

Online Appendix

Reparative Ripple Effects? Exploring the Impacts of Sibling Exposure to School-Based Restorative Justice

By Anjali Adukia, Benjamin Feigenberg, and Fatemeh Momeni

Abstract

This study leverages the rollout of restorative practices (RP) within Chicago Public Schools to investigate whether younger siblings in elementary school who are not directly exposed to RP are affected by their older siblings' RP exposure in high school. We find suggestive evidence that younger siblings' absent days decline in response to indirect RP exposure. In contrast, we do not find any evidence that indirect exposure affects perceived behavior or academic outcomes. Our analysis is intended to provide a useful data point for future work that more comprehensively assesses the scope for spillover effects associated with non-cognitive skill development.

Citation to Corresponding Paper

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APPENDIX TABLES

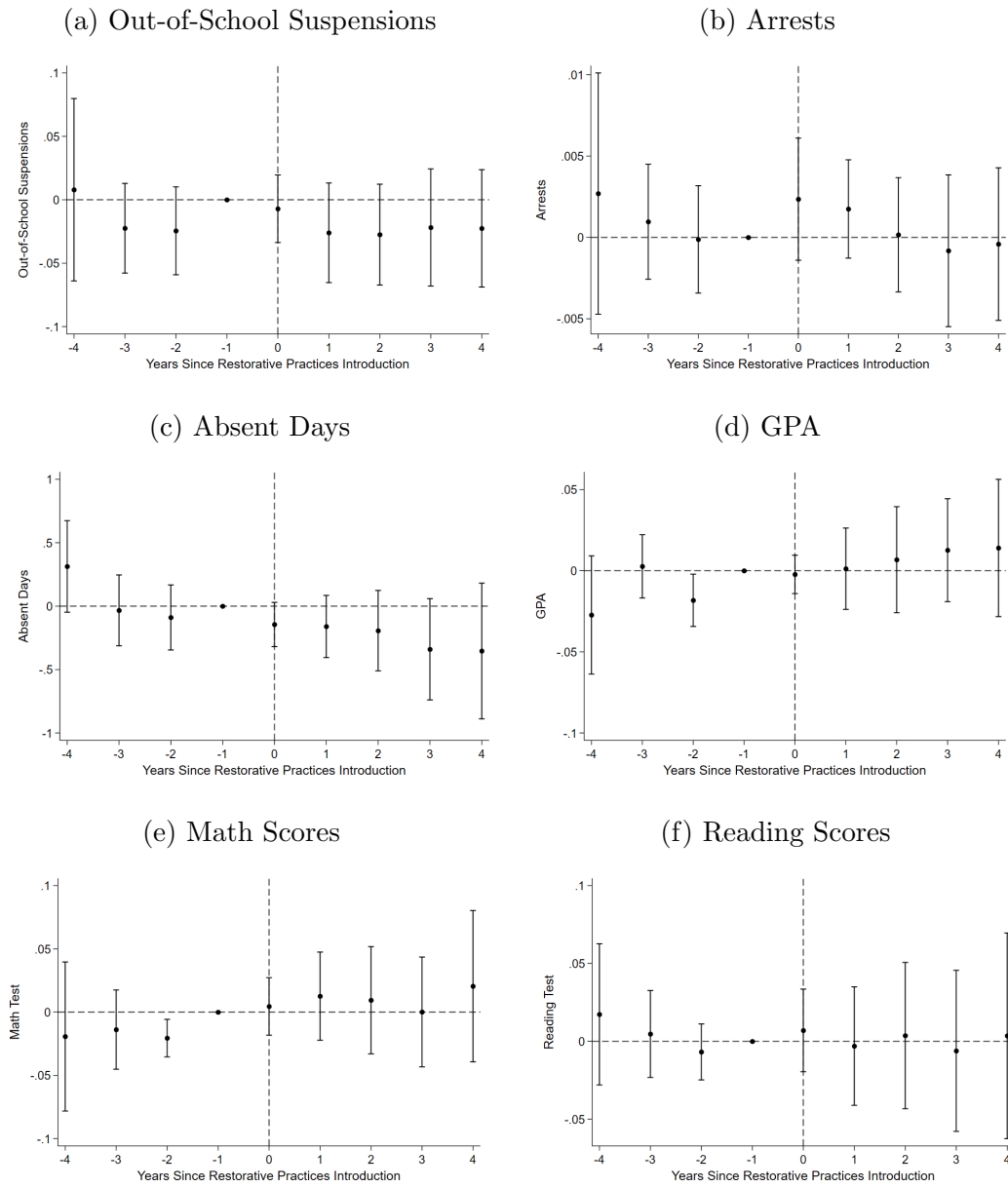
Table A1—Results Using Two-Way Fixed Effects Specification

	OSS Days (1)	Arrests (2)	Absent Days (3)	GPA (4)	Math Score (5)	Reading Score (6)
<i>Panel A: Benchmark Model</i>						
RP	-0.013 (0.014)	0.000 (0.001)	-0.159 (0.11)	0.011 (0.011)	0.023+ (0.013)	0.018 (0.016)
Observations	210,208	211,008	210,208	190,269	204,017	203,466
<i>Panel B: Including Elementary School-by-Year Fixed Effects</i>						
RP	-0.007 (0.01)	0.001 (0.001)	-0.06 (0.084)	0.01+ (0.006)	0.009 (0.009)	0.012 (0.01)
Observations	210,208	211,008	210,208	190,269	204,017	203,466
Baseline Mean	0.274	0.012	7.680	3.049	0.081	0.027

Note: Observations are at the student-school year level, and we report the average effect of restorative practices over five periods. Student treatment assignment is determined by the first high school the student’s older sibling had been enrolled in since SY2009, and the sample covers students in grades 3 to 8 between SY2009 and SY2019. We include only observations corresponding to elementary-high school combinations that appear contiguously across school years in the panel. Each specification includes the following covariates: fixed effects for the age difference (in years) between the younger and older sibling, student age fixed effects, student cohort fixed effects (based on grade and school year of entry), English Language Learner (ELL) indicator, unhoused indicator, Individualized Education Program (IEP) indicator, free or reduced-price lunch indicator, gender fixed effects, race fixed effects, and disability status indicators (having a 504 plan, physical disability, or cognitive disability). The “baseline mean” for each outcome is the mean of the outcome in SY2013. Regressions for the absent days outcome include student member days in the corresponding school year as a control. Estimates are based on TWFE models with elementary school-by-high school and school year fixed effects in Panel A (elementary school-by-high school and elementary school-by-year fixed effects in Panel B). Robust standard errors clustered by older sibling’s high school are reported with ** denoting statistical significance at the 1 percent level, * at the 5 percent level, and + at the 10 percent level.

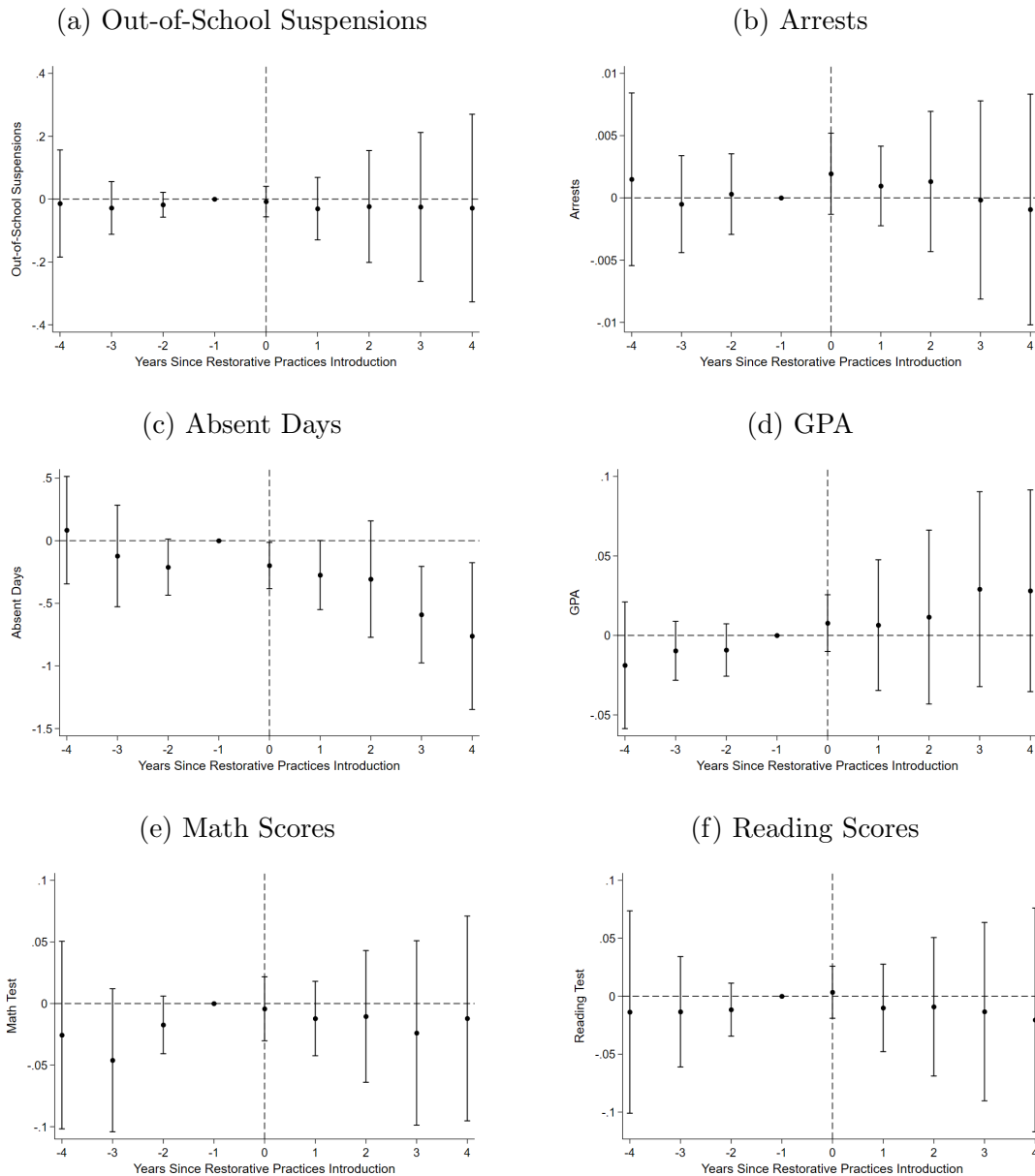
APPENDIX FIGURES

Figure A1. Event Studies, Benchmark Model



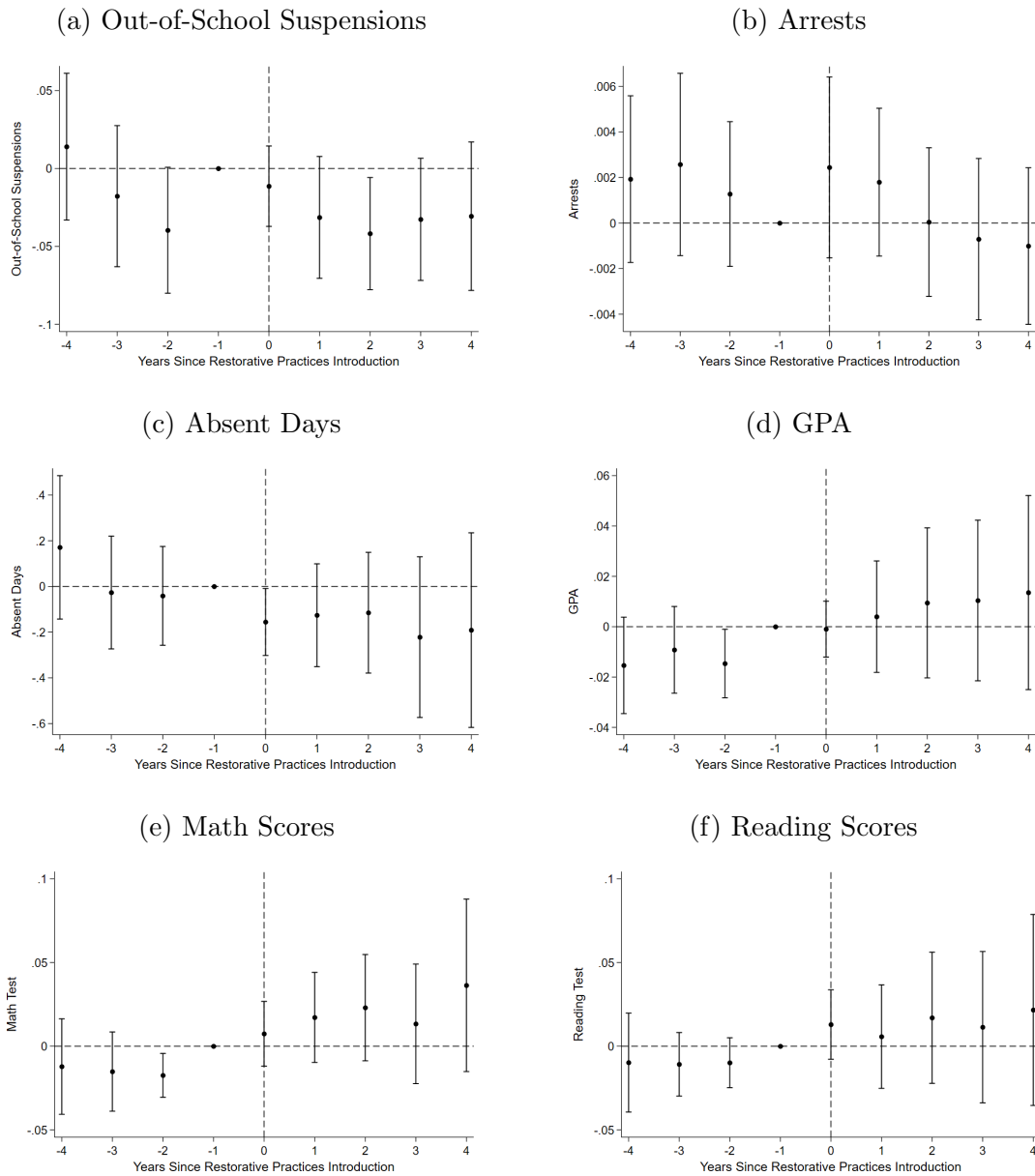
Note: These figures show the event studies around the introduction of RP. Observations are at the student-school year level. Student treatment assignment is determined by the first high school the student's older sibling had been enrolled in since SY2009, and the sample covers students in grades 3 to 8 between SY2009 and SY2019. We include only observations corresponding to elementary-high school combinations that appear contiguously across school years in the panel. Each specification includes the following covariates: fixed effects for the age gap (in years) between the younger and older sibling, student age fixed effects, student cohort fixed effects (based on grade and school year of entry), English Language Learner (ELL) indicator, unhoused indicator, Individualized Education Program (IEP) indicator, free or reduced-price lunch indicator, gender fixed effects, race fixed effects, and disability status indicators. Regressions for the absent days outcome include student member days in the corresponding school year as a control. Estimates are based on the methodology developed in de Chaisemartin and D'Haultfoeuille (2020) and described in the text. Bars represent 95% confidence intervals based on standard errors clustered by the older sibling's high school (and calculated analytically to facilitate computation).

Figure A2. Event Studies, Including Elementary School-by-Year Fixed Effects



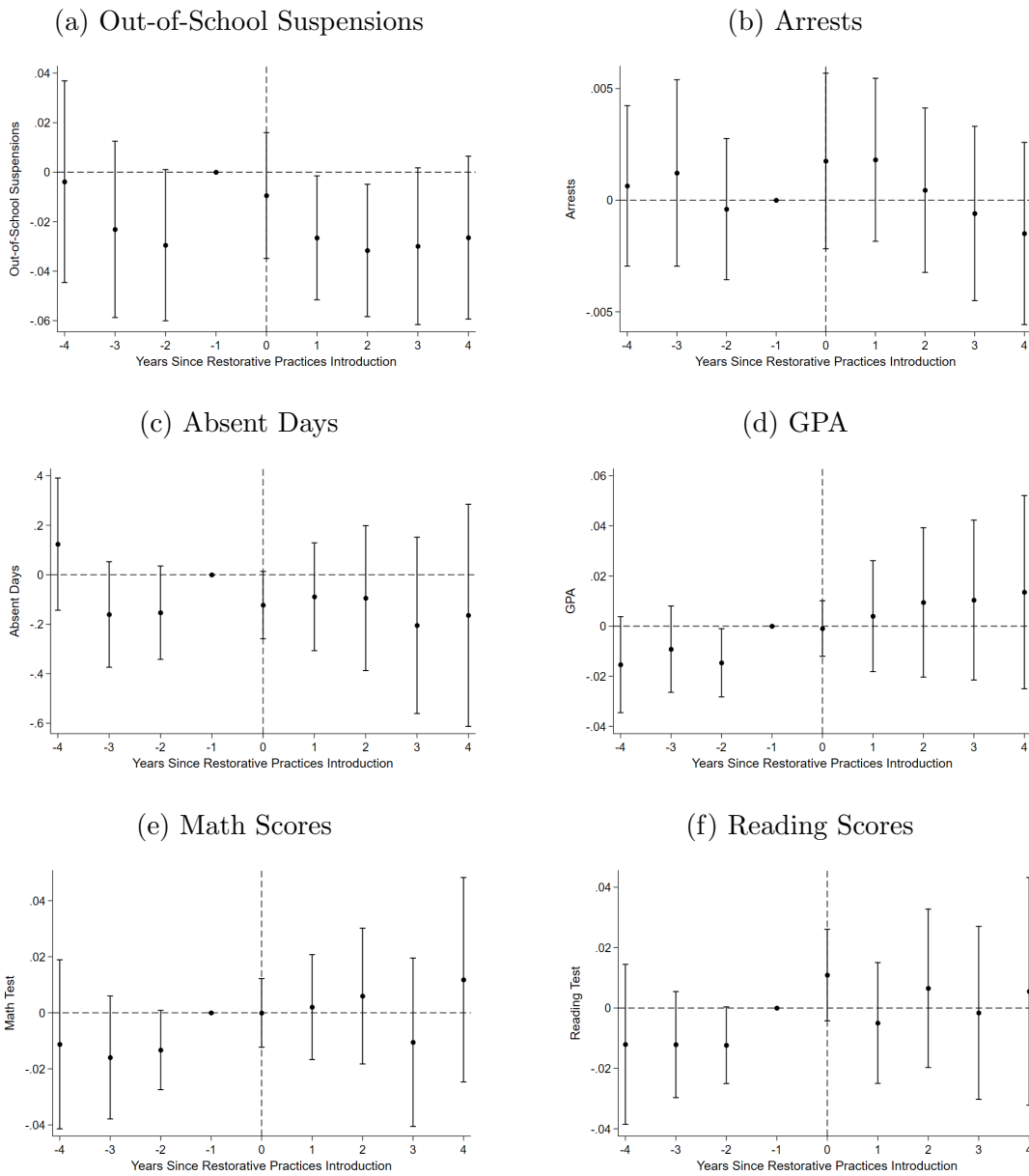
Note: These figures show the event studies around the introduction of RP. Observations are at the student-school year level. Student treatment assignment is determined by the first high school the student's older sibling had been enrolled in since SY2009, and the sample covers students in grades 3 to 8 between SY2009 and SY2019. We include only observations corresponding to elementary-high school combinations that appear contiguously across school years in the panel. Each specification includes elementary school-by-year fixed effects as well as the following covariates: fixed effects for the age gap (in years) between the younger and older sibling, student age fixed effects, student cohort fixed effects (based on grade and school year of entry), English Language Learner (ELL) indicator, unhoused indicator, Individualized Education Program (IEP) indicator, free or reduced-price lunch indicator, gender fixed effects, race fixed effects, and disability status indicators. Regressions for the absent days outcome include student member days in the corresponding school year as a control. Estimates are based on the methodology developed in de Chaisemartin and D'Haultfoeuille (2020) and described in the text. Bars represent 95% confidence intervals based on standard errors clustered by the older sibling's high school (and calculated analytically to facilitate computation).

Figure A3. Event Studies, Two-Way Fixed Effects, Benchmark Model



Note: These figures show the event studies around the introduction of RP. Observations are at the student-school year level. Student treatment assignment is determined by the first high school the student's older sibling had been enrolled in since SY2009, and the sample covers students in grades 3 to 8 between SY2009 and SY2019. We include only observations corresponding to elementary-high school combinations that appear contiguously across school years in the panel. Each specification includes the following covariates: fixed effects for the age gap (in years) between the younger and older sibling, student age fixed effects, student cohort fixed effects (based on grade and school year of entry), English Language Learner (ELL) indicator, unhoused indicator, Individualized Education Program (IEP) indicator, free or reduced-price lunch indicator, gender fixed effects, race fixed effects, and disability status indicators. Regressions for the absent days outcome include student member days in the corresponding school year as a control. Estimates are based on TWFE models with elementary school-by-high school and school year fixed effects. Bars represent 95% confidence intervals based on standard errors clustered by the older sibling's high school.

Figure A4. Event Studies, Two-Way Fixed Effects, School-by-Year Fixed Effects



Note: These figures show the event studies around the introduction of RP. Observations are at the student-school year level. Student treatment assignment is determined by the first high school the student's older sibling had been enrolled in since SY2009, and the sample covers students in grades 3 to 8 between SY2009 and SY2019. We include only observations corresponding to elementary-high school combinations that appear contiguously across school years in the panel. Each specification includes the following covariates: fixed effects for the age gap (in years) between the younger and older sibling, student age fixed effects, student cohort fixed effects (based on grade and school year of entry), English Language Learner (ELL) indicator, unhoused indicator, Individualized Education Program (IEP) indicator, free or reduced-price lunch indicator, gender fixed effects, race fixed effects, and disability status indicators. Regressions for the absent days outcome include student member days in the corresponding school year as a control. Estimates are based on TWFE models with elementary school-by-high school and elementary school-by-school year fixed effects. Bars represent 95% confidence intervals based on standard errors clustered by the older sibling's high school.