



The author(s) shown below used Federal funding provided by the U.S. Department of Justice to prepare the following resource:

**Document Title: Impact Evaluation of Complementarities
Between PBIS and Restorative Justice**

Author(s): Rebecca Herman

Document Number: 309967

Date Received: January 2025

Award Number: 2017-CK-BX-0017

This resource has not been published by the U.S. Department of Justice. This resource is being made publicly available through the Office of Justice Programs' National Criminal Justice Reference Service.

Opinions or points of view expressed are those of the author(s) and do not necessarily reflect the official position or policies of the U.S. Department of Justice.

National Institute of Justice Final Research Report

Project Title: Impact Evaluation of Complementarities Between PBIS and Restorative Justice¹

Project Information

Award Number: 2017-CK-BX-0017
Project period: 1/1/2018 – 6/30/2023
Award amount: \$2,970,725

Principal Investigator

Rebecca Herman, Senior Policy Researcher
BHerman@rand.org

The RAND Corporation, 1200 S. Hayes St., Arlington, VA 22202
310.393.0411

Award Recipient Organization

The RAND Corporation
P.O. Box 2138, 1776 Main St., Santa Monica, CA 90407-2138

¹ The title on the grant award included the district name. However, under the RAND-District data use agreement, RAND does not name the district in any public documents or materials.

Table of Contents

A. Project Summary.....	4
A.1. Major Goals and Objectives.....	4
A.2. Research Questions.....	5
A.3. Research Design, Methods, Analytical and Data Analysis Techniques.....	6
A.3.1. Research Design.....	6
A.3.2. Research Methods.....	8
A.3.3. Analytical and Data Analysis Techniques.....	13
A.4. Expected Applicability of the Research.....	17
B. Participants and other Collaborating Organizations.....	17
C. Changes in Approach from Original Design and Reason for Change.....	17
D. Outcomes.....	19
D.1. Activities and Accomplishments.....	19
E. Results and Findings.....	19
E.1. Implementation Results and Findings.....	19
E.1.1. Fidelity of Training.....	19
E.1.2. Use of RJ and PBIS Practices.....	21
E.1.3. Integration of RJ and PBIS.....	22
E.1.4. Implementation Challenges and Facilitators.....	25
E.2. Impact Results and Findings.....	31

E.2.1. Student and Staff Survey Results on School Climate	31
E.2.2. Attendance, Cost, Discipline Outcomes, and Student Test Scores	35
F. Limitations	44
G. Artifacts.....	45
G.1. List of products	45
G.2. Data Sets Generated.....	45
G.3. Dissemination Activities	45
H. References.....	46
I. Appendices.....	47
I.1. Survey Instruments.....	47
I.2. Teacher Log:.....	56
I.3. Case Study Protocols.....	60

A. Project Summary

A.1. Major Goals and Objectives

The purpose of this study was to examine the combined effects of two popular behavioral programs designed to promote school safety and good behavior among students, Schoolwide Positive Behavioral Interventions and Supports (PBIS) and Restorative Justice (RJ). Although there is some evidence of the effectiveness of each program in isolation, this was the first study to rigorously examine complementarities between the two in a randomized controlled trial (Lee and Gage, 2020). There are theoretical reasons to believe that RJ and PBIS would complement each other well. Both programs are whole school approaches that focus on changing the school environment and the behavior of adults and children by teaching and modeling positive behaviors. Both programs also focus on each child's individual needs and place a high value on involvement and engagement. Both are seen as effective ways to reduce racially disproportionate discipline referrals by providing adults with alternatives to traditional discipline methods. PBIS moves the focus from punishment and exclusion towards rewarding positive behavior and creating community while RJ teaches personal reflection, accountability for actions, and healing. PBIS is generally implemented in elementary and middle schools while RJ has been used more in middle and high schools, although both programs have been used at all three levels. (Johnston and Weaver, 2015). Despite the similarities, each program has unique aspects that address gaps in the other. PBIS aims to create a structured, rule-based, positive environment. However, PBIS is relatively weaker on dealing with conflict and violations of the system. Here, RJ provides early and intense interventions to restore harm and fix relationships, designed to help repair and reestablish a positive school environment. The first level of PBIS (primary prevention) focuses on creating rules and expectations for all students, teachers, and staff. The RJ method of class

meetings and circles is an especially promising way to create social cohesion, buy-in, and norms as well as a forum for delivering the pro-social messaging of PBIS. When students feel that they have been a part of creating the rules and defining the process, they are more likely to follow the PBIS structure. Similarly, the structure and systems of PBIS can help to define the parameters of when a violation has occurred and when RJ might be needed.

A.2. Research Questions

The research sought to identify the effectiveness of combining the two programs as well as to identify best practices in implementation of the programs to promote school safety and good behavior. The study tested whether an intervention combining RJ and PBIS (“RJ+PBIS”) would positively affect behavioral outcomes and would reduce exclusionary practices and disparities in exclusionary practices, compared to implementing no positive behavior program or implementing PBIS alone. We predicted that there would not be a negative effect on academic outcomes and that student and teacher attendance would increase. Initial research questions are listed below.

Implementation Research Questions:

1. Are the RJ and PBIS trainings delivered to school *staff* with high fidelity?
2. Are the RJ and PBIS elements delivered to *students* with high fidelity?
3. How does implementation of RJ+ PBIS differ from implementation of PBIS alone?
4. What are the challenges (i.e., difficulties or impediments) and facilitators (i.e., factors that assist or make it easier) of implementing RJ and PBIS with fidelity and how are any challenges resolved?

Impact Research Questions:

5. Does adding RJ to existing PBIS programs or introducing RJ+PBIS to schools that have neither program affect behavioral outcomes (i.e., disciplinary referrals, bullying, harassment, feeling isolated, social skills)?
6. Does adding RJ to existing PBIS programs or introducing RJ+PBIS to schools that have neither program reduce use of exclusionary practices (such as suspensions and expulsions)?
7. Does adding RJ to existing PBIS programs or introducing RJ+PBIS to schools that have neither program affect the disparities between African American, Hispanic/Latino, and White and Asian students on indicators of problem behavior, such as suspension rates?
8. Does adding RJ to existing PBIS programs or introducing RJ+PBIS to schools that have neither program affect students' attendance or academic outcomes?
9. Is RJ+PBIS more effective on the outcome measures than PBIS alone or neither program?

Cost-Effectiveness Research Question:

10. Which program—PBIS or RJ+PBIS—is more cost effective?

A.3. Research Design, Methods, Analytical and Data Analysis Techniques

A.3.1. Research Design

A.3.1.1. Randomization

Two school level randomized controlled trials (RCTs) were conducted. The first RCT involved schools that were already implementing PBIS. These 23 schools (18 elementary and 5 middle schools) were randomized into treatment (9 elementary and 3 middle schools) and control

conditions (9 elementary and 2 middle schools). The second RCT involved schools without a pre-existing school-wide behavioral program. These 21 schools (15 elementary and 6 middle schools) were randomized into treatment (8 elementary schools and 3 middle schools) and control conditions (7 elementary and 3 middle schools). (See Table 1.) The randomization was conducted in February 2019 to allow training for the treatment schools to start in the summer before the 2019 – 2020 academic year (SY 2019-2020). One treatment elementary school in RCT 2 dropped out of the experiment at the beginning of the 2019 – 2020 school year. Schools were balanced across treatment conditions in each RCT on preintervention administrative data.

Table 1. Sample size by condition

Sub-Study		Treatment		Control	
RCT 1	RJ+PBIS	12		PBIS	11
RCT 2	RJ+PBIS	11 ²		Neither	10
Case Studies	RJ+PBIS	5		PBIS	2
				Neither	2

A.3.1.2. Intervention Design

The study district planned to stage implementation of RJ and PBIS over two years, School Year (SY) 2019-2020 and SY2020-2021. The district planned separate training for RJ and PBIS and invited schools implementing both interventions to participate in both sets of trainings. In the first year, RJ training for treatment schools in both RCTs focused on building community through community circles.³ PBIS training for control schools in RCT 1 and treatment schools in both RCT 1 and RCT 2 focused on setting schoolwide behavioral

² The eleventh school dropped from the study after random assignment and before implementation.

³ Community circles were characterized in this study as group discussions, in a circle configuration, in which students share reflections on topics such as goal setting, classroom norms, and behavioral expectations, with the goal of building a sense of community.

expectations. In the second year, the district planned to train staff in RJ treatment schools on restorative circles⁴ and staff in PBIS schools on small group and individual interventions.

To support implementation, the study district established multiple district coaches for RJ and one district coach for PBIS. The district coaches provided professional development directly to school-based staff in summer cross-school workshops, as well as cross-school workshops and school-specific coaching during the school year in each of the two years of implementation. Each intervention school also designated an individual staff member to coordinate the effort, with coach support, for a small stipend.

A.3.2. Research Methods

A.3.2.1. Implementation Study Data Collection

We collected implementation data using training observations, teacher logs, administrative records, interviews, focus groups, and school observations.

To measure fidelity of training, we observed cross-school training workshops during summer 2019, using a structured protocol to record content coverage, instructional methodology, and time on task. We also collected training attendance records from the school district and analyzed school staff participation in trainings throughout the study period.

To measure teacher use of RJ and PBIS, we administered teacher logs on implementation activities to randomly selected teachers from each intervention school each month (two teachers per school per month during the first year and four during the second year). These logs were intentionally designed to capture top-line indicators of RJ and PBIS activities. For RJ, we asked whether teachers had facilitated community circles or restorative circles in the previous week.

⁴ Restorative circles were characterized in this study as group discussions, in a circle configuration, in which staff, students, their parents, and their peers discuss a specific incident or problem and actions that could address the harms.

For PBIS, we asked how many minutes the teacher had spent explicitly teaching behavioral expectations and how many rewards the teacher had given students for positive behavior in the past week. The overall response rate to the teacher logs was 44 percent in SY 2019-2020 and 19 percent in SY 2020-2021.

To better understand the dynamics of behavioral interventions in both intervention and control schools, we conducted site visits to nine study schools: five schools implementing both RJ and PBIS, two schools implementing PBIS only, and two schools implementing neither RJ nor PBIS. Four schools (at least one from each condition) were middle schools and five were elementary schools. Site visits were conducted in spring 2019, fall 2019, and spring 2021.

Site visits included in-depth interviews with school administrators and RJ and PBIS specialists, focus groups with teachers and other school staff, and school observations. In each school, we interviewed the school principal and the person responsible for student behavior issues. The response rate for interviews with school principals and the school lead for student behaviors was 90 percent (52 interviews held of 58 targeted interviews). We also held focus groups with teachers and non-instructional staff, with a response rate of 89 percent (50 focus groups held of 56 targeted focus groups). We observed student and staff member interactions in common areas where they mixed (e.g., hallways, the cafeteria, and the playground) and in a sample of community circles. We completed a total of 52 interviews, 50 focus groups and 24 school observation visits.

A.3.2.2. Impact Study Data Collection

The study examined outcomes in three domains: school climate as measured by student and staff climate surveys, academic achievement as measured by standardized test scores, and school attendance and student behavior (disciplinary events) as measured by administrative data. We

describe each outcome below. Table 2 indicates which outcome is available for each time period as well as the rationale for not including the outcome if it is not reported.

Table 2: Survey results and other metrics available and reported by time period

	Fall 2019	Spring 2020 (SY 2019-2020)	Spring 2020 (SY 2020-2021)	Rationale for not reporting
Climate: Staff survey	NA ⁵	Reported	Reported	NA
Climate: Student survey	Reported ⁶	Reported	Reported	NA
Student attendance	NA	Reported	Not reported	On-line student attendance in SY 2020-2021 is not reliable
Staff attendance	NA	Reported	Reported	NA
Student discipline: Suspensions	NA	Reported	Not reported	Policy prohibited suspensions in SY 2020-2021
Student discipline: Referrals	NA	Reported	Not reported	On-line referrals in SY 2020-2021 addressed different behaviors than in-person referrals in SY 2019-2020
Student test scores	NA	Not reported	Reported	No testing available for SY 2019-2020

Student and Staff Surveys. We constructed both student and staff surveys to measure school climate, drawing on items from validated surveys and some constructed items as needed. We administered the surveys to students and staff in treatment and control schools three times during the intervention. The student survey was given to students in grades 5 and above to increase the likelihood that they could read and understand the survey questions. Students could opt to take the survey in English or Spanish.

⁵ We administered a baseline staff survey in Spring 2019, allowing us to assess change from baseline to SY 2019-2020 and SY 2020-2021.

⁶ We first administered the student survey in Fall 2019, shortly after the intervention began. That first survey serves as an initial outcome data point rather than baseline, given the timing of administration.

Wave 1 student surveys were administered October through November 2019, soon after the intervention started; Wave 2 were administered February through March 2020; and Wave 3 were administered February through April 2021. Due to district policy, active parental consent was necessary for student participation in the school climate surveys. Despite intensive efforts, the logistics of active parental consent limited response rates on student surveys. We received parental consent for about 36 percent of students across the three survey rounds. Approximately 19 percent of the student sample both had parental consent and reached the last screen of the survey. Students in treatment schools were more likely to complete the survey than students in control schools, likely due to higher levels of cooperation among treatment school administrators and teachers.

School staff members also were surveyed in three waves: May through June 2019, March 2020, and March through April 2021. About 40 percent of staff finished the staff survey with the highest response rate (51%) among treatment schools on the baseline survey (spring 2019) and the lowest (33 percent; same for treatment and control) in spring 2020.

Student and Teacher Attendance. The school district provided school-level student and teacher attendance data for both years of the study at the end of the academic year. Although teachers continued to take student attendance even after learning moved entirely online in March 2020, we do not know how the measurement of online student attendance compares to the measurement of in-person attendance pre-pandemic. For student attendance, we report outcomes only for SY 2019–2020.

Student Discipline. The district also provided individual-level data on disciplinary events: number of suspensions and days suspended, as well as office referrals for lesser behavioral events. Again, this measure is likely different across in-person and online learning modalities.

For example, some behavioral issues such as fighting are less likely when students are not attending school in-person. In addition, school staff are less likely to directly observe some offenses that may happen outside of the virtual class. Finally, the district policy for the 2020-2021 school year prohibited most suspensions, which is borne out by the fact that there are no suspensions in study schools for SY 2020-2021. For these reasons, we focus on SY 2019-2020 for analysis of suspensions.

Because suspensions are relatively rare outcomes at the elementary and middle school levels, we also sought to examine discipline referrals. A teacher or other staff member can refer a student to the school office for minor discipline infractions. Referrals were also likely impacted by the pandemic. In the data, we see 7.0% of students with any referrals for SY 2019 – 2020 and only 0.1% for SY 2020-2021. Similar to attendance and suspensions, we focus on SY 2019-2020 in our analysis of referral data.

Student Test Scores. The district agreed to provide individual state test score data for both English and mathematics for students in intervention schools for SY 2017–2018 through SY 2020–2021. The state tests are taken in the spring of each year. Unfortunately, due to the disruptions caused by COVID-19, state academic achievement tests were not conducted in our district in either year of the study. No standardized tests were conducted in the district at all in SY 2019–2020. However, the Measures of Academic Progress (MAP) tests were conducted in the district in spring 2021. MAP are computer-adaptive assessment tests produced by the Northwest Evaluation Association (NWEA) and used as internal assessments of student progress by many districts through the country. Other studies have found that the MAP scores can be used as a proxy for state test scores (Hu, 2021; Schweig et al, 2021) and we find high individual level correlations between MAP scores and state test scores for our district for years before the start of

the study when both were available. Although we are unable to say how the interventions affected test scores in SY 2019–2020, we use MAP scores to examine the impact for SY 2020–2021.

Other Data. The school district provided individual-level administrative data on gender, race/ethnicity, and grade taught for teachers and on gender, race/ethnicity, and grade level for students. In addition, the school district provided school-level averages for teacher retention, percentage of students who received free or reduced priced school lunch (a measure of socioeconomic status), average teacher, administrator, and non-teaching staff salaries, average expenditure per student, and percentage of students that received special education services. These data from pre-intervention years were used to assess baseline equivalence of the sample and as covariates in outcome analyses. We also explore whether spending (average teacher, administrator, or staff support salaries and total, federal, and state and local per pupil expenditure) or teacher retention changed because of the interventions.⁷

A.3.3. Analytical and Data Analysis Techniques

Both qualitative and quantitative analytical techniques were used including descriptive statistics, regression analysis adjusting for covariates, qualitative coding, and thematic analysis.

A.3.3.1. Implementation Study Data Analysis

Researchers reviewed and coded interview and focus group transcripts using applied thematic analysis in Dedoose, an online, qualitative data analysis program that enables collaborative and team-based coding. The initial set of codes reflected the study theory of action

⁷ We look at spending to ensure that treatment schools did not receive disproportionate resources which could explain our results independent of the RJ and PBIS intervention.

(e.g., training activities, intervention activities). During preliminary coding, researchers identified emergent sub-codes, typically characterized as barriers, facilitators, and perceptions of behaviors, that were incorporated into the codebook. We evaluated interrater reliability for coding, mediated differences, and retrained researchers until we met the benchmark of 0.8 kappa agreement on an inter-rater reliability test. Once full coding began, coders met regularly to discuss code application; areas of disagreement were resolved via consensus with input from the principal investigator.

Conditions that were unrelated to the research study—a global pandemic and transition to virtual learning during the study—as well as the limited number of case study schools might limit how the findings generalize to different districts and situations.

A.3.3.2. Impact Study Data Analysis

A.3.3.2.1. Climate Surveys

We conducted factor analyses on the responses from the student and staff surveys to extract relevant themes as measures of school climate. The responses grouped survey questions into three primary factors for both the student and staff surveys. The first student factor (SF1) measures *interpersonal relationships*; the second factor (SF2) *sense of belonging*; and the third factor (SF3) student *self-efficacy*. The first staff factor (TF1) measures *respect*; the second staff factor (TF2) measures *emotional and mental health supports*; the third staff factor (TF3) measures *physical security and problem behaviors*. Note that improvements in school environment are indicated by increases in SF1, SF2, SF3, TF1, and TF2 but a decrease in TF3. Reported coefficients are standard deviations units on the factor score. We report the survey questions that constitute each factor for both students and staff in Tables 3 and 4.

Table 3: Student factor survey items

Factor	Factor Name	Items	Reliability
SF1	Interpersonal relationships	<ul style="list-style-type: none"> • Students treat staff with respect • Students treat each other with respect • Students like one another • Students at this school get along well with each other 	0.74
SF2	Sense of belonging	<ul style="list-style-type: none"> • I am happy to be at this school • I feel like I am part of this school • I feel socially accepted in this school • I feel safe at school • The rules for student behavior in my school are clear and consistent • School rules are applied equally to all students 	0.82
SF3	Self-efficacy	<ul style="list-style-type: none"> • I'm good at working with other students • I'm good at helping other people • When I make a decision, I think about what might happen afterwards • I can disagree without starting a fight or argument 	0.80

Note: Questions were on a 5-point Likert scale. Reliability is test-retest validity (Chronbach alpha) across W1 and W2 (N=1,492 students with factor scores from both waves).

Table 4: Staff factor survey items

Factor	Factor Name	Items	Reliability
TF1	Respect	<ul style="list-style-type: none"> • Staff treat other staff with respect • Staff treat students with respect 	0.73
TF2	Emotional and Mental Health Supports	<ul style="list-style-type: none"> • School provides counseling to students with social/emotional needs • School provides resources necessary to support student' social/emotional needs • School prioritizes addressing student' mental health needs • School prioritizes teaching students to manage their stress levels • School prioritizes helping students with their problems 	0.71
TF3	Physical Security and Problem Behaviors	<ul style="list-style-type: none"> • Physical conflicts among students • Robbery or theft • Vandalism • Student possession of weapons • Assaults on staff by students • Student verbal abuse of teachers 	0.82

Note: Questions were on a 5-point Likert scale. Reliability is test-retest validity (Chronbach alpha) across W1 and W2 (N=753 staff with factor scores from both waves).

A.3.3.2.2. Control Measures

Although the sample was well balanced on school characteristics which were available at the time of randomization, there are some differences between treatment and control schools in our measures of school climate at baseline. Treatment school staff in RCT 1 reported lower *physical security and problem behaviors* (TF3) although there were no differences for RCT 2. We control for this baseline measure of school environment (TF3) in our regressions for student factor outcomes.

Because our interventions were school-wide, we randomized at the school level. Students and staff were assigned to the schools that they were in at the time of randomization and our estimates can be interpreted as intention-to-treat estimates.⁸ We exclude students who joined study schools after Fall 2019 and include staff who joined at any time. Analyses of student outcomes controls for school-level covariates: school level (elementary or middle school), SY 2018-2019 total expenditure, SY 2018-2019 percent of free and reduced meal (FARM) recipients, SY 2018-2019 percent of special education students, and TF3. We further control for individual-level covariates including gender, minority status, SY 2018-2019 Partnership for Assessment of Readiness for College and Careers (PARCC) math scores, and SY 2018-2019 total suspension days. For staff outcomes we control for school-level variables including school level (elementary or middle school), SY 2018-2019 total expenditure, SY 2018-2019 percent FARM recipients, SY 2018-2019 percent of students in special education, and percent of

⁸ We have data on where staff were located for Spring 2019 and Spring 2020. We assign staff to the schools they were in during Spring 2019. Students are assigned to the schools they were in at the beginning of the SY 2019 - 2020 (September 2019). Results are similar if we let school assignment change to reflect the actual school attended, for staff and students that change schools, rather than the school at time of randomization.

students with any suspensions. At the individual level, we control for whether the individual was a teacher or other school staff member.

A.4. Expected Applicability of the Research

The research aims to provide evidence-based recommendations for schools looking to improve their approach to promoting positive behavior among students. Specifically, it provides evidence on the effectiveness of RJ and RJ+PBIS and provides guidance for schools on how to best implement RJ and RJ+PBIS.

B. Participants and other Collaborating Organizations

For this research, we partnered with a large school district in a mid-Atlantic state. At the beginning of the intervention the district had over 200 schools serving over 150,000 students. The student population was diverse, with around 30 percent of students identifying as Hispanic, a similar percentage identifying as White, and slightly fewer identifying as Black. Approximately 35 percent of students qualified for free or reduced lunch. In line with national trends, many elementary schools in the district had already implemented PBIS before the start of the intervention. However, while total disciplinary incidents had decreased in recent years, Black and Hispanic youth still made up over 80 percent of school removals. The district was committed to improving school safety further and to addressing the racial disparity in school discipline, which led to their interest in partnering with us to conduct this research.

C. Changes in Approach from Original Design and Reason for Change

The global COVID-19 pandemic and transition to virtual schooling limited our ability to collect some data and our ability to conduct in-person site visits during the second year of the

study. No school-wide tests were given in school year 2019-2020 and state tests were not given in 2020-2021. The completeness and meaning of discipline and attendance data also changed after the introduction of remote learning. Implementation of both programs was done virtually rather than in-person after March 2020.

Our study spanned school years 2019 – 2020 (SY 2019-2020) and 2020 – 2021 (SY 2020-2021) and was profoundly affected by the global Covid-19 pandemic. All schools in the district moved to remote learning in March 2020 and, while some students returned to in-person instruction in April 2021, many remained in online learning environments throughout SY 2020-2021. Implementation of PBIS and RJ continued during remote learning through instruction to teachers, remote circles, and online community building activities. However, the nature of the intervention undoubtedly changed. We have no evidence on the difference in effectiveness between in-person delivery of PBIS and RJ and online delivery of PBIS and RJ but, given the results on learning loss during the pandemic (Kuhfeld et al, 2022; Goldhaber et al, 2022; Jack et al, forthcoming), it is reasonable to assume that online delivery of these programs was less effective. For this reason, we report findings where we have data for both years but argue that findings from the first year are likely the most representative of outcomes under typical conditions. Note that since implementation of school-based programs ramps up over time as teachers and administrators learn more and become better at implementing, our results are likely an under-estimate of the full impact of the programs given full in-person implementation.

Some schools that had originally expressed interest in participating in the study during the proposals stage were no longer eligible at the time of random assignment. For example, many had begun implementing RJ on their own. Due to changes in the school sample, RAND

reconfigured the study groups from three RCTS to two by combining elementary and middle schools into a single RCT.

Because we found no differences in the cost data that we had available from the district, we did not further explore the cost effectiveness of the two programs (research question 10).

D. Outcomes

D.1. Activities and Accomplishments

Despite the challenges posed by the COVID-19 pandemic, all research and implementation activities were conducted, although sometimes in a modified form. Two academic articles were produced from the project, one focused on implementation and one examining effectiveness.

E. Results and Findings

E.1. Implementation Results and Findings

E.1.1. Fidelity of Training

We found that the district met most of its training plans, based on analysis of district training records. District coaches provided training throughout the grant period. There were more training opportunities in the first summer and school year (summer 2019 through spring 2020) compared to the second (fall 2020 through spring 2021), more RJ training events compared to PBIS events in the first year, and greater focus on cross-school training in the first year and individual school coaching in the second. Due to the COVID-19 pandemic, fewer group events were held than planned in the summer of 2020 and throughout SY 2020-2021, which led to more

reliance on individual school coaching. Notably, this meant school staff did not get the intended training on restorative circles, which had been planned for the second year of implementation.

Overall, most intervention schools participated in the training. School participation in training followed a similar pattern: more schools participated in the initial summer training compared to training provided during the school year (79 percent versus 27 percent), and rates of school participation were higher for RJ than PBIS events (42 percent versus 24 percent).

While there was representation from schools in RJ training events, the events did not include the full staff. Case study school staff identified two groups of staff who would most benefit from some or additional training: staff with no prior experience and support staff. Staff who had no prior exposure or experience with RJ or PBIS may need more training to understand the core principles. Support staff, such as paraeducators, lunch and recess aides, security personnel, and other support staff, could be trained in RJ or PBIS approaches to ensure that the application is consistent throughout the school.

Study participants recommended having formal training annually during pre-service (at a minimum) to bring new staff onboard and to refresh continuing staff and suggested that training would be most effective when offered throughout the year. As a teacher noted,

I think it's something that probably needs to be repeated often as far as the function and a different component of restorative practices so that people can understand exactly what it is. Repeating, "we have this process, we have this, we have this," will help staff to really understand and actually use the various components of restorative practice. I think a lot of the components are probably not being used because a lot of time. If you don't understand it you're not going to reach out to it. Maybe every

quarter, just say “okay this is restorative practice” during a staff promo or a staff meeting or PowerPoint or something, just to go over what restorative practices is. If you do it every quarter I think it will get into the brains of all staff to know exactly what it is and the different components on how to use it. (teacher)

The overwhelming feedback from staff in the intervention schools was that both RJ and PBIS training helped them understand and implement the interventions—and that they needed more training. Study participants widely agreed that RJ training was effective for teaching how to implement and facilitate *community circles*. Most participants felt confident leading community circles following their initial training, but less confident or knowledgeable about how to conduct *restorative circles* (conflict circles).

The in-house coaching model was viewed by many staff as effective for supporting schools. School staff reported that coaches’ office hours helped get general questions answered—and they wanted more consulting for specific scenarios. Study participants valued opportunities to see and practice the approaches. Having the district coaches provide **coaching**—by observing staff and providing feedback—helped school staff develop knowledge and competency. School staff also appreciated seeing **demonstrations**, especially in-person demonstrations.

E.1.2. Use of RJ and PBIS Practices

We used data from teacher logs to characterize the use of selected RJ and PBIS practices. In terms of RJ practices, teachers’ use of community circles was highest in SY 2019-2020 (53 percent), which was the first year of implementation. That pattern is consistent with case study data that indicated teachers felt prepared to lead community circles. Even so, only slightly above

half of teacher logs indicated they held a community circle in the given week that year. The use of community circles declined the following year (39 percent), likely due to limitations of virtual instruction. A low percentage of teachers (7 percent) facilitated restorative circles in SY 2019-2020, with a small uptick the following year (12 percent).

In terms of PBIS, it appears that teachers spent less time each year explicitly teaching behavioral expectations, from 49 minutes in SY2018-2019 to 18.7 minutes in SY 2020-2021. They did appear to provide more behavior rewards in SY 2019-2020 (19.8 rewards in a week) than prior to the intervention (11.4) or in the second year of implementation (7.7).

In sum, teacher-reported data indicate increased but not pervasive use of some core RJ and PBIS practices. Interview data support this picture, as school staff reported that they felt well-trained to lead community circles but not restorative circles.

Table 5. Indicators of RJ and PBIS implementation over time

Indicators of Implementation Over Time			
RJ Practice	SY2018-19 (n=15)	SY2019-20 (n=87)	SY2020-21 (n=90)
Facilitated community circles	7%	53%	39%
Restorative circles	6%	7%	12%
PBIS Practice	SY2018-19 (n=15)	SY2019-20 (n=86)	SY2020-21 (n=82-83)
Mean minutes spent teaching expectations	49.0 min	30.0 min	18.7 min
Mean number of behavior rewards	11.4	19.8	7.7

Source: Teacher Logs

E.1.3. Integration of RJ and PBIS

Both PBIS and RJ aim to prevent, reduce, and respond to problematic behaviors through positive relationships and community climate. Both interventions strive to reduce exclusionary practices and build students’ social and emotional skills. Here, we provide lessons learned from interviews with staff in the five case study schools that implemented RJ alongside PBIS to

illustrate whether and how the two approaches complemented each other and to raise considerations for implementation.

Staff at the five case study schools that were implementing both RJ and PBIS described the relationship between the two interventions as either (1) driven by common philosophies or (2) complementary when implemented together. Most of the staff at the five dual-intervention schools reported that **RJ and PBIS were built on common principles**, such as taking a positive rather than punitive approach to behavior, aiming to change teacher practices, building on a foundation of relationships, and understanding and addressing underlying causes of behavioral issues. One teacher discussed how RJ and PBIS have a common mindset:

Just like PBIS, you know, restorative justice is really like a mindset, right, being restorative. So I mean, I know, we've tried to say that it's kind of like, what are our goals here, really, we're trying to teach kids, you know, we're trying to help repair harm...I'd still think that's our same approach just not explicitly stated. (teacher)

Some staff also talked about the ways in which **the two worked together in practice**, and how PBIS helped establish expectations and RJ helped address situations when students did not meet expectations. A school leader described this complementarity:

For us right now, with restorative justice, a restorative spirit, we've revamped our school behavior expectations for students. Try to embed a component of positive behavior as preferred behavior, and we do some incentivizing with that with PBIS. Basically, we use a restorative spirit with the student code of conduct as the basis for how we judge negative behaviors. But we mostly try to highlight and promote the positive

behavior that we see, because the majority of students are doing the right thing. (school leader)

When implemented together, staff in the study schools reported that both approaches worked well to establish clear and consistent expectations for students. Staff said that RJ implemented with PBIS helped teach students that both positive and negative actions have consequences and that students' choices impact the people around them. They also reported that both interventions helped to build students' social and conflict resolution skills. Staff noted that it is equally important to recognize that the two approaches rely on the foundational mindset of building relationships and that relationships are key to effective implementation and positive outcomes. Once relationships are in place, according to staff, the two approaches work together to address positive behaviors through recognition and positive reinforcement (i.e., PBIS) and negative behaviors through restorative conversation, healing, and reassimilation (i.e., RJ). The two approaches also work together to minimize recurring behaviors through preventative techniques and student-centered practices, such as positive recognition, opportunities for positive feedback, experience-based rewards, strong relationships, and established safe spaces for open discussion. Staff appreciated how both approaches are positive and celebrate students' successes. Lastly, we heard from school staff that RJ and PBIS are viewed as equitable approaches for reducing disciplinary disparities and effective approaches for teaching core values like respect and responsibility.

Some school staff **did not see a connection between RJ and PBIS**. By design, the district held separate trainings and used different coaches for RJ and PBIS, even for schools that were assigned to implement both. Some schools implemented the two as separate interventions:

They're very, in my opinion, it's just two separate tracks in two separate lanes, and maybe we're doing it wrong. Maybe they're supposed to work in tandem, but because I do think there were some teachers who just got all onboard with PBIS and loved it, it worked for them. But I don't know that they would say the same about the restorative justice, or the restorative circles. (school leader)

E.1.4. Implementation Challenges and Facilitators

In this section, we summarize challenges to implementing two positive behavioral approaches in schools, based on analysis of qualitative data from the five case study schools that were assigned to implement RJ and PBIS. We also offer potential strategies for combatting these challenges. Challenges and solutions emerged in these categories: (1) commitment, (2) consistency, and (3) capacity.

E.1.4.1. Building Staff Commitment to Positive Approaches to Behavior Management

School communities comprise a diverse set of ideologies and philosophies regarding behavior management, and not everyone shares the same set of beliefs around how to enforce behavioral expectations or encourage accountability. Staff from four of the five case study schools assigned to implement both RJ and PBIS reported that most school staff supported the principles of positive behavioral approaches—and that some staff did not. Based on reports from staff in study schools implementing RJ and PBIS, a common barrier to staff investment in RJ was that many staff believed—erroneously—that positive approaches to behavior management do not provide students with consequences for their behavior, and further that students are not motivated to improve. Staff from some schools cautioned that it takes time to shift mindsets, for example:

It took a long time for buy-in. In the first year, half the teachers didn't agree with the approach—they believed in punishing students—50 percent of teachers left. Now, we're all on the same team, use the same approach and language. Kids can see we're on the same team. (school leader)

School staff identified strategies that they felt helped build commitment in their schools for RJ and PBIS and could be considerations for other schools aiming to implement positive behavior approaches. Staff recommended the following engagement strategies (see Table 6 for example strategies):

- Explicitly address concerns about accountability and consequences under positive behavioral interventions
- Plan for sufficient time to understand and adopt the approach

E.1.4.2. Building Consistent Implementation Across the School

Both RJ and PBIS are designed to engage students and staff in a schoolwide community, with common expectations based in a commitment to the health of that community. School staff emphasized the importance of consistent schoolwide implementation, including misalignment between school administrators and teachers on behavior management, differences among teachers in using RJ and PBIS practices, attenuating use of practices over the course of the year, and perceived variation in how students of different ages and needs understand and engage in RJ and PBIS. As one teacher explained it, *“if [a teacher]’s doing everything that she’s supposed to and having restorative conversations and [students] come into my class and I just yell at them and I don’t do any of that, then it kind of sets it back...it’s inconsistent and they don’t know what to expect.”* According to staff in some schools, this became a self-perpetuating cycle. Staff

Table 6. Considerations for building commitment to implement RJ and PBIS

Approaches to Building Commitment	Example Strategies
1. Discuss the Role of Accountability in the Approach	<ul style="list-style-type: none"> • Address concerns about how RJ and PBIS promote accountability for behavioral events through taking responsibility • Discuss how RJ and PBIS can teach students to understand their differences and empower students to resolve conflict • Discuss the role of accountability in the underlying theory of action
2. Plan for Sufficient Time for Staff to Understand and Adopt the New Approach	<ul style="list-style-type: none"> • Plan time to gradually build investment and commitment to RJ and PBIS, and time for staff to integrate new ways of thinking into their toolkit • Schedule training and professional development to optimize staff attendance • Consider how to build a sense of community when students have limited time together (e.g., consider scheduling extended periods for students with individual teachers for holding weekly community circles) • Modify community circles to fit the needs of school schedule, (e.g., holding shorter “circle bursts” daily and more intensive community circles weekly or biweekly)
3. Share Information on Progress, Goals, and Outcomes Data	<ul style="list-style-type: none"> • Share prior research on impacts to set expectations • Share national, state, district, and school-level data with staff and parents • Share data showing how exclusionary practices disproportionately affect students who identify as a racial and ethnic minority • Collect and share student and staff perspectives through surveys or other methods • Use district data systems and/or develop custom tools to collect and analyze school-level disciplinary data (e.g., office referral data, suspensions, etc.) • Collect data on progress in schools regarding changes in behavior, exclusionary practices on minority students • Review and discuss the data with staff and parents on a recurring basis

reported that when behavioral approaches were implemented inconsistently, they were not effective, and therefore, teachers and other staff became more reluctant to use them.

Teachers in more than half of the case study schools raised concerns about a **disconnect between teachers and their administrators** about which behaviors should be addressed by the office (office referral) and which should be handled in the classroom. School staff named multiple factors contributing towards **inconsistent implementation across staff**, such as confusion about expectations. Staff identified the following strategies as contributing to more consistent implementation (see Table 7 for example strategies):

- Clear and consistent communication of expectations for students and staff
- Plan for students who need additional supports

Table 7. Considerations for building consistency in implementing RJ and PBIS

Approaches to Building Consistency	Example Strategies
1. Use Unified Messaging and Consistent Processes for Restorative Practices	<ul style="list-style-type: none"> • Align messaging from RJ and PBIS leaders/committee to staff and from staff to students, using a school-based committee • Have clear and consistent processes for managing student behaviors and resolving behavioral conflicts or events • Provide training and support materials to all staff and parents • Develop and share resources to keep circle structures consistent and reduce the burden on teachers • Follow-up with staff after restorative events to provide learning opportunities about the process and its effectiveness • Document restorative actions and resolutions to ensure that processes are implemented with fidelity and to track outcomes
2. Tailor Implementation to Students at Different Grade Levels	<ul style="list-style-type: none"> • Plan for age-appropriate practices and circle topics • Consider implementation alongside complementary behavioral approaches (e.g., PBIS) • Practice basic RJ and PBIS processes with younger students • Engage older students at a deeper level; discuss implications of causing harm

3. Plan for Students Who Need Additional Supports	<ul style="list-style-type: none"> • Offer additional supports, such as individualized behavioral plans, programs to support SEL development, or connections to social services • Apply restorative techniques with all students and recognize some students will need additional supports
---	--

E.1.4.3. Building School Capacity to Implement RJ and PBIS

Even staff who are fully committed to the principles of positive behavior approaches can be overwhelmed with the logistical challenges of implementation. **Time constraints and competing priorities** can be a major barrier to implementation. Staff in study schools reported being overwhelmed with competing demands, such as other district initiatives, resulting in little time for learning and implementing positive behavioral approaches. We also found that **staffing shortages and turnover** affected schools' ability to build capacity around implementing RJ and PBIS. A teacher noted,

We...have two to three staff members that do have training in that area, and they have done some really great work, but having more of us trained in that area, bringing more of those restorative practices to our school will really help that to be more widespread. These two [trained support people] that we keep talking about are phenomenal, but they can only be in two places at once. So we just need more of them. The work that they're doing with the kids, I've seen some really great changes, they are staying in the classroom more, but they are only two people. (teacher)

Staff identified the following strategies as helping to improve their school's capacity to implement RJ/PBIS (see Table 8 for example strategies):

- Integrate activities into the regular school schedule
- Provide professional development to build staff capacity
- Add key staff positions and roles

Table 8. Considerations for building capacity to implement RJ and PBIS

Approaches to Building Capacity	Example Strategies
1. Integrate Activities into the Regular School Schedule	<ul style="list-style-type: none"> • Integrate restorative practices into school operations through clear expectations (e.g., appropriate classroom behaviors) and scheduling
2. Provide Exposure through Training and Professional Development	<ul style="list-style-type: none"> • Promote use of restorative language throughout school • Offer both formal training and professional development • Provide recurring refresher learning opportunities • Support staff with ongoing coaching and mentoring, demonstration and modeling, and opportunities for observation and feedback
3. Add Key Staff Positions and Roles	<ul style="list-style-type: none"> • Establish RJ and PBIS coordinators to lead implementation and committees to share responsibility • Engage principals in setting expectations and providing supports for implementation • Non-classroom teachers can support classroom teachers with restorative conversations • Consider new roles, such as using trained paraeducators as “behavioral-wellness staff members” that can float throughout the building to respond to behavioral events as needed and support classroom teachers with restorative conversations and de-escalation

In sum, we found strong implementation of training for RJ and PBIS practices in the year not disrupted by the COVID-19 pandemic. School staff could see commonalities between RJ and PBIS practices but tended to implement them separately rather than integrated. We identified several challenges to implementing RJ and PBIS with fidelity in K-12 schools, including lack of time, resources, support from leadership, competing priorities, staff turnover, and resistance to change. However, we also identified several facilitators of implementation reported by participants to be helpful, such as strong leadership support, clear communication channels,

ongoing professional development/training opportunities for staff members, and data-driven decision-making processes. See Waymouth et al., forthcoming, for more details.

E.2. Impact Results and Findings

E.2.1. Student and Staff Survey Results on School Climate

Table 9 presents the regression analysis assessing the impact of the treatment on the three student-reported factors for the three survey waves for RCT 1 and RCT 2. While the coefficients are positive in RCT 1 in Wave 1, none are statistically significantly different from zero. By the end of the first year of the intervention (Wave 2) coefficients for all three student factors are positive and statistically significant. They remain positive although only SF2 is statistically significant at the end of the second year of the intervention (Wave 3). For RCT 2, all three student factors are positive and statistically significant at the beginning of the first year of the intervention. *Sense of belonging (SF2)* remains positive and statistically significant at the end of the first year and at the end of the second year. Although the coefficients on the other two factors remain positive, none is statistically significant in Wave 2 or Wave 3 for RCT 2.

In Table 10 we present the same results, but we include treatment interacted with being a historically under-represented minority student. This allows us to examine if the interventions had a different impact on minority versus non-minority students. Most of the students in this category are Hispanic or Black but it also includes Native Americans, Pacific Islanders, and students of multiple races. The “non-minority” category includes White and Asian students. Interestingly, we find only two statistically significant differences for the interaction term in RCT 1: for SF1 in Wave 1 which is negative and for SF1 in Wave 3 which is positive. However, for RCT 2, all three interaction terms are positive and statistically significant for Waves 1 and 3 but not for Wave 2. As discussed below, it is unclear how to interpret these results.

Table 9: Regression results for student survey factors by wave, factor, and RCT

Panel A: RCT 1

	Wave 1 (SY 2019-2020, Fall)			Wave 2 (SY 2019-2020, Winter)			Wave 3 (SY 2020-2021, Winter)		
	1	2	3	4	5	6	7	8	9
	SF1	SF2	SF3	SF1	SF2	SF3	SF1	SF2	SF3
Treatment	0.036	0.082	0.006	0.221***	0.188**	0.124***	0.064	0.147**	0.079
Standard error	[0.0518]	[0.0527]	[0.0387]	[0.0617]	[0.0720]	[0.0408]	[0.0545]	[0.0645]	[0.0675]
Includes school covariates	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Includes individual covariates	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mean (control) ⁹	-0.11	-0.05	0.00	-0.28	-0.26	-0.15	0.16	0.10	0.02
Observations	1,148	1,148	1,148	1,023	1,023	1,023	561	561	561
Adjusted R-Squared	0.040	0.061	0.039	0.067	0.064	0.058	0.062	0.088	0.023

Panel B: RCT 2

	Wave 1 (SY 2019-2020, Fall)			Wave 2 (SY 2019-2020, Winter)			Wave 3 (SY 2020-2021, Winter)		
	1	2	3	4	5	6	7	8	9
	SF1	SF2	SF3	SF1	SF2	SF3	SF1	SF2	SF3
Treatment	0.167*	0.202***	0.140**	0.114	0.210**	0.095	0.020	0.120*	0.043
Standard error	[0.0838]	[0.0592]	[0.0540]	[0.0876]	[0.0884]	[0.0818]	[0.0680]	[0.0652]	[0.0665]
Includes school covariates	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Includes individual covariates	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mean (control)	-0.02	-0.06	-0.01	-0.18	-0.26	-0.17	0.37	0.28	0.18
Observations	1,122	1,122	1,122	842	842	842	744	744	744
Adjusted R-Squared	0.095	0.074	0.058	0.056	0.065	0.069	0.086	0.072	0.058

Note: Each column of each panel is the result of a separate regression of the factor on being in a treatment school controlling for school type (elementary, middle), pre-intervention school level variables (total per pupil expenditure in thousands, % FARMS recipients, % special education, TF3 from the baseline staff survey) and pre-intervention individual variables: gender, minority status, SY 2018-2019 PARCC mathematics score, and SY 2018-2019 total suspension days. School for each student is based on where they were located in September of SY 2019-2020. Standard errors clustered two-way, at the levels of school of current enrollment and school of enrollment at randomization. Stars indicate whether the difference is significant: * p < 0.10, ** p < 0.05, *** p < 0.01.

⁹ Note that factor scores are centered at zero across all waves so the control mean is not very informative here.

**Table 10: Regression results for student survey factors including a minority race interaction
by wave, factor, and RCT**

Panel A: RCT 1

	Wave 1 (SY 2019-2020, Fall)			Wave 2 (SY 2019-2020, Winter)			Wave 3 (SY 2020-2021, Winter)		
	1	2	3	4	5	6	7	8	9
	SF1	SF2	SF3	SF1	SF2	SF3	SF1	SF2	SF3
Treatment	0.124*	0.131	0.083	0.309***	0.289**	0.127	-0.006	0.128	0.064
Standard error	[0.0608]	[0.0789]	[0.0635]	[0.0805]	[0.1085]	[0.0735]	[0.0599]	[0.0784]	[0.0722]
Treatment*Minority	-0.145*	-0.081	-0.128	-0.140*	-0.161	-0.005	0.174**	0.047	0.038
Standard error	[0.0774]	[0.0986]	[0.0809]	[0.0804]	[0.0956]	[0.0946]	[0.0629]	[0.0671]	[0.0609]
Includes school covariates	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Includes individual covariates	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mean (control)	-0.11	-0.05	0.00	-0.28	-0.26	-0.15	0.16	0.10	0.02
Observations	1,148	1,148	1,148	1,023	1,023	1,023	561	561	561
Adjusted R-Squared	0.042	0.061	0.04	0.070	0.066	0.058	0.067	0.088	0.023

Panel B: RCT 2

	Wave 1 (SY 2019-2020, Fall)			Wave 2 (SY 2019-2020, Winter)			Wave 3 (SY 2020-2021, Winter)		
	1	2	3	4	5	6	7	8	9
	SF1	SF2	SF3	SF1	SF2	SF3	SF1	SF2	SF3
Treatment	0.082	0.148**	0.092	0.111	0.278**	0.127	-0.052	-0.009	-0.057
Standard error	[0.0881]	[0.0676]	[0.0556]	[0.0833]	[0.0979]	[0.1016]	[0.0765]	[0.0783]	[0.0682]
Treatment*Minority	0.207***	0.130**	0.116**	0.006	-0.148	-0.068	0.204***	0.366***	0.284**
Standard error	[0.0457]	[0.0550]	[0.0449]	[0.0841]	[0.1181]	[0.1251]	[0.0620]	[0.1059]	[0.1132]
Includes school covariates	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Includes individual covariates	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mean (control)	-0.02	-0.06	-0.01	-0.18	-0.26	-0.17	0.37	0.28	0.18
Observations	1,122	1,122	1,122	842	842	842	744	744	744
Adjusted R-Squared	0.101	0.075	0.059	0.056	0.067	0.069	0.091	0.084	0.067

Note: Each column of each panel is the result of a separate regression of the factor on being in a treatment school controlling for school type (elementary, middle), pre-intervention school level variables (total per pupil expenditure in thousands, % FARMS recipients, % special education, TF3 from the baseline staff survey) and pre-intervention individual variables: gender, minority status, SY 2018-2019 PARCC mathematics score, and SY 2018-2019 total suspension days. The minority indicator includes any student that is not listed in district records as White or Asian. School for each student is based on where they were located in September of SY 2019-2020. Standard errors clustered two-way, at the levels of school of current enrollment and school of enrollment at randomization. Stars indicate whether the difference is significant: * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$.

Table 11 presents the results of regressions for the three factors from the staff survey controlling for school and staff level covariates for both follow-up periods. For RCT 1, all factors show improvement and all except *physical security and problem behaviors* (TF3) in SY 2019-2020 are statistically significant. In contrast, we find no differences among staff in RCT 2 for any of the factors at the end of the first year of the intervention or at the end of the second year. The intervention seems to have made a difference for staff in schools in RCT 1 but not for those in schools in RCT 2.

E.2.2. Attendance, Cost, Discipline Outcomes, and Student Test Scores

We find no difference for either RCT in teacher attendance in either year, in student average attendance in SY 2019-2020, or in most cost measures for either year (Panels A and B of Table 12). We find a slight improvement in teacher retention in RCT 1 in SY 2019-2020 and a slight decrease in federal per pupil spending in RCT 2 in SY 2020-2021.

As can be seen in Panel C of Table 12, we find no differences in suspension or referral data for RCT 1 for either year. However, in Panel D of Table 12 we see that total discipline days is higher in treatment than control schools in SY 2019-2020. In particular, suspensions are significantly higher in treatment schools for problem behavior but not for disruption or rule-breaking. Referrals are also statistically significantly higher in RCT 2 among treatment schools in SY 2019-2020; in particular, referrals are higher in treatment schools than in control schools in that year for disruption and rule-breaking, but not for problem behavior.¹⁰ We find no differences in MAP test scores at the end of the second year of the intervention (the only year for which we have test score data) for either RCT.

¹⁰ The data is less complete in SY 2020-2021 (there were no suspensions and very few referrals due to the pandemic) and we see no differences in this year (results not shown).

Table 11: Regression results for staff survey by wave, factor, and RCT

Panel A: RCT 1

	SY 2019-2020, Spring			SY 2020-2021, Spring		
	1	2	3	4	5	6
	TF1	TF2	TF3	TF1	TF2	TF3
Treatment	0.133**	0.264***	-0.162	0.101**	0.172***	-0.112**
Standard error	[0.0563]	[0.0733]	[0.1282]	[0.0403]	[0.0423]	[0.0495]
Includes school covariates	Yes	Yes	Yes	Yes	Yes	Yes
Includes individual covariates	Yes	Yes	Yes	Yes	Yes	Yes
Mean (control)	-0.16	-0.24	0.26	0.18	0.20	-0.27
Observations	633	633	633	737	737	737
Adjusted R-Squared	0.066	0.102	0.162	0.057	0.041	0.070

Panel B: RCT 2

	SY 2019-2020, Spring			SY 2020-2021, Spring		
	1	2	3	4	5	6
	TF1	TF2	TF3	TF1	TF2	TF3
Treatment	0.079	0.180	0.071	0.046	0.050	0.095
Standard error	[0.1232]	[0.1553]	[0.1060]	[0.0951]	[0.1470]	[0.0698]
Includes school covariates	Yes	Yes	Yes	Yes	Yes	Yes
Includes individual covariates	Yes	Yes	Yes	Yes	Yes	Yes
Mean (control)	-0.03	0.02	-0.03	0.18	0.33	-0.39
Observations	606	606	606	649	649	649
Adjusted R-Squared	0.031	0.120	0.154	0.048	0.042	0.111

Note: Each column of each panel is the result of a separate regression of the factor on being in a treatment school controlling for school type (elementary, middle), pre-intervention school level variables (total per pupil expenditure in thousands, % FARMS recipients, % special education, % students with any suspensions) and whether the individual was a teacher or non-teacher staff member. Note that TF3 represents “physical security and problem behaviors” and thus a negative coefficient indicates a better staff environment. School for a staff member is based on where they were located at the time of randomization. However, staff members who joined the school at any time before the surveys (joiners) are included in the results with their current school used as “school.” Standard errors are clustered two-way, at the levels of school of current employment and school of employment at randomization. Stars indicate whether the difference is significant: * p < 0.10; ** p < 0.05; *** p < 0.01.

**Table 12: Regression results for administrative data for school- and student-level variables
by SY and RCT**

School-level

Panel A: RCT 1

	Treatment	Standard error	Includes school covariates	Mean (control)	Observations	Adjusted R-Squared
SY 2019-2020						
Average Teacher Salary (thousands)	1.833	[2.2002]	Yes	79.39	23	0.140
Average Administrator Salary (thousands)	0.973	[3.7203]	Yes	135.36	23	0.014
Average Support Staff Salary (thousands)	1.960	[1.3940]	Yes	33.17	23	0.379
Average per Pupil Expenditure - Federal (thousands)	-0.026	[0.3396]	Yes	0.89	23	0.123
Average per Pupil Expenditure - State and Local (thousands)	0.044	[0.6930]	Yes	16.62	23	0.009
Average per Pupil Expenditure - Total (thousands)	0.018	[0.7671]	Yes	17.51	23	0.060
Teacher Retention	0.056*	[0.0314]	Yes	0.72	23	0.170
Average Teacher Attendance	-0.007	[0.0046]	Yes	0.95	23	0.115
Average Student Attendance	0.003	[0.0031]	Yes	0.94	23	0.088
SY 2020-2021						
Average Teacher Salary (thousands)	1.879	[2.3327]	Yes	80.58	23	0.126
Average Administrator Salary (thousands)	1.677	[3.3947]	Yes	139.27	23	0.034
Average Support Staff Salary (thousands)	2.116	[1.2396]	Yes	34.19	23	0.377
Average per Pupil Expenditure - Federal (thousands)	0.183	[0.3851]	Yes	1.30	23	0.178
Average per Pupil Expenditure - State and Local (thousands)	0.170	[0.9120]	Yes	17.22	23	0.045
Average per Pupil Expenditure - Total (thousands)	0.354	[1.0303]	Yes	18.52	23	0.118
Teacher Retention	-0.006	[0.0304]	Yes	0.79	23	0.035
Average Teacher Attendance	-0.001	[0.0034]	Yes	0.96	23	0.149

Panel B: RCT 2

	Treatment	Standard error	Includes school covariates	Mean (control)	Observations	Adjusted R-Squared
SY 2019-2020						
Average Teacher Salary (thousands)	0.011	[3.3252]	Yes	81.65	20	0.068
Average Administrator Salary (thousands)	3.267	[3.9233]	Yes	138.11	20	0.191
Average Support Staff Salary (thousands)	-0.824	[1.0355]	Yes	36.17	20	0.553
Average per Pupil Expenditure - Federal (thousands)	-0.294	[0.3172]	Yes	0.83	20	0.166
Average per Pupil Expenditure - State and Local (thousands)	0.383	[0.6962]	Yes	15.16	20	0.022
Average per Pupil Expenditure - Total (thousands)	0.089	[0.8039]	Yes	15.99	20	0.043
Teacher Retention	0.045	[0.0591]	Yes	0.78	20	0.053
Average Teacher Attendance	-0.005	[0.0075]	Yes	0.95	20	0.086
Average Student Attendance	-0.001	[0.0030]	Yes	0.95	20	0.016
SY 2020-2021						
Average Teacher Salary (thousands)	-1.294	[3.1611]	Yes	85.19	20	0.073
Average Administrator Salary (thousands)	1.500	[4.0803]	Yes	140.83	20	0.140
Average Support Staff Salary (thousands)	-0.255	[1.1891]	Yes	36.72	20	0.511
Average per Pupil Expenditure - Federal (thousands)	-0.498*	[0.2743]	Yes	1.22	20	0.269
Average per Pupil Expenditure - State and Local (thousands)	0.515	[0.6844]	Yes	15.87	20	0.079
Average per Pupil Expenditure - Total (thousands)	0.017	[0.7156]	Yes	17.09	20	0.126
Teacher Retention	0.018	[0.0333]	Yes	0.84	20	0.017
Average Teacher Attendance	0.003	[0.0044]	Yes	0.97	20	0.109

Student-level

Panel C: RCT 1

	Treatment	Standard error	Includes school covariates	Includes individual covariates	Mean (control)	Observations	Adjusted R-Squared
SY 2019-2020							
Any Suspension / Expulsion	0.001	[0.0032]	Yes	Yes	0.01	13,443	0.012
Total Discipline Days	0.010	[0.0176]	Yes	Yes	0.02	13,443	0.004
Any Suspension for Disruption	0.000	[0.0030]	Yes	Yes	0.01	13,443	0.010
Any Suspension for Rule-breaking	0.000	[0.0002]	Yes	Yes	0.00	13,443	0.001
Any Suspension for Problem behavior	0.000	[0.0002]	Yes	Yes	0.00	13,443	0.002
Any Referral	-0.001	[0.0201]	Yes	Yes	0.08	13,443	0.028
Total Referrals	-0.011	[0.0662]	Yes	Yes	0.20	13,443	0.011
Any Referral for Disruption	-0.003	[0.0191]	Yes	Yes	0.07	13,443	0.026
Any Referral for Rule-breaking	0.000	[0.0017]	Yes	Yes	0.00	13,443	0.004
Any Referral for Problem behavior	0.002	[0.0044]	Yes	Yes	0.02	13,443	0.015
SY 2020-2021							
MAP Reading Score	1.987	[2.4543]	Yes	Yes	211.38	8,112	0.426
MAP Math Score	0.446	[1.8899]	Yes	Yes	206.74	7,848	0.378

Panel D: RCT 2

	Treatment	Standard error	Includes school covariates	Includes individual covariates	Mean (control)	Observations	Adjusted R-Squared
SY 2019-2020							
Any Suspension / Expulsion	0.005	[0.0038]	Yes	Yes	0.01	13,430	0.014
Total Discipline Days	0.036**	[0.0146]	Yes	Yes	0.02	13,430	0.005
Any Suspension for Disruption	0.004	[0.0039]	Yes	Yes	0.01	13,430	0.013
Any Suspension for Rule-breaking	0.000	[0.0003]	Yes	Yes	0.00	13,430	0.001
Any Suspension for Problem behavior	0.001**	[0.0006]	Yes	Yes	0.00	13,430	0.002
Any Referral	0.052**	[0.0201]	Yes	Yes	0.04	13,430	0.056
Total Referrals	0.220**	[0.0890]	Yes	Yes	0.08	13,430	0.017
Any Referral for Disruption	0.047**	[0.0177]	Yes	Yes	0.03	13,430	0.047
Any Referral for Rule-breaking	0.005*	[0.0027]	Yes	Yes	0.00	13,430	0.004
Any Referral for Problem behavior	0.016	[0.0125]	Yes	Yes	0.01	13,430	0.032
SY 2020-2021							
MAP Reading Score	-2.608	[2.7916]	Yes	Yes	225.77	8,003	0.429
MAP Math Score	-1.630	[2.2574]	Yes	Yes	218.88	7,867	0.382

Note: Each row shows the results of an OLS regression on treatment status controlling for covariates. pre-intervention School-level covariate includes type of school (elementary or middle) and pre-intervention baseline characteristics (total per pupil expenditure in thousands, % FARMS recipients, % special education, TF3 from the baseline staff survey). Student-level covariates include gender, minority status, SY 2018-2019 PARCC mathematics score, and SY 2018-2019 total suspension days. For student-level regressions, standard errors are clustered two-way, at the levels of school of current enrollment and school of enrollment at randomization. Stars indicate whether the difference is significant: * p < 0.10; ** p < 0.05; *** p < 0.01.

In Table 13 we look at the same outcomes as panels C and D of Table 12 for historically disadvantaged minority groups by including an interaction term between minority status and the outcome of interest. We see no differences in discipline outcomes for minority students in RCT 1. For RCT 2, minority students were significantly more likely (at the 10% level) to be referred for disruption. There are no statistically significant differences in test scores for minority students in either RCT.

In sum, for schools that already had an established PBIS program we find that adding an RJ program led to improvements in reported school climate for both students and staff. Notably, improvements in school environment for students seem to ramp up over time throughout the first year of implementation and are strongest at the end of the first year before the pandemic disruption. Improvements in climate for staff continue into the second year although they are more muted. We see no differential effects for historically disadvantaged minority students and no effects on spending or teacher or student attendance although there is a small effect on teacher retention in the first year. There are also no differences in MAP test scores for treatment students at the end of the second year.

The effects of adding both PBIS and RJ at the same time to schools that did not already have a school-wide behavior program are harder to interpret. Student reported school climate improved immediately, perhaps because of the community building aspects of PBIS. However, only “sense of belonging” remains statistically significant at the end of the first year and the end of the second year. For historically disadvantaged minority students, the school environment seems to improve immediately, fade by the end of the first year, and then improve again by the end of the second year. Staff report no difference in school environment. Although we see few

**Table 13: Regression results for administrative data for school- and student-level variables
by SY and RCT with an interaction for minority status**

Panel A: RCT 1

	Treatment	Standard error	Treatment* Minority	Standard error	Includes school covariates	Includes individual covariates	Mean (control)	Observations	Adjusted R-Squared
SY 2019-2020									
Any Suspension / Expulsion	-0.003	[0.0037]	0.01	[0.0048]	Yes	Yes	0.006	13,443	0.013
Total Discipline Days	-0.009	[0.0177]	0.03	[0.0247]	Yes	Yes	0.018	13,443	0.004
Any Suspension for Disruption	-0.002	[0.0031]	0.00	[0.0046]	Yes	Yes	0.006	13,443	0.011
Any Suspension for Rule-breaking	0.000	[0.0002]	0.00	[0.0004]	Yes	Yes	0.000	13,443	0.001
Any Suspension for Problem behavior	-0.001	[0.0007]	0.00	[0.0010]	Yes	Yes	0.000	13,443	0.002
Any Referral	-0.016	[0.0181]	0.02	[0.0245]	Yes	Yes	0.075	13,443	0.028
Total Referrals	-0.062	[0.0562]	0.07	[0.0891]	Yes	Yes	0.201	13,443	0.011
Any Referral for Disruption	-0.016	[0.0165]	0.02	[0.0225]	Yes	Yes	0.069	13,443	0.026
Any Referral for Rule-breaking	0.001	[0.0019]	0.00	[0.0026]	Yes	Yes	0.003	13,443	0.004
Any Referral for Problem behavior	-0.002	[0.0060]	0.01	[0.0088]	Yes	Yes	0.015	13,443	0.015
SY 2020-2021									
MAP Reading Score	4.313	[4.4928]	-3.24	[3.7750]	Yes	Yes	211.385	8,112	0.427
MAP Math Score	0.275	[2.9021]	0.24	[2.6275]	Yes	Yes	206.738	7,848	0.378

Panel B: RCT 2

	Treatment	Standard error	Treatment* Minority	Standard error	Includes school covariates	Includes individual covariates	Mean (control)	Observations	Adjusted R-Squared
SY 2019-2020									
Any Suspension / Expulsion	0.002	[0.0043]	0.00	[0.0078]	Yes	Yes	0.007	13,430	0.014
Total Discipline Days	0.005	[0.0184]	0.06	[0.0432]	Yes	Yes	0.019	13,430	0.005
Any Suspension for Disruption	0.001	[0.0045]	0.00	[0.0078]	Yes	Yes	0.006	13,430	0.013
Any Suspension for Rule-breaking	0.001	[0.0007]	0.00	[0.0007]	Yes	Yes	0.000	13,430	0.001
Any Suspension for Problem behavior	0.000	[0.0006]	0.00	[0.0013]	Yes	Yes	0.001	13,430	0.002
Any Referral	0.034	[0.0216]	0.03	[0.0222]	Yes	Yes	0.040	13,430	0.057
Total Referrals	0.146	[0.0986]	0.13	[0.1484]	Yes	Yes	0.076	13,430	0.018
Any Referral for Disruption	0.026	[0.0158]	0.036*	[0.0205]	Yes	Yes	0.030	13,430	0.048
Any Referral for Rule-breaking	0.003*	[0.0019]	0.00	[0.0024]	Yes	Yes	0.001	13,430	0.004
Any Referral for Problem behavior	0.012	[0.0130]	0.01	[0.0150]	Yes	Yes	0.013	13,430	0.032
SY 2020-2021									
MAP Reading Score	-4.144	[3.0768]	2.88	[3.2937]	Yes	Yes	225.769	8,003	0.430
MAP Math Score	-3.156	[1.9020]	2.90	[3.4082]	Yes	Yes	218.883	7,867	0.383

Note: Each row shows the results of an OLS regression on treatment status controlling for covariates. School-level covariate includes type of school (elementary or middle) and pre-intervention baseline characteristics (total per pupil expenditure in thousands, % FARMS recipients, % special education, TF3 from the baseline staff survey). Student-level covariates include gender, minority status, SY 2018-2019 PARCC mathematics score, and SY 2018-2019 total suspension days. For student-level regressions, standard errors are clustered two-way, at the levels of school of current enrollment and school of enrollment at randomization. Stars indicate whether the difference is significant: * p < 0.10; ** p < 0.05; *** p < 0.01.

differences in attendance, spending, or test scores, we see statistically significant higher referral rates and days suspended – the opposite of what we had expected with the introduction of these programs. Our interpretation is that students, especially historically disadvantaged minority students, felt a greater sense of community from the introduction of these programs but that staff and administrators may have felt too overburdened with the introduction of two new programs to experience the positive aspects of either one. Other interpretations are also possible. See Smith et al., forthcoming, for more details.

F. Limitations

The COVID-19 pandemic, which induced the move to fully online instruction from March 2020 through most of SY 2020-2021 is a major limitation of the study. Although instruction continued, the change in mode of instruction undoubtedly affected student and staff perceptions of school climate as well as the implementation of PBIS and RJ in the treatment schools, and the definition of several data points for our outcome variables, such as attendance and what constituted a disciplinary infraction. Given this major worldwide pandemic, it is not surprising that we find few significant differences between treatment and control schools in the second year of our study. Other social events, such as the increasingly public awareness of systemic racism and how schools dealt with social issues also played out in the study schools and may have affected implementation.

Another major limitation of the study is the absence of test score data for the first year of implementation, where we find positive effect on school climate measures. Although we see no difference in test scores at the end of the second year, it is hard to definitively rule out a tradeoff between improving school climate and decreasing test scores in this study.

Further, the study was limited by its focus on elementary and middle schools in one geographic region, which may limit the generalizability of the findings. Due to the grant period, the study also did not examine the long-term effects of implementing the programs.

G. Artifacts

G.1. List of products

Separate implementation and outcomes articles have been submitted to academic journals for publication. We also prepared a presentation for the partner school district to share with other districts in the area.

G.2. Data Sets Generated

Anonymized data used in the quantitative analyses from the project was submitted to the National Archive of Criminal Justice Data (NACJD) as stipulated in the project plan.

G.3. Dissemination Activities

The research and implementation team presented at NIJ's February 2021 Virtual Conference on School Safety. A presentation on the findings of both the implementation and effectiveness analyses was also presented to the partner school district as part of their efforts to continue to improve program implementation and reach. Knowledge will be disseminated to a broad audience through academic articles.

H. References

- Gage, N. A., Sugai, G., Lewis, T. J., & Brzozowy, S. (2015). Academic achievement and school-wide positive behavior supports. *Journal of Disability Policy Studies*, 25(4), 199-209.
- Goldhaber, D., Kane, T., McEachin, A., Morton E., Patterson, T., Staiger, D. (2022). *The Consequences of Remote and Hybrid Instruction During the Pandemic*. Research Report. Cambridge, MA: Center for Education Policy
- Hu, A. (November 2021). "MAP Growth Linking Studies: Intended Uses, Methodology, and Recent Studies," NWEA White Paper. Accessed February 2023 at https://www.nwea.org/uploads/2021/06/MAP-Growth-Linking-Studies_Uses-Methodology-Recent-Studies-2021-11-15.pdf.
- Jack, R., Halloran, C., Okun, J., and Oster, E. (Forthcoming). Pandemic Schooling Mode and Student Test Scores: Evidence from U.S. School Districts. *American Economic Review: Insights*.
- Johnston, A., and Weaver, M. (2015). PBIS: Embedding Restorative justice Within a PBIS Framework to Support Student Success. SERC. Accessed March 14, 2017 at <http://www.ctserc.org/assets/documents/initiatives/primary-mental-health-program/2015/PBIS-Restorative.pdf>.
- Kuhfeld, M., Soland, J., & Lewis, K. (2022). Test Score Patterns Across Three COVID-19-Impacted School Years. *Educational Researcher*, 51(7), 500–506.
- Lee, A, Gage, NA. Updating and expanding systematic reviews and meta-analyses on the effects of school-wide positive behavior interventions and supports. *Psychol Schs*. 2020; 57: 783– 804. <https://doi.org/10.1002/pits.22336>
- Schweig, J., McEachin, A., Kuhfeld, M., Mariano, L. T., and Diliberti, M. K. (2021). *Adapting Course Placement Processes in Response to COVID-19 Disruptions: Guidance for Schools and Districts*, Santa Monica, Calif.:
- Smith, T.D., De Guttry, R., Herman, R, Waymouth, M., Tosh, K. (forthcoming). Complementarities Between Schoolwide Positive Behavioral Interventions and Supports (PBIS) and Restorative Justice (RJ).
- Waymouth, M., Herman, R., Tosh, K., Smith, T. D., and De Guttry, R. (forthcoming). *Implementing Restorative Justice with PBIS: Building Commitment, Consistency, and Capacity*. Santa Monica, CA: The RAND Corporation.

I. Appendices

I.1. Survey Instruments

Staff Survey:

1. What is your gender?
2. At what school do you work?
3. Which of the following best describes your current, primary role at your school?*
- Administrator (e.g., principal)
 - Classroom teacher
 - Student support (certified staff without a classroom)
 - Certified non-teaching position (e.g., counselor, librarian)
 - Non-certified, non-teaching position (e.g., paraprofessional, student resource officer)
4. Do you work full-time for your school, or part-time?
- Full-time
 - Part-time
5. What percent of time do you work for your school?
%
-
6. What grade level do you teach?
If you work with multiple grade levels, select the grade level that you primarily support.
- Pre-K
 - K
 - 1
 - 2
 - 3
 - 4
 - 5
 - 6
 - 7
 - 8
 - Other, please specify:
7. How many years have you taught in *[name of school district]*?
8. How many years have you taught outside of *[name of school district]*?
If none, enter 0.

9. Does your school have dedicated physical space for meetings about behavior?
- Yes, we have a room set aside for meetings about behavior
 - No, we use existing conference rooms, offices, or other spaces as needed

10. Have teacher absences so far in the current school year
- Increased from the previous school year?
 - Decreased from the previous school year?
 - Stayed about the same as the previous school year?

11. To what do you attribute this change?

12. What percent of your time do you spend doing activities around behavior development and management?

%

13. In your opinion, how often does each of the following occur at your school?

	Never	Rarely	Sometimes	Often	Always
a) Staff treat other staff with respect.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Staff treat students with respect.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) Students treat staff with respect.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) Parents treat staff with respect.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e) Staff do a good job helping parents to support their children's learning at home.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f) This school communicates with parents in a timely and ongoing basis.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

14. How much do you agree or disagree with each of the following statements regarding your school?

	Strongly agree	Agree	Disagree	Strongly disagree
a) My school provides quality counseling or other services to help students with social or emotional needs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) My school provides the materials, resources, and training necessary for me to support students' social or emotional needs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

- c) My school places a priority on addressing students' mental health needs.
- d) My school places a priority on teaching students strategies to manage their stress levels.
- e) My school places a priority on helping students with their social, emotional, and behavioral problems.

15. In your opinion, how often does each of the following types of problems occur at your school?

- | | Never | Rarely | Sometimes | Often | Always |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| a) Conflicts among students (verbal or physical) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| b) Robbery or theft | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| c) Vandalism | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| d) Student possession of weapons | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| e) Assaults on staff by students | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| f) Student verbal abuse of teachers | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

16. Which of the following types of student problems would you refer to school administrators?

Mark all that apply

- Insubordination
- Disruption
- Disrespect
- Bullying/Harassment
- Academic Dishonesty
- Drugs/Controlled Substances, or Alcohol
- Other, please specify:

17. How much do you agree or disagree with each of the following statements regarding your school?

- | | Strongly agree | Agree | Disagree | Strongly disagree |
|---|-----------------------|-----------------------|-----------------------|--------------------------|
| a) My school effectively handles student discipline and behavior problems. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| b) Students have been explicitly taught behavioral expectations. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| c) The rules for student behavior changed when our school moved online due to COVID-19. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

18. How much do you agree or disagree with the following statement?

- | | Strongly agree | Agree | Disagree | Strongly disagree |
|---|-----------------------|-----------------------|-----------------------|--------------------------|
| a) The changes in rules for student behavior due to our school moving online due to COVID-19 were clearly communicated. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

19. What else should we know about school climate and safety at your school?

Student Survey:

1. What is your gender?

2. What is your race/ethnicity?

Mark all that apply.

- American Indian or Alaskan Native
 Asian
 Black or African American
 Hispanic or Latino/a
 Native Hawaiian or Pacific Islander
 White
 I prefer not to answer

3. What school do you go to?

4. What grade are you in?

- 5
 6
 7
 8
 9

5. Since the semester started (February 1st), how often have you attended school in-person in a school building as opposed to virtually?

- Never, I have attended entirely virtually
 I have attended in person about 1 day a week
 I have attended in person about 2 days a week
 I have attended in person about 3 days a week
 I have attended in person about 4 days a week
 I have attended in person every day since the semester started

6. In your opinion, how often does each of the following occur at your school?

	Never	Rarely	Sometimes	Often	Always
a) Staff treat students with respect.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Students treat staff with respect.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) Students treat each other with respect.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) Students like one another.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e) Students at this school get along well with each other.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f) When something is bothering me, I talk to a teacher or other adult at this school about it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

- g) If I don't check in, a teacher or some other adult at school will notice my absence.
- h) If I do not turn in homework, a teacher or some other adult at school will notice and follow up with me.

7. In your opinion, how often does each of the following occur?

- | | Never | Rarely | Sometimes | Often | Always |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| a) At my school, students talk about the importance of understanding their own feelings and the feelings of others. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| b) At my school, students work on listening to others to understand what they are trying to say. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| c) I am happy to be at this school. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| d) I feel like I am part of this school. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| e) I feel socially accepted in this school. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| f) I can find a way to help people end arguments. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| g) I'm good at working with other students. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| h) I'm good at helping other people. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| i) I control myself when I am frustrated, angry, or disappointed. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| j) When I make a decision, I think about what might happen afterwards. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| k) I can disagree without starting a fight or argument. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

8. In your opinion, how often does each of the following occur at your school?

- | | Never | Rarely | Sometimes | Often | Always |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| a) I feel safe at school, whether it is in the school building or online. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| b) Students at my school get in fights. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

9. In your opinion, how often does each of the following occur at your school?

- | | Never | Rarely | Sometimes | Often | Always |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| a) Students at my school are bullied. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| b) Students spread mean rumors or lies about others at my school on social media and the internet (i.e., Facebook™, Instagram™, Snapchat™, e-mail, and instant message). | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| c) Students at this school try to stop bullying. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

10. In your opinion, how often does each of the following occur at your school?

	Never	Rarely	Sometimes	Often	Always	I have not been in this situation
a) If I harm, bully, harass, or get in a fight with someone at this school, I get a chance to change my behavior and fix things.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) If someone harms, bullies, harasses, or gets into a fight with me at this school, I am able to say how things can be made better.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

11. In your opinion, how often does each of the following occur at your school?

	Never	Rarely	Sometimes	Often	Always
a) When a student causes harm, the main response by the school is a disciplinary action, such as detention, having to leave the online classroom, or being muted.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Students at this school stop and think before doing anything when they get angry.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) Students at this school try to work out their disagreements with other students by talking to them.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

In the current school year, how often have you participated in each of the following?

12. I have participated in meetings, either in person or online, with other students designed to address a problem or disagreement between us.

- Not at all
- 1-2 times
- Several times (at least 3 times, but not every week)
- At least once a week
- More than once a week
- I haven't had any problems or disagreements with other students

13. I have participated in a community circle, either in person or online, with other students designed to build relationships around topics such as expectations for behavior.

- Not at all
- 1-2 times
- Several times (at least 3 times, but not every week)
- At least once a week
- More than once a week

14. How much do you agree or disagree with the following statement?

	Strongly disagree	Disagree	Agree	Strongly agree
a) I get along better with others because of skills I learned in school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

15. How much do you agree or disagree with each of the following statements?

	Strongly disagree	Disagree	Agree	Strongly agree
a) The rules for student behavior in my school are clear and consistent.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) School rules are applied equally to all students.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) The rules for student behavior changed when school moved online due to COVID-19.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

16. In your opinion, how often does each of the following occur at your school?

	Never	Rarely	Sometimes	Often	Always
a) My teachers make it clear to me when I have misbehaved in class.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Adults working at my school reward students for positive behavior.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

17. Have you received a reward for positive behavior in the past two months?

- Yes
 No

18. In your opinion, how often does each of the following occur at your school?

	Never	Rarely	Sometimes	Often	Always
a) Students in my classes behave so that teachers can teach.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) When there is a behavior problem between students, the students talk it out.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

19. What else should we know about the way people behave in your school?

Please do not write about any situation where you or others might be hurt or if you need help with a problem. We will not get that information in time to help you. To report a problem or if someone might be hurt, please contact your school counselor or principal as soon as you can.

I.2. Teacher Log:

What is your gender?

At what school do you work?

What grade level do you teach?

If you work with multiple grade levels, please select the grade level that you primarily support.

Pre-K

K

1

2

3

4

5

6

7

8

Other (please specify):

How many years have you taught in [name of school district]?

Years

How many years have you taught outside of [name of school district]?

Years. If none, enter 0.

Have you participated in a professional learning community (PLC) activity in the past school week for restorative justice?

A PLC is a group of educators that meets regularly, shares expertise, and works collaboratively to improve teaching skills and the academic performance of students.

Yes

No

Don't know

How many proactive circles, sometimes called community circles, have you run in the past school week?

Proactive / Community circles are highly structured relationship-building activities with clear expectations, done in a circle configuration. Topics include goal setting, academic content, classroom norms, behavioral expectations.

If none, enter 0. If don't know, enter 99.

How many circle bursts have you run in the past school week?

Circle bursts are very similar to proactive/community circles but are typically shorter (only last about 10-15 minutes) and include one round or one question.

If none, enter 0. If don't know, enter 99.

How many restorative circles have you run in the past school week?

Restorative circles are circles that occur within a group of students (such as an entire class) after a moderately serious incident causes harm.

If none, enter 0. If don't know, enter 99.

How many family circles or conferences have you run in the past school week?

A family circle or conference typically brings together a student, his or her family and friends, and school staff to make decisions or plans for the student and family.

If none, enter 0. If don't know, enter 99.

What other types of restorative circles have you run in the past school week, and how many?

If none, enter NA

Type:

Number:

What type of circle did you facilitate?

- Proactive/community circle
- Circle burst
- Restorative circle
- Family circle/conference
- Other

The circle was:

- In-person
- Via video conference
- Some other mode (please describe):

Who participated?

Mark all that apply.

- Students

- Parents
- School administrators
- Other school staff
- Other teachers
- Other (please specify):

Please describe the circle

What was the greatest challenge in facilitating the circle?

What helped the circle run smoothly?

How much time have you spent on explicitly teaching behavioral expectations to students in the past school week?

In minutes. If none, enter 0.

How many times have you delivered a reward (other than verbal praise) to a student for expected behavior over the past school week?

If none, enter 0.

What was the reward?

Have you sent any students to the principal or other administrator for behavioral issues in the past school week?

- Yes
- No

Outside of those referrals to school administrators, have you removed any student from the classroom environment for behavioral issues in the past school week?

- Yes
- No

Have you participated in meetings about behavioral supports in your school in the past school week?
Mark all that apply.

- Yes, focusing on an individual child
- Yes, focusing on the schoolwide system of behavioral supports
- No

What else should we know about school climate and safety at your school?

I.3. Case Study Protocols

School Administrator Interview

Background [5 minutes]

1. How many years have you worked at this school?
 - a. 1-2
 - b. 3-5
 - c. 6-10
 - d. 11+

2. How many years have you worked in K-12 education?
 - a. 1-2
 - b. 3-5
 - c. 6-10
 - d. 11 +

Staff Training [20 minutes]

3. Please describe your school's approach to behavior management in just a few words.

4. Does your school use a specific behavior management intervention? If so, what is it?

5. Did you or your staff participate in training on school behavior management this year?
For each training event...
 - a. Were you a participant or leader for this training?
 - b. What intervention was the focus: PBIS? RJ? Other?
 - c. What specific topics were covered?
 - d. Who provided the training?
 - e. How prepared did the trainer seem?
 - f. Who from your school participated?
 - g. How useful was the training? Do you feel the training prepared you to implement your school behavior management intervention?

6. Have you received materials from sources outside the school (e.g., district, third-party vendor, etc.) to support implementation of your school behavior management intervention this year? These may include paper-based, electronic, and/or audio/visual materials. [If multiple materials mentioned, go through the following sub-questions for each material.]
 - a. What intervention was the focus: PBIS? RJ? Other?

- b. What specific materials did you receive?
 - c. Who provided those materials?
 - d. Was this provided proactively or in response to your request?
 - e. Who from your school received these materials?
 - f. How useful were the materials? And how did you use them?
 - g. Did you receive money to buy your own materials, in addition to, or instead of, receiving materials directly?
7. Have you developed materials in-house to support implementation of your school behavior management intervention this year?
- a. What specific materials did you develop?
 - b. How did you use them?
8. Have you received any coaching or other tailored support for implementing your school behavior management intervention this year? For example, coaching from a colleague, the district, or another source.
- a. What intervention was the focus: PBIS? RJ? Other?
 - b. What was the nature of the coaching/tailored support?
 - c. Who provided the coaching/tailored support?
 - d. Was this provided proactively or in response to your request?
 - e. How useful was the coaching/tailored support? Do you feel the coaching or other support you received helped you to implement your school behavior management intervention?
6. Do you have an out-of-school liaison in the state or district to support you on your [PBIS/RJ/discipline intervention]? If yes, who?

Behavior Management [20 minutes]

7. Do you collect and summarize discipline referral information?
- a. What tool (e.g., hard copy referral form, staff portal, smartphone app) do you use to record the data?
 - b. What tool (e.g., spreadsheet, SWIS) do you use to manage the data?
 - c. What data do you collect?
 - d. Who collects and enters the data?
8. What do you do with discipline referral information?
- a. Who has access to look at the data?
 - b. How are data communicated to other staff? Which staff? How often?
 - c. What actions have resulted from sharing the data?

9. What type of problems do you expect teachers to refer to school administrators rather than handling in the classroom setting?
10. Does your school have a school-specific code of conduct or policies that supplements the MCPS Student Code of Conduct?
 - a. What are they called?
 - b. How many are there?
 - c. What are the rules?
 - d. Could you please share these with us?
11. Do you have a school motto?
 - a. Could you please share it with us?
12. Does the school acknowledge students for doing well socially?
 - a. What are the social acknowledgements/activities/routines called? (student of the month, positive referral, letter home, stickers, high 5's)
13. Do you have a team focused on discipline or positive behavior?
 - a. What is the focus of the team?
 - b. Has the team taught or reviewed the school discipline intervention with staff this year?
 - c. Do team activities promote learning about behavior management? Please describe.
 - d. Please describe the membership of the team.
 - e. Are you on the team?
 - f. How often does the team meet?
 - g. Do you attend team meetings consistently?
 - h. Who is your team leader(s)/facilitator?
 - i. Does the team provide updates to faculty on activities and data summaries? If so, how often?
14. What are your top three school behavior improvement goals?
15. Does the school budget contain an identified amount of money for school-wide behavioral management?

Implementation [20 minutes]

The following questions refer to the current school year, [years].

16. Have you participated in a professional learning community (PLC) activity, other than participation on a PBIS or other disciplinary team, in current school year about your school's behavior management protocol?

I'm going to ask about three types of behavioral management circles. I'll define each.

17. A formal restorative or conflict circle typically involves bringing in parents and peers of certain students to discuss a particular incident or problem. These are different from traditional meetings between administration and parents/students, and follow a specific approach and protocol. Have you facilitated a formal restorative or conflict circle in the current school year? How many formal conflict circles have you run in the past year?
18. Thinking about the most recent formal conflict circle you have run...
- How well prepared did you feel to facilitate the circle?
 - Did you use a script?
 - How many hours did you spend preparing?
 - Who was present? [e.g., victim, victim's peer, victim's parent, offender, offender's peer, offender's parent]
 - What type of incident precipitated the conference?
 - Were the victim and offender able to come to agreement to repair harm?
19. Community circles are highly structured relationship-building activities with clear expectations, done in a circle configuration. Topics include goal setting, academic content, classroom norms, behavioral expectations, or other "fun" topics. Have you facilitated a community circle in the current school year? How many community circles have you run in the past year?
20. Thinking about the most recent community circle you have run...
- How well prepared did you feel to facilitate the circle?
 - Did you use a script?
 - How many hours did you spend preparing?
 - Who was present?
 - What was the outcome of the circle?
21. Group restorative circles are circles that occur within a group of students (which could be an entire class) after a moderately serious incident causes harm. Have you facilitated a group restorative circle in the current school year? How many group restorative circles have you run in the past year?
22. Thinking about the most recent group restorative circle you have run...
- How well prepared did you feel to facilitate the circle?
 - Who was present?
 - Were the victim and offender able to come to agreement to repair harm?
23. How much time have you spent on explicitly teaching behavioral expectations to students in the current school year? Be as specific as you can.
24. How many times have you delivered a reward (other than verbal praise) as part of your PBIS program to a student for expected behavior in the current school year? Be as specific as you can. ["reward" generally means points or tickets, rather than being part of the prize that students are saving towards]

25. How many times have students been sent to the school office for behavioral issues in the current school year? Be as specific as you can.
26. [Other than participating on school behavior committees and trainings] Have you participated in staff meetings about behavior management in your building in the current school year?
27. What else you would like to share about how you and your staff address behavior in your school?

Thank you very much for sharing your experiences with us.

Staff Focus Group

Approach to Behavior Management

1. Could you please briefly describe your role in this school?
2. Please describe your school's approach to behavior management in just a few words.
3. Does your school use a specific behavior management intervention? If so, what is it? [Probe: Is your school using Restorative Justice or PBIS? (if they don't mention by name)]
4. Are staff aware that your school uses PBIS/RJ/other? If so, how were they made aware?
5. Is there a schoolwide team to address behavior support interventions? If so, please describe it.
 - a. What type of staff are on the team?
 - b. How often does it meet?
 - c. What are the goals of the team?
6. Does your school have a school-based code of conduct (e.g., school-specific rules, repercussions, or expectations) in addition to the MCPS Code of Conduct? If so,
 - a. Please describe it briefly. What is it called? What are the core elements (expectations, repercussions, approach)?
 - b. What was the source (e.g., IIRP, developed internally)?
7. What are your most important school rules or expectations? How do you determine why they are the most important?
8. Which student behavior problems are managed by school administrators and which by teachers?

9. How are students taught the school's behavioral expectations?
 - a. Do staff provide direct instruction or learning activities on behavioral expectations? How often does this happen?
 - b. What other ways are students taught behavioral expectations?
10. How is student behavior rewarded (if at all)?
 - a. How often does this happen for a student?

Implementation

11. Did you participate in training on school behavior management this year? For each training event...
 - a. What intervention was the focus: PBIS? RJ? Other?
 - b. What specific topics were covered?
 - c. Who provided the training?
 - d. How well do you feel the training prepared you to implement your school behavior management intervention?
12. What additional supports, beyond training just mentioned, have you received in the current school year to implement your school's approach to behavior management? Please describe.
 - a. Additional general information about the approach
 - b. Answering specific questions about the approach
 - c. Modeling the approach
 - d. Providing feedback based on observing your use of the approach
 - e. Connecting you to other staff in your building who modeled or supported you in implementing the approach
 - f. What is the source of that support?
13. What are the most significant challenges you have faced to date in implementing your school's approach to behavior management? I'll name some possible challenges—please tell me if these are big challenges, medium challenges, or not challenges. [Probe for descriptions]
 - a. Time constraints
 - b. Training not sufficient for implementation
 - c. Lack of support from school administration
 - d. Lack of student buy-in

- e. Students don't understand expectations for behavior; lack of understanding of expectations or clarity related to the code of conduct (MCPS and/or school-based, if applicable)
 - f. Staff don't understand the expectations for managing behavior; lack of understanding of expectations or clarity related to the code of conduct (MCPS and/or school-based, if applicable)
 - g. Leadership/staff turnover
 - h. Student mobility
 - i. Other [please specify]
14. What factors facilitate implementation of your school's approach to behavioral management?
15. Please provide an example of how a behavioral issue has been resolved in this school.

Restorative Justice

16. I know there may be varying levels of training on restorative justice among staff. There is no right or wrong answer. What is your understanding of restorative practices or restorative justice?
- a. [If most can say something about restorative practices] Based on your current understanding of restorative practices, can you please answer...
 - b. [If few or none can talk about restorative practices] Let's talk more generally. [skip to Outcomes section]
17. How useful do you think restorative practices are for improving school culture? Improving classroom culture? Addressing student misbehavior?
18. On a scale of strongly disagree, disagree, agree, or strongly agree, please indicate the extent to which you feel you understand specific restorative practices. I'll ask about three areas: purpose of RP, understanding of the RP methods, and ability to use RP.
- a. I am confident that I know the purpose of restorative justice.
 - b. I am confident that I know and understand the MCPS restorative justice methods.
 - c. I am confident in my ability to use and/or implement restorative practices.
19. Do you believe that restorative practices can help to improve student behavior?

20. Does the majority of staff in this school believe that restorative practices can help improve student behavior?
21. Is learning restorative practices worth your time? Please explain.
22. Is adopting restorative practices worthwhile for your school?
23. How do restorative practices align with your school-specific discipline policy?
 - a. In what ways are they similar? Different?
 - b. Are restorative practices explicitly mentioned in your school's code of conduct or discipline policy?
 - c. Do restorative practices conflict with your school-specific discipline policy? How?

Outcomes

24. For the following statements, think about how students act on their own (e.g., without teacher guidance). What percentage of students:
 - a. Use affective statements when interacting with others.
 - b. Display an understanding of the impact of their actions.
 - c. Can express how they have been hurt by other students. [Probe: can they express how they have been hurt as part of an effort to heal?]
 - d. Seem to understand the goals of restorative justice? [or other behavioral management approach identified by respondents]
 - e. Seem to respect restorative practices? [If respondents note another behavioral management approach in questions 2 or 3 above, ask about that approach by name as well].
25. Over the current school year, in what ways has your school's behavior management approach (e.g., PBIS, RJ, or some other approach) affected...[Probe: Compared to last year?]
 - a. Student social skills or behavior?
 - b. Safety in school?
 - c. School culture and climate for students?
 - d. School culture and climate for staff?
 - e. The way adults handle conflicts with students?
 - f. The way students handle conflicts with other students?

- g. Relationships among staff?
 - h. Relationships of staff with students?
 - i. Academic performance
25. Is there anything else you would like to share about your school's approach to student behavior management?