From Retributive to Restorative: An Alternative Approach to Justice

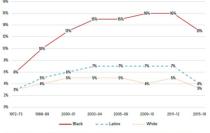
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Pattern of Punitiveness

Zero-tolerance policies led to ~3.5 M U.S. public school students suspended, loss of 18 M days of instruction in 2012 (Losen et al. 2015)

School suspensions more than doubled between 1974 and 2006



Source: U.S. Department of Education, Office for Civil Rights, Civil Rights Data Collection, 1972-73, 1988-89, 2000-01, 2003-04, 2005-06, 2009-10, 2011-12, and 2015-16.

Source: Losen and Martinez (2020)

Linked with increased likelihood of adult incarceration and decreased educational attainment (Fabelo et al. 2011; Shollenberger 2015; Wolf & Kupchik 2017; Bacher-Hicks et al. 2020)

How to Shift the Punishment Paradigm?

Many school officials understand suspensions may harm, but

- Classroom management and discipline considered to be among most difficult problems of teachers (Evertson & Weinstein 2006; Kauffman et al. 2011)
- ▶ 80% of public schools reported violence, theft, or other crimes (1.4 M incidents) (NCES 2019)
- ▶ 80% of surveyed teachers believe suspensions are useful to improve learning and safety (Griffith & Tyner 2019)

How to achieve justice and accountability without generating the potential harms of exclusion?

New approach: Restorative Justice

- Came from the criminal justice system
- Increasingly adopted in U.S. urban schools but little evidence of its efficacy

What is Restorative Justice (RJ)?

A philosophy:

- Reparation of harm between victims and offenders
- Restore (transform) relationships
- Engaging various stakeholders through open dialogue
- Increased perspective taking
- Shared ownership of disciplinary justice

Not necessarily a specified set of practices:

- Referred to as Restorative Practices (RP) in schools
- Implementation matters always, but particularly with RP
- ► Manifests as restorative circles, peer juries, peace rooms, etc.
 - e.g. conferencing between offenders and victims, those similarly harmed, or those who committed similar offenses

(McCold & Wachtel 1998; Fulkerson 2001; Karp & Breslin 2001; McGarrell 2001; Hopkins 2003; Gonzalez 2012;

This Study

How can policy shift the suspension paradigm towards something more positive?

Partnership with Chicago Public Schools:

- Examine gradual rollout of restorative practices (RP)
- Intensive coaching/training of school employees
- Use a difference-in-differences-style research design
- 1. Does RP shift the disciplinary responses of school staff?
 - Perceived behavior in school? (suspensions)
- 2. How does RP shift student behavior and perceptions?
 - Attendance
 - Academic achievement
 - School climate
 - Perceived behavior outside of school (arrests)

Preview of Results

Restorative practices improved outcomes in and out of school.

Reduced punishment based on perceived in-school behavior

- Decreases in out-of-school suspensions (OSS)
- ▶ No evidence of offsetting rise in-school suspensions (ISS)

More in-person instructional time

▶ No meaningful changes in average math/reading scores, GPA

Possible mechanism

Improved perception of school climate

Schools shaping behavior outside of school

- ▶ Evidence of spillovers into neighborhoods: decreases in arrests
- Decreases in arrests for violent offenses

Evidence of specific benefits for Black students

▶ ↓ OSS, arrests, absences; ↑ math scores

Outline

- Background on restorative justice in schools
- Data: education, climate, policing
- Research Design
- Findings
- Summary

Shaping Student Behavior

School officials want to respond to undesirable behavior

What are the goals?

- "Perpetrator": Hold accountable, teach appropriate behavior
- "Victim": Make them feel whole again, that justice was served
- "Bystanders": Deter, teach appropriate behavior

Common tool: exclusionary disciplinary practices (suspensions)

- ▶ At best: Removes offender from situation (but does not teach desired behavior), gives victim reprieve from interacting with offender (but unclear they feel justice)
 - Justice involves accountability
 - Victims: perpetrators need to understand the harms caused in order to truly feel accountable for their actions
- At worst: Counterproductive to goals, long-term harm

Policy Setting: Chicago Public Schools (CPS)

Partnership with Chicago Public Schools

How to shift the punishment paradigm?

CPS: 3rd largest U.S. school district

- ▶ 171 high schools, 492 elementary schools; 340,658 students
- ▶ 36% African American, 47% Hispanic/Latinx, 11% White
- ► 63%+ eligible for free/reduced priced lunches

Historically punitive/zero-tolerance approach to student discipline

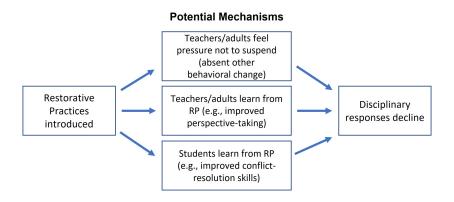
In SY14, shift to more "positive" approaches to shaping behavior

- Suspensions and Expulsions Reduction Plan (SERP)
- ► Introduction of RP in some schools
- Implemented by CPS Office of Socioemotional Learning

Implementation of Restorative Practices

- ► RP coach trained admin and designated staff to model and implement restorative practices within their schools
- ▶ RP coaches drawn from 15 different vendors
- ► The longer coaches were in schools, the more they were used as staff members
- Originally funded by DOJ grant, coaches came 2-3 dys/wk/yr
- After grant ended (SY 16), coaches in schools 1 day/wk/yr
- Flexible model, designed to meet schools' needs and abilities in developing a menu of restorative practices most appropriate for their school context
- Used in variety of contexts: property damage, conflict resolution, etc.

How might RP influence behavior?



Introduction of Restorative Practices

- Allocation based on
 - 1. Network specialists' recommendations
 - 2. "Perceived need" (size, disciplinary responses, climate)
- Demand outweighed supply: always more applications than they could fulfill

RP Status	Total	Percent
All high schools	171	
Never received any RP	97	56.7%
Ever treated	74	43.3%
First time receiving any RP in		
SY 2014	22	12.9%
SY 2015	23	13.5%
SY 2016	5	2.9%
SY 2017	6	3.5%
SY 2018	10	5.8%
SY 2019	8	4.7%

Data Sources: Education, Policing, Climate

- Restorative practices programming data (school-level, CPS)
- ► SY09-19 education administrative data (student-level, CPS)
 - Enrollment, demographics, out-of-school and in-school suspensions (OSS, ISS), attendance, math/reading test scores, GPA
- Chicago Police Department (CPD) data (person-level)
 - Geolocated arrest data: location (in-school vs. out-of-school) determined by geocode and timing (during school hours or not)
 - Nature of arrest (FBI code): Non-violent vs. violent (homicide, sexual assault, robbery, assault, battery)
- School and academic climate survey data (student-level, CPS)
 - "My Voice, My School" (MVMS) school climate: peer academic support, emotional health, academic engagement, human and social community resources, student classroom behavior, academic personalism, parent supportiveness, psychological sense of school membership, safety, school-wide future orientation, school safety, student-teacher trust



Descriptive Statistics: CPS High Schools in SY 2013

	Non-Treated	Treated	Difference
Variable	(1)	(2)	(3)
Number of Students	538.6 (425.9)	1003.7 (774.9)	465.1*** (106.4)
Out-of-School Suspension Days	0.73 (2.61)	1.07 (3.28)	0.35** (0.18)
In-School Suspension Days	0.25 (1.24)	0.49 (1.72)	0.25** (0.12)
Number of Arrests	0.14 (0.69)	0.17 (0.71)	0.03 (0.04)
Ever Arrested	0.07 (0.26)	0.09 (0.29)	0.02 (0.02)
Math Test Score	0.17 (1.08)	-0.076 (0.92)	-0.24 (0.15)
Reading Test Score	0.15 (1.06)	-0.066 (0.94)	-0.21 (0.15)
Climate Score	0.060 (0.53)	-0.037 (0.52)	-0.097*** (0.027)
English Learner	0.05 (0.22)	0.07 (0.26)	0.02 (0.01)
Students in Temporary Living Situations	0.05 (0.22)	0.06 (0.24)	0.01 (0.01)
Individualized Education Plan	0.14 (0.35)	0.15 (0.36)	0.01 (0.01)
Gender: Female	0.51 (0.50)	0.49 (0.50)	-0.02 (0.02)
Race: African American	0.48 (0.50)	0.42 (0.49)	-0.06 (0.08)
Race: White	0.08 (0.28)	0.10 (0.30)	0.02 (0.03)
Race: Hispanic/Latino	0.40 (0.49)	0.44 (0.50)	0.04 (0.06)
Disability: Cognitive	0.12 (0.33)	0.14 (0.34)	0.01 (0.01)

 Consistent with the prioritization of schools with more punitive disciplinary practices and climates, suspension rates and school climate are the most important predictors of future treatment status (aside from school size)

Empirical Strategy: Notation

To accommodate treatment effect heterogeneity across time/schools, we follow de Chaisemartin and D'Haultfoeuille (2020) and define the following objects:

- ▶ $D_{g,t}$: indicator for RP exposure of students with assigned school g in school year t ($D_{g,t} \ge D_{g,t-1}$)
 - Students assigned to first high school attended
- $Y_{g,t}$: average outcome value for students with assigned school g in year t (OSS days, number of arrests, etc.)
- N_S: total number of observations corresponding to students in the year that their assigned school is first treated
- $ightharpoonup N_{g,t}$: number of students with assigned school g in year t
- $N_{d,d',t} = \sum_{g:D_g,t=d,D_g,t-1=d'} N_{g,t}$: total number of students assigned to schools in year t with treatment value d' in year t-1 and treatment value d in year t

Empirical Strategy: Event Studies

Then, we define the instantaneous effect of treatment as:

$$DID_{M} = \sum_{t=2}^{T} \left(\frac{N_{1,0,t}}{N_{S}} DID_{+,t} \right)$$

$$DID_{+,t} = \sum_{g:D_{g,t}=1,D_{g,t-1}=0} \frac{N_{g,t}}{N_{1,0,t}} (Y_{g,t} - Y_{g,t-1})$$

$$- \sum_{g:D_{g,t}=D_{g,t-1}=0} \frac{N_{g,t}}{N_{0,0,t}} (Y_{g,t} - Y_{g,t-1})$$

- Analogous approach to construct dynamic/placebo estimates
- Benchmark models also control for student age/cohort/race/ gender FEs, homelessness, ELL, disability classification, IEP, free/reduced lunch status (results not sensitive to inclusion)

Empirical Strategy: Cumulative Estimates

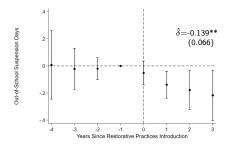
To combine instantaneous and (3) dynamic estimates, we construct the following estimator:

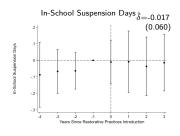
$$\hat{\delta}_{+,0:3} = \sum_{l=0}^{3} \omega_{+,3,l} D l D_{M,l}$$

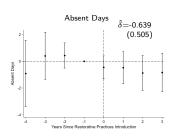
- ▶ DID_{M,I} is the weighted average effect of treatment I periods after initial treatment exposure
- ▶ Weight $\omega_{+,3,l}$ is equal to $\frac{N_l^1}{\sum_{l=0}^3 N_l^1}$; N_l^1 is the number of students reaching l school years after initial treatment
- Across analyses, standard errors clustered at the level of the high school in which each student first enrolled (i.e., the assigned school)

School-Based Punitive Outcomes and Attendance

Out-of-School Suspension Days







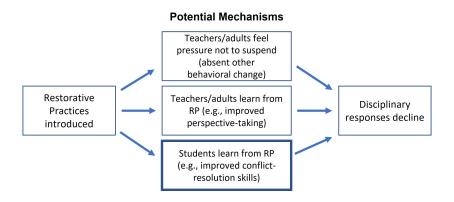
School-Based Punitive Outcomes and Attendance

	Out-of-School Suspension		In-School	In-School Suspension		
	Days	Binary	Days	Binary		
	(1)	(2)	(3)	(4)	(5)	
RP	-0.139**	-0.021**	-0.017	0.004	-0.639	
	(0.066)	(0.010)	(0.060)	(0.018)	(0.505)	
Baseline Mean	0.781	0.158	0.419	0.134	19.25	
Observations	1,176,280	1,176,280	1,176,280	1,176,280	1,176,280	

- ▶ RP leads to an 18% decline in out-of-school suspension days, no evidence of offsetting rise in in-school suspensions
- ▶ Days spent in classroom increases on net by 0.78 (0.43)



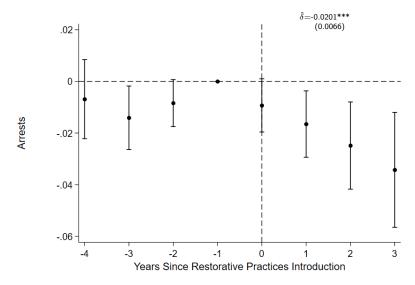
What Explains Changing Punitiveness?



- Recall three potential mechanisms
- We do not have data on teacher attitudes and perceptions
- ► Can only examine child response

Does Student Behavior Change?

▶ Use person-level arrest data from CPD



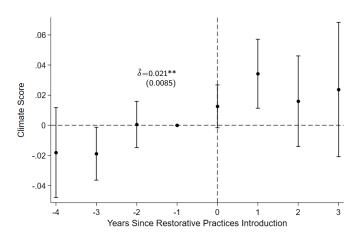
RP Decreases Arrests

	Arrest	s (All)	Non-Violent	Violent	In-School	Out-of-School
	Count	Binary	Arrests	Arrests	Arrests	Arrests
	(1)	(2)	(3)	(4)	(5)	(6)
RP	-0.0201***	-0.0074***	-0.0162***	-0.0039***	-0.0080***	-0.0120**
	(0.0066)	(0.0025)	(0.0043)	(0.0015)	(0.0020)	(0.049)
Baseline Mean	0.125	0.069	0.096	0.029	0.030	0.095
Max Observations	1,197,382	1,197,382	1,197,382	1,197,382	1,197,382	1,197,382

- ▶ 16% decline in child arrests
- Robust declines across all arrest subcategories
- Declining out-of-school arrests imply RP programming is not only affecting how adults in schools respond to misconduct



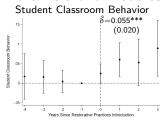
Mechanisms: Does School Climate Change?



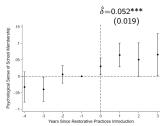
- Use student survey data from CPS' "My Voice My School"
- Measures students' perceptions of educational environment

Climate Survey Module-Specific Treatment Effects

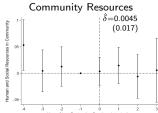
More Relevant Modules



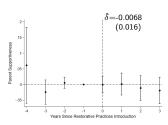
Psychological Sense of School Membership



Less Relevant Modules

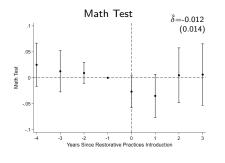


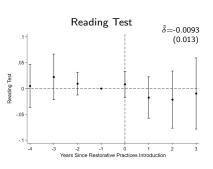
Parent Supportiveness



Module-specific impacts consistent with RP theory of change

Implications for Academic Performance





- On net, small, negative, statistically insignificant changes in test scores (similar estimates for GPA)
- School climate improvements suggest disruption-induced losses unlikely
- ► We next investigate how key outcomes vary by student race and gender to unpack average findings

Punitive Outcomes by Race and Gender

	OSS		Arrests		Max
	$\hat{\delta}$	Mean	$\hat{\delta}$	Mean	Obs
	(1)	(2)	(3)	(4)	(5)
Black Males	-0.307**	1.880	-0.067***	0.387	237,882
	(0.120)		(0.020)		
Black Females	-0.276**	1.322	-0.014**	0.085	261,688
	(0.115)		(0.0069)		
White Males	-0.039	0.417	-0.0084	0.059	55,583
	(0.065)		(0.013)		
White Females	-0.064**	0.180	-0.0054	0.013	58,723
	(0.032)		(0.0038)		
Hispanic Males	0.0085	0.670	-0.012	0.086	261,951
	(0.065)		(0.010)		
Hispanic Females	-0.042	0.304	-0.0037*	0.015	266,259
	(0.031)		(0.0019)		

► Level effects on OSS/arrests driven by decreases for Black students (esp. males)

Attendance and Achievement by Race and Gender

	Absent Days		Math Score		Reading Score		Max	
	$\hat{\delta}$	Mean	$\hat{\delta}$	Mean	$\hat{\delta}$	Mean	Obs	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	
Black Males	-1.769***	21.014	0.044**	-0.298	0.012	-0.311	231,997	
	(0.460)		(0.018)		(0.025)			
Black Females	-0.758	21.813	0.012	-0.197	0.0012	-0.051	256,763	
	(0.538)		(0.017)		(0.0120)			
White Males	-0.508	15.370	-0.032	0.767	-0.0065	0.685	53,817	
	(0.625)		(0.049)		(0.038)			
White Females	-0.738	15.650	-0.053	0.785	-0.036	0.975	57,494	
	(0.684)		(0.036)		(0.034)			
Hispanic Males	-0.106	16.466	-0.051*	0.078	-0.044**	-0.076	258,263	
	(0.724)		(0.026)		(0.017)			
Hispanic Females	-0.395	17.084	-0.035	0.040	-0.030	0.058	263,189	
	(0.749)		(0.039)		(0.027)			

- ▶ Null average math effects mask gains for Black students (driven by males) and negative point estimates for all others
- Relative impacts on reading scores are somewhat more muted

Interpreting Test Score Impacts

To unpack heterogeneous test score impacts, we examine whether RP benefits vary with school-level Black student share

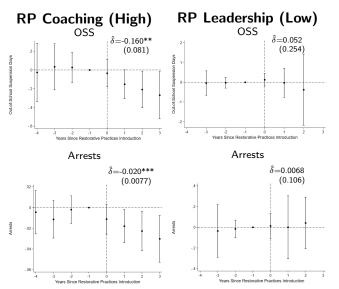
Power is limited, but relatively homogeneous impacts on OSS, arrests, and test scores for Hispanic (and Black) students suggest heterogeneity persists within schools

Candidate (speculative) explanation:

- ▶ RP induces teachers to take more holistic approach to classroom management/instruction
- Reduced focus on testing offset for Black students by increased classroom time

Does Program Intensity Matter?

▶ Before concluding, we examine how program impacts vary with the intensity of the RP intervention



Restorative Practices Hold Promise, Evidence that School Policies Shape Behavior

- Falling out-of-school suspensions paired with declines in arrests (both in- and out-of-school) indicate that RP goes beyond simply changing how adults respond to misconduct
- Evidence of student-reported school climate improvements consistent with this conclusion
- Despite increased time spent in classrooms, we find null average impacts on academic achievement
- Unpacking this result, some evidence of gains for Black students, who benefit most from RP in terms of OSS and arrest rate reductions, but offsetting test score impacts for non-Black students



Data Details

In benchmark specifications, we impose the following sample restrictions:

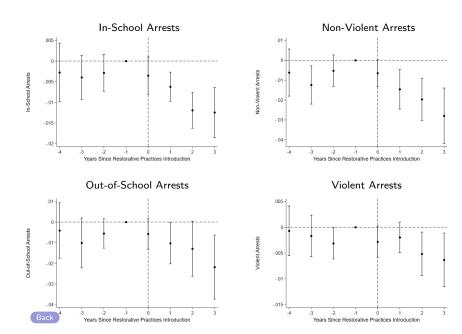
- We include all students who attended a CPS high school (charter or non-charter) for one or more days between SY09 and SY19
- Students are included in each year they appear in CPS administrative enrollment files
- We assign students to the first high school they attended and drop all observations past the expected school exit year
- We drop observations with data quality concerns (ex./ the student's annual grade level is less than that of the previous year)



School-Based Punitive Outcomes and Attendance: Sensitivity Analysis

	Out-of-Scho	ol Suspension	In-School	Suspension	Absent Days
	Days	Binary	Days	Binary	
	(1)	(2)	(3)	(4)	(5)
		Standard TW	/FE Model		
RP	-0.159*	-0.021**	0.00004	0.011	-2.171***
	(0.087)	(0.011)	(0.070)	(0.016)	(0.774)
		School-by-C	ohort FEs		
RP	-0.082	-0.020*	-0.057	-0.005	-0.031
	(0.076)	(0.011)	(0.073)	(0.018)	(0.432)
Baseline Mean	0.781	0.158	0.419	0.134	19.25
Max Observations	1,176,280	1,176,280	1,176,280	1,176,280	1,176,280

Arrest Outcomes: Event Studies

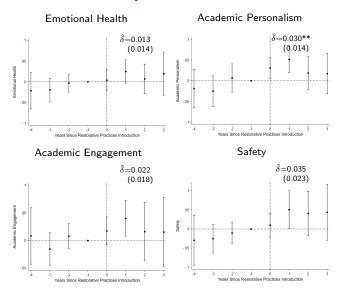


Arrest Outcomes: Sensitivity Analysis

	Arres	ts (All)	Non-Violent	Violent	In-School	Out-of-Schoo
	Count	Binary	Arrests	Arrests	Arrests	Arrests
	(1)	(2)	(3)	(4)	(5)	(6)
			Standard 7	TWFE Model		
RP	-0.0129** (0.0057)	-0.0064*** (0.0023)	-0.0094** (0.0047)	-0.0020 (0.0016)	-0.0034** (0.0016)	-0.0079 (0.0051)
			School-by	-Cohort FEs		
RP	-0.023*** (0.0076)	-0.0090*** (0.0028)	-0.0177*** (0.0039)	-0.0053** (0.0025)	-0.0123*** (0.0029)	-0.0108* (0.0056)
Mean Max Obs	0.125 1,197,382	0.069 1,197,382	0.096 1,197,382	0.029 1,197,382	0.030 1,197,382	0.095 1,197,382

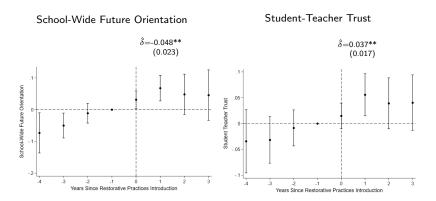


Additional Climate Survey Modules I





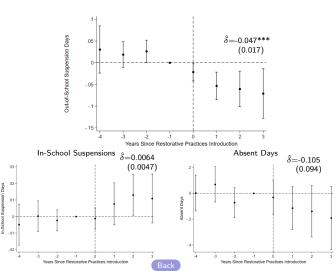
Additional Climate Survey Modules II



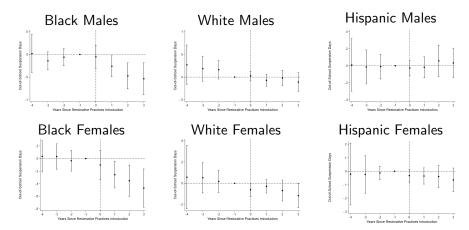


Elementary School-Based Punitive Outcomes and Attendance: Graphical Evidence

Out-of-School Suspensions



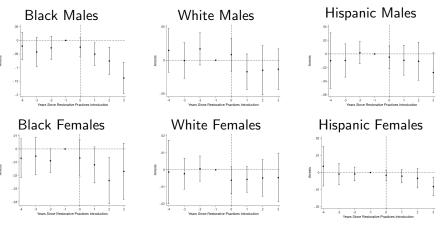
Heterogeneity Analysis by Race and Gender: OSS



 Declines in out-of-school suspensions are concentrated among Black students, who face the highest suspension rates at baseline



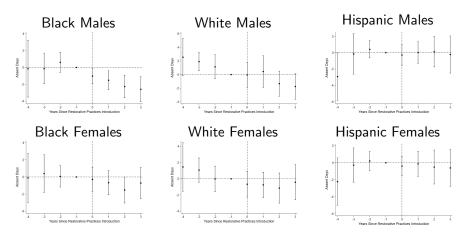
Heterogeneity Analysis by Race and Gender: Arrests



▶ In parallel, arrest declines are driven by Black males, who are arrested far more frequently than members of any other race-gender subgroup



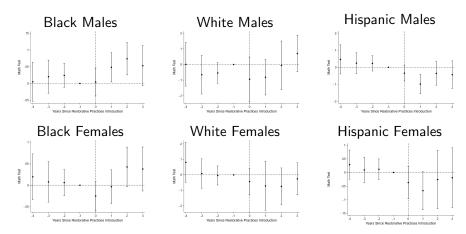
Heterogeneity Analysis by Race and Gender: Absent Days



Here, we see complementary evidence of rising attendance among Black males



Heterogeneity Analysis by Race and Gender: Test Scores (Math)

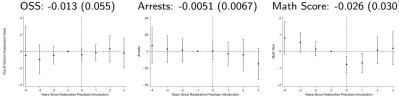


▶ Black males, who experience the largest declines in OSS, arrests, and absent days, see sizable (0.044 SD) math gains

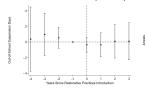


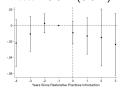
Heterogeneity Analysis by Racial Composition of Schools

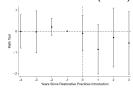
Hispanic Students in Schools with Above-Median Black Enrollment OSS: -0.013 (0.055) Arrests: -0.0051 (0.0067) Math Score: -0.026 (0.030)



Hispanic Students in Schools with Below-Median Black Enrollment OSS: -0.016 (0.076) Arrests: -0.014 (0.012) Math Score -0.042 (0.045)

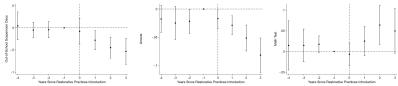




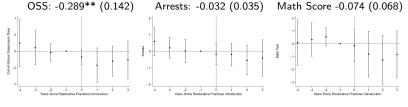


Heterogeneity Analysis by Racial Composition of Schools

Black Students in Schools with Above-Median Black Enrollment OSS: -0.311*** (0.112) Arrests: -0.041*** (0.0084) Math Score 0.032** (0.016)



Black Students in Schools with Below-Median Black Enrollment



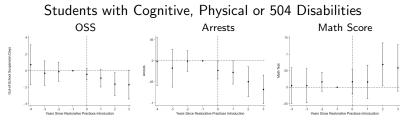


Heterogeneity by Disability Status, ELL, and Grade Level: OSS, Arrests, and Math Scores

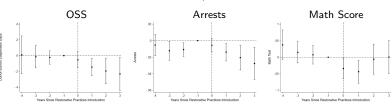
	OSS		Arrests		Math Score		Max
	$\hat{\delta}$	Mean	$\hat{\delta}$	Mean	$\hat{\delta}$	Mean	Obs
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Students w/ Disabilities	-0.112**	0.881	-0.040***	0.184	0.040	-0.613	220,428
	(0.050)		(0.013)		(0.025)		
Students w/o Disabilities	-0.147**	0.782	-0.016**	0.098	-0.021	0.140	975,999
	(0.060)		(0.0070)		(0.018)		
Grades 9-10	-0.184***	0.979	-0.026***	0.137	0.0060	_	646,927
	(0.066)		(0.0081)		(0.024)		
Grades 11-12	-0.100**	0.569	-0.0081**	0.088	-0.031	_	524,330
	(0.046)		(0.0038)		(0.024)		
ELL Students	0.114	0.409	-0.015	0.045	0.035	-0.581	78,113
	(0.072)		(0.011)		(0.033)		
Non-ELL Students	-0.150**	0.822	-0.021***	0.121	-0.016	0.058	1,118,309
	(0.059)		(0.0058)		(0.020)		

- ▶ We see larger arrest rate declines for students with disabilities, who face higher average arrest rates
- Similarly, students in grades 9-10, who are suspended and arrested more frequently, appear to benefit more from RP with respect to punitive outcomes

Heterogeneity by Disability Status

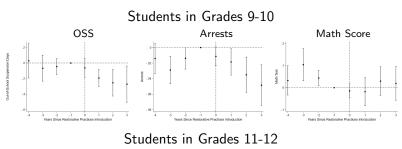


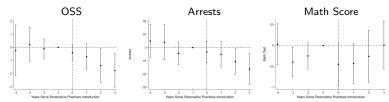
Students without Reported Disabilities





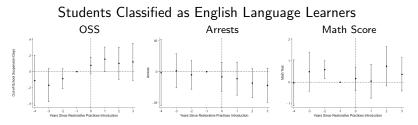
Heterogeneity by Grade Level







Heterogeneity by ELL Status



Students not Classified as English Language Learners

