort, and district dummy variables.
^ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 2 displays the linear fixed effects models of the relationship between exposure to SRO and average standardized End of Grade test scores, controlling for grade, cohort, year and district dummy variables. Model (1) and model (2) test whether an increase in exposure to SRO affects short-term school performance in the same grade and district. Our preliminary finding is that exposure to an SRO harms short-term school performance in math. Increasing exposure from 0 to 2 years is expected to decrease the average standardized test score in math by .049, which is one fifth of its standard deviation.

Discussion

Preliminary findings from these analyses indicate that placing police officers in schools implies tradeoffs. SROs appear to provide positive gains in terms of improved school safety and reductions in violent offenses, but they also cause large negative academic consequences for students. The mechanisms behind this academic effect will require further examination. It could be that having a police officer in school causes a more stressful and isolated environment that hinders learning. Another mechanism could be that students who interact more frequently with the disciplinary system are more likely to be removed from a learning environment for minor deviant behavior. We expect the long-term analyses to further elucidate whether the benefits of SROs to the students they serve outweigh the potential costs.

References

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