Blending Restorative Practices with Multi-tiered Support Systems in High Schools Before and

During the Covid Pandemic: Successes, Challenges, and Adaptations

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Abstract

We present outcomes from a study testing the effect of professional development (PD) focused on integrating restorative practices into multi-tiered student support systems on how high school staff, students, and parents perceive their school's discipline practices. A total of 16 high schools enrolled in the 2-year study during which Covid-related school closures and a switch to distance learning occurred. Eight schools assigned to the intervention condition received the PD and coaching during the first year and periodic booster trainings delivered remotely during the second year. Eight schools assigned to the control condition received the PD and coaching remotely during the second year. While results did not reach statistical significance, they were in the desired direction and suggested changes in staff perceptions favoring restorative discipline practices. Quantitative findings were supported by coaches' fieldnotes which described facilitators and barriers to implementing restorative practices during in-person as well as remote instruction. We offer recommendations for providing support to high school personnel and students as they move towards a non-punitive approach to discipline that favors community-building over rule compliance in real and virtual learning environments.

Blending Restorative Practices with Multi-tiered Support Systems in High Schools Before and During the Covid Pandemic: Successes, Challenges, and Adaptations

More and more schools are implementing restorative practices (RP) as an alternative to punitive discipline (Velez et al., 2020). Punitive discipline has been found ineffective in improving student behavior (Fronius et al., 2016; Skiba & Losen, 2016); associated with racial-ethnic disparities in exclusionary as well as non-exclusionary discipline (Fenning & Jenkins, 2018; Wegmann & Smith, 2019); and detrimental to students' academic achievement (Olley et al., 2010). A number of small scale or correlational studies have associated RP with overall decreases in exclusionary discipline (Weber & Vereenooghe, 2020), decreases in racial-ethnic disparities in discipline (Gregory et al., 2016; Kline, 2016), and the potential to improve academic achievement through improving student-teacher and peer relationships fundamental to learning (Gomez et al., 2021; Lodi et al., 2021). A randomized controlled trial has established a causal link between RP and decreases in exclusionary discipline as well as racial disparities in discipline (Augustine et al., 2018), while another randomized controlled trial found no significant intervention effects and only associated students' perceptions of RP with improved school climate and connectedness (Acosta et al., 2019). To strengthen the evidence-base for RP in schools, the literature identifies a need for additional experimental studies (Darling-Hammond et al., 2020; Lodi et al., 2021; Velez et al., 2020; Zakszeski & Rutherford, 2021). In response to this identified need, we conducted a study to test the effect of professional development that focused on blending RP with multi-tiered support systems (MTSS) on high school staff's perceptions of their school climate, discipline and teaching practices, students' perceptions of their school climate, and parents' perceptions of their child's school climate.

Multi-tiered Support Systems in Schools

Multi-tiered Support Systems (MTSS) are derived from the public health model prioritizing prevention for entire populations as a means to reserve and effectively allocate resources to those who require intervention (Burns et al., 2016; Eagle et al., 2015; Stoiber & Gettinger, 2016; Walker et al., 1996). In school contexts, the MTSS logic has been applied to providing behavioral and academic support (Utley & Obiakor, 2015). One of the more widely implemented tiered approaches to behavioral support is Positive Behavior Interventions and Supports (PBIS; Sugai et al., 2016). The preventative tier (Tier 1) of PBIS recommends defining and teaching behavioral expectations to all students, consistently rewarding displays of positive behavior, and consistent consequences for behavioral violations. Students who remain unresponsive to these preventative support strategies are eligible for secondary support (Tier 2), a group-based delivery of more intensive supports, or tertiary support (Tier 3), consisting of individualized intervention (Sugai et al., 2016). PBIS support practices are firmly rooted in behavioral science (Horner & Sugai, 2015) and rely on reinforcement and punishment to shape student behavior to comply with expectations. Although students are nominal participants in positive reinforcement practices implemented in the context of PBIS (e.g. school-wide raffles, public recognitions on bulletin boards), discipline decisions tend to involve processes and procedures that are designed and implemented by adults.

Students' compliance with adult-driven expectations and policies can become challenging at the high school level, when adolescent students seek independent decision-making and autonomy from adults and can be resistant to adult direction (Yeager et al., 2018). To better align MTSS, like PBIS, with the support needs of adolescent students, Abraczinskas and colleagues (2022) recommend actively involving adolescent students in the development of PBIS policies and practices that directly affect them to promote student ownership of their educational

environment and encourage all students, especially students who tend to be marginalized to make their voice heard. Restorative Practices provides a framework for active student involvement in the development of behavioral expectations and behavioral support practices.

Restorative Practices

Derived from restorative justice implemented in judicial systems (Zehr, 2015), restorative practices (RP) in school focus first and foremost on restoring relationships that have been harmed (Amstutz, 2015; Wachtel & McCold, 2012), with the goal of preventing removal of students from the classroom or the school due to disciplinary infractions (Teasley, 2014). Restoring relationships requires that those who are involved in conflict are willing and able to listen to each other's perspectives of what happened, understand the impact of actions and behaviors that led to the conflict, make amends, and agree on a path forward that prevents conflict from reoccurring (Abregu, 2011). To increase the likelihood that relationships that have been harmed can be restored, RP implementation in schools emphasizes proactively building relationships as well as the skills to restore them (Macready, 2009). Relationship building skills that can be proactively taught include active listening, using affective language to communicate how a behavior has impacted oneself, acknowledging responsibility for one's behavior, and participating in community building circles (Amstutz, 2015). These social-emotional skills can be learned and can prepare students and school personnel to resolve conflict without disciplinary expulsions (Ortega et al., 2016). Conceptualizing RP along a multi-tiered continuum, with a strong emphasis on preventative practices, appears important to increase the likelihood that conflict—once it occurs—can be resolved without exclusionary consequences.

Integrating MTSS and RP

Our professional development focused on strategies teachers could use to integrate RP

into MTSS. The goals of the PD were to (a) provide high school staff with strategies to modify behavioral support practices to actively involve adolescent students and highlight student voice, (b) emphasize the broader applicability of RP beyond alternatives to disciplinary exclusions, and (c) demonstrate how existing tiered support systems can facilitate implementation of a new practice and acquisition of new skills. Our emphasis was on building strong classroom communities and relationships that might prevent events potentially leading to disciplinary exclusion. Preparing teachers to acquire the skills necessary to build these relationships with all students, regardless of their demographic background, and rebuild them to resolve conflict before it escalates towards exclusion was a key focus of our professional development.

Professional Development in School-wide Positive and Restorative Discipline

We designed our professional development (PD) for high school teachers, called *School-wide Positive and Restorative Discipline* (SWPRD), based on feedback from high school personnel, high school students, and high school parents (Vincent, McClure, et al., 2021; Vincent, Inglish, et al., 2021). The training consisted of five modules. Module 1 (1.5 hours) introduced school personnel to the reasons for blending RP with MTSS, illustrated how implicit and explicit biases can contribute to racial and gender disparities in discipline outcomes, and mapped the MTSS logic onto RP implementation in schools. Module 2 (1.5 hours) offered an overview of specific skills to proactively promote a welcoming and supportive classroom community as a universal support tier. Specific skills focused on how to establish trust with students using active listening, affective language, reframing, and conducting community-building circles. Because successful RP implementation requires student buy-in, Module 3 (2 hours) engaged participants in conducting community-building circles. The trainer modeled circle facilitation and participants had the opportunity to practice the modeled skills, especially

how to create emotionally safe environments where students feel comfortable speaking up. To engage parents in discussions of RP and answer potential questions and concerns, Module 4 (1 hour) offered opportunities to role play conversations with parents. Following the multi-tiered support logic, Module 5 (3 hours) focused on providing Tier 2 and Tier 3 support that addresses harm and rebuilding relationships. Participants practiced holding restorative chats, conferences, or circles to prevent exclusion from the classroom or school in response to specific scenarios.

While modules 1 and 2 were delivered to all school personnel, Modules 3, 4, and 5 were delivered to a small group of "Early Adopters." Early Adopters were teachers or other school personnel (counselors, administrators) who wanted to dive deeper into RP implementation and become local champions for promoting school-wide implementation of RP. We adopted this training delivery model based on the literature's recommendation to gradually build local buy-in and local capacity to bring school personnel, who might be resistant to innovation, on board with a new practice (Rogers, 2010). The Early Adopters were eligible to participate in coaching sessions provided by two project personnel and one school-based trained expert. Coaching sessions focused on assistance with the day-to-day implementation of the learned practices, trouble-shooting challenges, and celebrating successes.

The current study focused on pilot testing the PD and examining its impact on school-wide practices and staff's, students', and parents' perceptions of school climate. The following research questions drove the study:

1. Does the PD show promise in changing staff's self-reported use of RP?
2. Does the PD show promise in changing students' perceptions of their school's climate?
   a. Do changes in student perception differ by race/ethnicity?
3. Does the PD show promise in changing parents' perceptions of the climate of their

child's school?

It is important to note that the study was conducted during the COVID-19 pandemic. The study started in the 2019-2020 school year and concluded in the 2020-21 school year. Participating schools closed in March 2020 and pivoted to on-line instruction. Between September 2020 and January 2021, many schools provided hybrid instruction (remote for some students on some days, in-person for some students on some days), before gradually returning to in-person instruction for all students. The PD was delivered in person in the fall of 2019 and remotely in the fall of 2020. Coaching was conducted in person until schools closed and mostly remotely in the 2020-21 school year. School closures also affected data collection and attrition.

Method

Participants

A total of 16 high schools in the Pacific Northwest participated. Any high school interested in adopting RP was eligible to participate. Table 1 provides an overview of the schools' demographic characteristics, including total enrollment, enrollment by race/ethnicity, precent of students who were English language learners, who had a disability, and who were eligible for free or reduced-price lunch, and the school's urbanicity and Title 1 eligibility.

Design

We conducted a modified randomized controlled trial with two conditions. The intervention condition consisted of training and coaching in Year 1 (2019-2020) and booster coaching sessions in Year 2 (2020-2021) of the study; the control condition consisted of training and coaching in Year 2. We matched schools on (a) total enrollment, (b) percent minority enrollment, (c) percent Latino enrollment, (d) percent of students eligible for free or reduced-priced lunch, and (e) percent of students with a disability. Because one school district that had

enrolled all its high schools (n = 4) into the study and requested that all its schools be assigned to the same condition, we created a total of 6 matched pairs. Each pair was then assigned to condition through virtual coin flips on the random.org website (see https://www.random.org/coins/). Eight schools were assigned to the intervention condition, and eight to the control condition.

Intervention Procedures

Once a school expressed interest in participating, the administrator was asked to provide informed consent as approved by the Institutional Review Board and complete the SWPRD Fidelity of Implementation Rubric (see below). Before training was delivered in the 2019-2020 school year, staff were asked to provide informed consent as approved by the Instructional Review Board and completed the Staff Survey (see below). After all consented staff had completed the survey, the project team delivered all training modules in person to the schools in the intervention condition. At the beginning of the school year, schools sent project information and a passive parental consent form in English and Spanish approved by the Institutional Review Board to all students' parents. Students, whose parents did not opt them out of the study, were then asked to provide informed assent as approved by the Institutional Review Board and complete the SWPRD student survey (see below). Parents were encouraged to complete the parent survey after providing informed consent. Once all baseline data were collected and all trainings delivered, school staff who volunteered to be Early Adopters participated in coaching sessions. The frequency and format of those sessions were determined by Early Adopters' availability and varied across schools from monthly to quarterly, and from individual consultations to group sessions.

Due to the pandemic related school closures in March 2020, coaching sessions were

conducted remotely via Zoom for the remainder of the 2019-2020 school year. During the 2020-2021 school year, training and most coaching sessions were delivered remotely to the control schools. Booster coaching sessions were delivered remotely to the intervention schools.

Measures

Fidelity of Implementation Rubric. The *SWPRD Fidelity of Implementation Rubric* was modeled after the School-wide Evaluation Tool (Vincent et al., 2009; Horner et al., 2004), developed to assess the extent to which schools implemented multi-tiered behavioral support systems, particularly (PBIS). The assessment consisted of 43 items across seven domains: (1) Administrative support: Training and coaching (9 items); (2) Define behavioral expectations/classroom agreements (4 items); (3) Teach behavioral expectations (4 items); (4) Use of reward system (5 items); (5) Use of restorative consequences (7 items); (6) Data-based decision-making (9 items); and (7) Action planning (5 items). Each item was scored on a scale ranging from 0 = not at all/never/not in place to 10 = always/fully in place. In the current study, Cronbach's α for the subscales ranged from .41 to .68, and was .71 for the total scale. The measure was completed by school leadership teams at the beginning of year 1 (T1), the end of year 1 (T2) and at the end of year 2 (T4). We did not collect the measure at the beginning of year 2, because few changes were expected to occur over the summer months.

Staff Survey. The *SWPRD Staff Survey*, originally developed by the research team for a previous study (Vincent et al., 2016), consisted of 53 items across 6 domains at baseline and 70 items across 8 domains at post-intervention. The domains were: (1) Bullying and harassment (3 items); (2) School's discipline processes as fair, appropriate and relationship based (12 items); (3) Discipline implementation (8 items); (4) multi-tiered behavior support implementation (9 items); (5) Restorative practices implementation (11 items); (6) Blending multi-tiered behavior

support and restorative discipline (10 items); (7) Your understanding of SWPRD (6 items); and (8) Benefits of SWPRD. Each item was scored on a scale ranging from 1 = strongly disagree/not at all/never to 5 = strongly agree/very much/always. Staff were also asked to complete 5 items about their demographics (gender, race/ethnicity) and professional experience (subject taught, grade level taught, number of years teaching high school). During a prior study the staff survey scales showed adequate internal consistency ranging from Cronbach's α = .75 to α = .96 (Vincent, Inglish et al., 2021). For the current study, α values ranged from .72 to .94. The measure was collected at the beginning of year 1 (T1), the end of year 1 (T2), the beginning of year 2 (T3), and the end of year 2 (T4).

  Student Survey. The *SWPRD Student Survey* administered during Year 1 of the study consisted of 81 items across nine domains: (1) Bullying and harassment (7 items), (2) School safety (5 items), (3) Staff role in bullying and harassment (5 items), (4) Disciplinary equity and rules (23 items), (5) School belonging (11 items), (6) Teacher-student relationships (12 items), (7) Stress coping (4 items), (8) Stress & Discrimination (4 items) and (9) Academic motivation (10 items). Items were scored on scales ranging from 1 = strongly disagree/not at all/never to 5 = strongly agree/very much/always, with the exception of the academic motivation scale, which was scored on a scale ranging from 1 = not at all true to 4 = very true. Students also completed 5 demographic questions (gender, grade level, race/ethnicity, sexual orientation, and disability status) at the end of the survey. All scales except "Stress & Discrimination" had been tested in a prior study and showed adequate internal consistency with Cronbach's α ranging from .72 to .96.

  After schools closed, staff found that the number of items made it difficult to administer the survey in a remote environment and challenging for students to complete. To maximize the number of students completing surveys in a remote environment, school staff suggested reducing

the number of items. We reviewed factor loadings of each item and examined redundancy of items across scales; items with low factor loadings were considered for removal. In year 2 of the study, the student survey consisted of 31 items across seven domains: (1) Bullying (1 item), (2) School safety (3 items), (3) Disciplinary equity (4 items), (4) School belonging (5 items), (5) Teacher-student relationships (5 items), (6) Stress & Discrimination (3), and (7) Academic motivation (10 items). The five demograhic questions were retained. Cronbach α values ranged from .64 to .89. Student survey data were collected at the beginning of year 1 (T1), the end of year 1 (T2), the beginning of year 2 (T3), and the end of year 2 (T4).

Parent Survey. The *SWPRD Parent Survey* consisted of 23 items across 5 domains: (1) School safety (4 items), (2) Staff role in bullying (3 items), (3) Child's social life at school (4 items), (4) Parent-teacher relationship (4 items), and (5) Teacher-child relationship (4 items). Items were scored on a 5-point scale ranging from 1 = strongly disagree/not at all/never to 5 = strongly agree/very much/always. Parents were also asked to respond to demographic items about their child (grade level, gender, race/ethnicity, sexual orientation). We derived this measure from the student survey to capture parent perceptions of the constructs of interest. The measure was used in a prior study and Cronbach's α ranged from = .57 to .97. For the current study, α values ranged from .68 to .89. The measure was collected at the beginning of year 1 (T1), the end of year 1 (T2), the beginning of year 2 (T3), and the end of year 2 (T4).

Data collection was impacted by the pandemic-related school closures. Due to the high stress levels generated by the pandemic, it was challenging for participants to attend to data collection. Table 2 provides an overview of the number of completed measures returned at each point in time.

Analytical Approach

For each measure, we first examined descriptive outcomes. For the Fidelity of Implementation measure, we calculated mean scores for each measurement domain at each measurement occasion and then calculated change scores by subtracting the T1 mean from the T2 mean, and the T2 mean from the T4 mean. For all remaining measures, we also calculated mean scores for each measurement domain based on all responses at each measurement occasion, and then calculated change scores by subtracting the T1 mean from the T2 mean, and the T3 mean from the T4 mean for each measurement domain. We graphed the change scores for visual analysis of change over time for each condition.

Statistical follow-up testing through two-way mixed ANOVA with time as the within subjects factor and intervention condition as the between subjects factor did not yield significant outcomes. We describe our statistical analytical procedures in the Appendix.

Results

We describe descriptive outcomes for each measure across conditions. Results of the statistical testing are presented in the Appendix.

Fidelity of Implementation Outcomes

Compared to schools in the control condition, schools in the intervention condition showed larger gains in all measurement domains except "Rewards" in year 1 (T1 to T2) when they received the training and had access to coaching. As illustrated in Figure 1, the greatest gains occurred in the domain of "Data-based Decision Making", followed by "Defining Behavioral Expectations/Classroom Agreements" and "Action Planning". Smaller gains occurred in the domains of "Teaching Behavioral Expectations" and "Administrative Supports." Overall, the magnitude of gains in year 1 ranged from 1.01 to 2.3 points on a 10-point scale. In year 2 (T2-T4), when the intervention schools received booster coaching session but no direct training,

there were small additional gains ranging from .05 to 1.17 points. There was a small loss in the domain "Rewards." Compared to schools in the intervention condition, schools in the control condition showed overall smaller gains in year 1, with the exception of the domain "Teaching Behavioral Expectations/Agreements," which improved by 2.09 points. The gains in all other domains ranged from 1.36 to .2 points on a 10-point scale. In year 2 (T2-T4), when the control schools received the training and coaching remotely, there were additional gains in all domains, with the largest gain occurring in "Defining Behavioral Expectations/Agreement." Overall gains ranged from .35 to 1.88 points on a 10-point scale. These results suggest that—while the gains were overall small—the training had some effect on RP implementation based on the perceptions of administrative leadership teams.

Staff Outcomes

Figure 2 illustrates changes in staff perceptions across time and condition. In year 1, change in the intervention schools ranged from -.08 points (Bullying/Harassment) to .31 points ("Restorative Discipline Implementation" on a 5-point scale. The greatest gain occurred in "Restorative Discipline Implementation" followed by a gain in "School Discipline Process." In year 2, there was a loss of -.21 points in the domain of "Discipline Consistency/Equity" followed by a loss of -.13 points in "Bullying/Harassment." Overall, little additional change occurred (-.21 to .01 points on a 5-point scale). In year 1, change in the control schools ranged from -.14 ("PBIS Implementation") to .13 ("Bullying/Harassment"). In year 2, when the control schools received training and coaching, change ranged from -.16 to .27 on a 5-point scale. The largest gain occurred in "Restorative Discipline Implementation."

Staff perceptions of their "Understanding of SWPRD" at T2 and T4 was high in both conditions (range of M = 3.37, SD = .64 to M=3.48, SD = .5). Similarly, staff perceptions of the "Benefits of SWPRD" at T2 and T4 was high in both conditions (range of M = 3.29, SD = .52 to

M = 3.38, SD = .58).

Student Outcomes

Overall, there was very little change in student perceptions of their school climate in both conditions. As illustrated in Figure 3, for students in the intervention schools, the greatest gains in year 1 occurred in "Teacher-Student Relationships ", followed by "Discipline Consistency/Equity" and "School Engagement/Belonging." Gains ranged from .33 to .14 points on a 5-point scale. There were minor losses in "Stress" and "Bullying." In year 2, a noticeable gain occurred in "Academic Motivation" (.55 points on a 4-point scale), but there was only minimal change in the other survey domains. For students in the control schools, there was a gain of .26 points on a 5-point scale in "Teacher/Student Relationships" in year 1. Overall, change ranged from -.11 to .26 points on a 5-point scale. In year 2, there was a gain in "Academic Motivation" (.48 points on a 4-point scale). Overall, changes ranged from -.23 ("Bullying") to .09 points on a 5-point scale.

Change scores in both conditions differed only minimally across student demographics. Compared to White students, Non-White students in the intervention group reported a slightly higher gain in academic motivation (.54 and .62 points on a 4-point scale, respectively) in year 2.

Parent Outcomes

Parent participation declined substantially across time; therefore, results need to be interpreted with caution. As illustrated in Figure 4, changes reported by parents in the intervention schools ranged from -.16 points ("Staff Role in Bullying") to .29 points ("Parent/Teacher Relationships" on a 5-point scale in year 1. In year 2, they ranged from .01 points ("Child Social Life at School") to .64 points ("Staff Role in Bullying). Changes reported by parents in the control schools ranged from -.04 points ("School Safety") to -.29 points ('Staff

Role in Bullying") on a 5-point scale in year 1. In year 2, only 4 parents completed the survey, which makes outcomes not representative.

Coaching Outcomes

Three coaches provided support to schools receiving the intervention. Two coaches were project staff with extensive experience implementing RP in school contexts, and one coach had completed RP training, was a teacher in one of the intervention schools, and provided coaching to the staff in that school. In year 1, the three coaches provided a total of 79 coaching sessions across eight intervention schools. The number of sessions per school ranged from $n = 4$ to $n = 20$. A total of 41 sessions were group-based, and 36 sessions were individualized. A total of 43 sessions were initiated by the coach, 15 sessions by teacher participants, and 21 sessions by an administrator. The number of participants per coaching sessions ranged from $n = 2$ to $n = 18$. Schools either had fewer number of sessions with larger number of participants, or more frequent sessions with fewer participants. Sessions lasted from 5 minutes (2 sessions) to 120 minutes (1 session). The most frequent session duration was 60 minutes (20 sessions). Many sessions focused generally on how and when to use RP (52 sessions), but participants also requested support with specific practices, such as classroom circles (38 sessions), restorative chats (21 sessions), affective language (14 sessions) and active listening (8 session). Towards the end of the first year, participants requested assistance with supporting students remotely, opportunities for connection with students in online learning environments, and teacher self-care during the pandemic. Coaching sessions also offered trouble shooting specific challenges, including disruptive student behavior during circles, lack of administrative buy-in, or how to hold restorative chats in real time without diverting undue attention away from the rest of the class, and challenges with teaching via video conference. Finally, coaching sessions offered

opportunities to celebrate successes, such as improved relationships with students, positive reactions from students during circles, positive interactions with students, and students expressing gratitude for the opportunity to discuss important issues during circle.

In year 2, a total of 62 coaching sessions were provided, four of those sessions were booster sessions delivered to intervention schools; the remaining sessions were delivered to the control schools. Seven control schools participated in coaching; the number of sessions per school ranged from $n = 3$ to $n = 14$. The number of participants per session ranged from $n = 1$ to $n = 6$. The majority of sessions ($n = 53$) were conducted via video conference, and $n = 54$ sessions were group sessions, while 1 session was individualized. A total of 10 sessions were initiated by the coach, 48 by an administrator, and 4 by a teacher/participant. Sessions lasted between 3 minutes (1 session) and 1 hour (25 sessions). The content of coaching focused again on overall implementation of RP (n = 29 sessions), and specific practices, such as classroom circles (n = 28), restorative chats (n = 8), affective language (n = 13) and active listening (n = 3). Participants also requested assistance with building and maintaining classroom agreements around Covid protocols, using proactive circles to engage students during distance learning and compliance with Covid protocols, connecting RP to hybrid teaching strategies, and planning for post-Covid RP implementation. Participants requested assistance with specific challenges, including low student engagement during remote instruction, virtual circles formats, student compliance with masking and other Covid protocols, heightened student anxiety about returning to hybrid instruction, and teacher stress and exhaustion. Participants celebrated successes in the coaching sessions, including using circles to maintain relational skills with students and building positive relationships, using circles to build student compliance with Covid protocols, building administrator buy-in, and planning for more in-depth school-wide training in RP.

Discussion

Our study tested if our professional development in RP showed promise in changing (1) staff's self-reported use of RP, (2) students' perception of their school's climate in general as well as across racial/ethnic groups, and (3) parents' perception of the climate of their child's school. The unanticipated school closures and shift to remote teaching and learning occurring at the end of year 1 of our study undoubtedly impacted results. The school closures were stark reminders of the realities within which schools operate and provided important insights into how RP could help to address associated challenges.

Promising Changes in Staff's Self-reported Use of RP

We measured staff's use of RP through the Fidelity of Implementation measure completed by school leadership teams, and the staff survey completed by all school staff. Outcomes seemed to indicate a relationship between training delivery and the school leadership's self-reported use of RP. Figure 1 showed that—based on the report of school leaderships teams—the intervention schools made larger gains in Year 1 when they received the training compared to the control schools, while the control schools made larger gains in Year 2, when they received the training compared to the intervention schools. It is important to note that during Year 1, the control schools also made gains on all measurement domains. The control schools had made a clear commitment to RP by participating in our study, and—although they did not have access to our training—might have availed themselves of publicly available information on RP during year 1. Given RP's popularity, many teachers look towards RP practices without systematic training and support. Sustained implementation, however, requires systemic buy-in and—most of all—administrative support (Gregory et al., 2021). Figure 1 illustrated the gains in Administrative Support that seemed associated with the training delivery. Taken together the

Fidelity of Implementation outcomes suggest that our PD was a useful element in supporting RP implementation and systemically changing schools' approaches to discipline delivery.

The staff survey findings seemed consistent with the perceptions of the school leadership teams. Figure 2 showed that staff in the intervention schools made the greatest gains in "Restorative Practices Implementation" in year 1 while staff in the control schools made little gain in that domain. Staff in the control schools made the greatest gain in "Restorative Practices Implementation" in year 2, when they had access to training and coaching. Although these respective gains on the key measurement domain were small, the pattern across conditions seems to suggest an intervention effect. The intervention schools lost some momentum in year 2, but continued to make small gains in some domains, suggesting that effects perhaps sustained somewhat. The intervention schools' loss in "Disciplinary Consistency and Equity" in year 2 might be related to challenges staff experiences with maintaining relationships with their students during remote instruction.

While the overall change scores were small, these results suggests that the training was associated with perceived gains in RP implementation. The descriptively observed intervention effects seemed to be concentrated in year 1, with control school making fewer gains in year 2. This might be due to the increased stress related to the pandemic control schools experienced when they received the intervention in the 2020-21 school year.

Promising Changes in Student Perceptions of Their School's Climate

Given that our focus was on intervening with school staff and that we did not intervene with students directly, we did not expect to see much change in students' perceptions of their school climate. Because school personnel's adoption and implementation of RD occurs gradually across time, perhaps even years, it will likely take even more time until effects trickly down to

students. At the same time, staff's initial use of community building circles, restorative chats, and relationship building strategies might have been noticed and appreciated by students. Figure 3 indicated larger gains on all measurement domains in year 1 for students in the intervention schools compared to students in the control schools. The largest gains occurred in students' perceptions of teacher-student relationships, school engagement and belonging, and disciplinary consistency and equity. In year 2, there were minimal additional gains in these measurement domains. These gains are promising, as they could be due to greater staff attention to community and relationship-building, the core principles of restorative practices. Students who feel connected to school and engaged with their school community tend to have better academic outcomes. The relatively large gain in year 2 in academic motivation might reflect this longer term academic benefit of a school climate perceived as positive. Students in the control schools also reported gains in year 1 in teacher-student relationships, school engagement and belonging, and disciplinary consistency and equity, but those gains were smaller than those reported by students in the intervention schools. In year 2, when their teachers received training and coaching in restorative practices remotely, students in the control schools reported a decrease in bullying and an increase in academic motivation, but very little change on the other measurement domains. Overall, these outcomes seem to reflect a promising association between our PD and students' perceptions of their school's climate.

Changes in Parents' Perception of the Climate of Their Child's School

We collected the parent survey to assess if our staff PD reached not only students, but parents as well. Parent participation in survey completion waned considerably during the project as shown in Table 2. Therefore, results were difficult to interpret. However, it was interesting to see that in year 1, parents in the intervention schools reported small gains in parent-teacher

relationships and teacher-child relationships, while parents in the control schools reported minimal losses in those domains. Parents perception of staff's role in bullying decreased minimally in the intervention schools in year 1, while it decreased more in the control schools during the same year. In Year 2, the response rate to the parent survey was so low, that outcomes are largely uninterpretable.

Field notes from our coaches provided useful context for our study findings and confirmed changes in outcomes we observed through descriptive analyses. The Early Adopters who participated in the coaching sessions focused on increasing administrative buy-in to promote school-wide implementation of RP and bring more of their colleagues on board the implementation effort. Consistent with the literature, coaching session participants asked for assistance with maintaining connection to all students during school closures, and found value in utilizing the newly learned RP skills, like classroom circles, to create a sense of community in virtual classrooms and provide students with the opportunity to connect (Velez et al., 2020). Most importantly, coaching participants emphasized the need for self-care when stress built during the 2020-21 school year due to the pandemic and long periods of isolation. These requests made by teachers during our study point to some of the weaknesses of our educational systems that were magnified in the pandemic, including teacher overload and equitable student belonging and engagement. Restorative practices might serve to strengthen connections, make space for vulnerabilities, and provide opportunities for dialogue and collective problem-solving (Hough, 2021).

Lack of Statistical Significance

While descriptive outcomes showed promising changes, those changes were overall small and did not reach statistical significance during follow-up testing. This seems consistent with the

literature on introducing restorative practices into schools. Research indicates that promoting restorative school climates takes time and gradual buy-in of stakeholders (Fronius et al. 2016; Mansfield et al., 2018; Gregory & Evans, 2020). School personnel who participated in focus groups during the formative phase of our PD emphasized the incremental nature of RP adoption and implementation and gradual integration of RP into existing discipline systems (Vincent, McClure et al., 2021). While some school staff might be enthusiastic about RP, others might at first resist implementation. Shifting from a focus on compliance with behavioral expectations to shared decision-making and problem-solving is a giant philosophical leap. Teachers need to be willing and equipped to decentralize authority in the classroom, listen to students' voices, accept criticism, and acknowledge their own vulnerabilities. It might not be realistic to expect a school to fluently implement RP after one year of training and see statistically significant change in outcome measures, especially when other events, like the Covid pandemic, divert staff attention, sap resources, increase stress on staff, students, and parents, and increase attrition.

Impact of School Closures due to the Covid-19 Pandemic on Study Outcomes

The unanticipated school closures due to the Covid-19 pandemic created challenges as well as opportunities. Perhaps the greatest challenge was the increase in stress our study participants experienced on multiple levels due to the pandemic. In the spring of 2020, staff, students, and parents were thrown into a tailspin with teachers having to figure out how to stay connected to their students to wrap up the school year, students finding themselves isolated from each other and experiencing mounting stress as parents worked from home, families lost employment, or loved ones succumbed to the virus. In Fall 2020, when the study moved into year 2, schools started the year out with either remote instruction or a hybrid model that allowed some students to attend school on some days or in cohorts, while others stayed home, and many

teachers had to simultaneously teach in-person and remotely. The stressors of the pandemic seemed to have worsened; the longer the isolation lasted, the more teachers' connections to students were jeopardized, and students' connection to school weakened. Some ninth graders starting high school in Fall 2020 did not meet their teachers or peers in person until many weeks into the school year. Many families' economic situation worsened and teacher turn-over and student absenteeism in schools increased, as teachers left the profession and students lost interest in school or had to contribute to the economic survival of their families (Garcia & Weiss, 2020).

Participants' attention was diverted away from the primary focus of the study, to implement the learned RP skills and promote restorative classrooms, to finding ways to care and connect with each other on-line. For some schools, these added stressors led to reduced attention to trainings, coaching sessions, and data collection, lowering the impact our PD might have had under "normal" circumstances, decreasing the response rate to our surveys and altering response patterns. To be responsive to these stressors, we shortened the student survey to maximize response rates. These changes might have impacted our findings. From participating staff, we learned that, while some students disengaged from school during on-line instruction, others, who were self-motivated, thrived (McClure et al., in print). It is likely that these latter students were more likely to complete the student survey, thus making outcomes less representative for the entire student population.

To accommodate the unanticipated shift to virtual environments, trainings that were originally designed to be delivered in person had to be adapted to on-line delivery, and activities intended to allow participants to practice RP skills, such as circle facilitation, had to be conducted in virtual environments. While we managed to practice circles on-line and encouraged participants to work together in on-line break-out rooms to reflect on their current practices and

plan for RP implementation, the lack of personal contact between trainers and participants might have weakened the effect of our PD. Similarly, coaching sessions had to move to a virtual environment, which made guidance and collaborative problem-solving more challenging.

On the other hand, the unanticipated school-closures also created opportunities. The core of our PD was to promote supportive communities and build, maintain, and re-build relationships. During remote instruction, supporting each other and maintaining relationships between and among teachers and students took on added significance. Many of our participating teachers turned to our coaches to ask for advice on how to keep students engaged remotely, how to maintain relationships with students and families, and how to care for themselves during this stressful time. As such, RP seemed to be subject to a more rigorous test than initially anticipated, and participating staff worked with the research team to implement strategies to bridge the social distance created by on-line interactions and maintain communities and relationships. We incorporated these adaptations into our PD to increase its relevance given the uncertainty of what educational environments might look like in the future.

Limitations

Findings of our study must be interpreted in the context of a number of limitations reflecting the reality under which schools generally operate and the extraordinary circumstances under which they operated while we conducted our study. First, we modified random assignment to include all high schools in one district. The district requested that all schools be assigned to the same condition so that the district can provide the same services to all its students. We decided to honor this desire for equitable service delivery and include the district in our study. Second, we made changes to the student survey before we started year 2 of the study. This decision was based on multiple administrators and teachers from the participating schools

sharing with us that a detailed and long survey takes too much time to administer and exceeds students' attention span. These challenges were then magnified in year 2 due to the school closures that forced students to complete the survey without direct teacher supervision. To respond to these unique circumstances, we chose to reduce the length of the survey while maintaining the key survey domains, in order to collect data from as many students as possible during year 2. Third, and relatedly, we experienced greater than anticipated attrition over the course of the study when staff, students, and parents struggled with the effects of the pandemic and prolonged social isolation. Despite these limitations, our study yielded promising findings that might contribute to the knowledge base of RP implementation in schools.

Implications for Research and Practice

Based on our findings, it appears that the training we developed can improve school staff's implementation of RP designed to promote welcoming classroom communities, relationships between students and teachers and among peers, and an overall positive school climate where students can engage with academic learning. The circumstances of the pandemic appeared to magnify existing challenges, including keeping adolescent students engaged with school, providing them opportunities to make their voices heard, and promoting positive and supporting peer relationships that can protect against bullying and harassment. Our study seemed to suggest that RP could address some of these challenges. Staff utilized community building circles first in real and then in virtual environments and created on-line spaces where students could connect with staff and with each other. If these practices can make a difference, however small, during the trying times of social isolation, they might also make a difference during less trying times. Replicating the study during non-Covid times might increase our understanding of how the SWPRD training can support staff, students, and parents in promoting a trusting school

climate.

Practitioners, especially school administrators, could benefit from our PD to promote systemic changes in their schools supporting the use of RP. We emphasized the alignment between MTSS and RP to allow our study participants to build on existing systems. This approach might be useful for gradually adopting and implementing RP and incrementally changing discipline from rule compliance and punishment to elevating student voice and sharing authority. The importance of administrative support for RP implementation has been documented in the literature (Gregory et al., 2021). Building internal momentum and advocacy for RP could benefit staff as well as students and their families. Readiness for RP might further be strengthened by pairing staff training with student-based interventions. Simultaneously training staff in RP while engaging students with lessons in how to communicate, how to build trust, and how to be accountable to self and others might benefit both staff and students.

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Table 1. *Overview of participating schools' demographics*

Condition	Intervention									Control								
School	1	2	3	4	5	6	7	8	Total	9	10	11	12	13	14	15	16	Total
Total enrollment	324	100	1230	952	245	533	88	122	3594	1294	848	100	160	641	186	455	200	3884
Percent Hispanic/Latinx	11	7	11	41	8	10	10	18		20	8	22	28	31	13	25	11	
Percent American Indian/Alaska Native	6	2	2	1	2	5	0	6		7	9	11	5	2	2	3	9	
Percent Black/African American	2	1	1	1	<1	2	0	1		1	2	6	0	<1	0	<1	0	
Percent Asian	>1	1	1	11	1	1	2	1		4	3	1	0	<1	<1	1	<1	
Percent Pacific Islander	>1	0	1	<1	<1	1	0	1		<1	1	2	0	<1	<1	<1	0	
Percent White/Caucasian	79	80	79	53	80	81	82	80		72	86	88	60	55	73	62	67	
Percent Multiracial	0	9	5	2	9	1	6	12		9	N/A	3	7	41	24	32	24	
Percent English Language Learners	>1	0	1	29	0	<1	0	0		4	1	8	4	7	2	2	0	
Percent on 504/IEP	22	50	22	16	23	24	20	46		21	22	25	32	28	20	28	29	
Percent on Free or Reduced-Priced Lunch	39	95	49	49	37	45	33	61		31	36	81	81	100	100	100	100	
Title 1	No	No	No	No	No	No	No	NA*		No	No	Yes	Yes	No	No	No	No	
Locale	Rural Distant	City Midsize	Town Fringe	Town Fringe	City Small	Town Fringe	Rural Distant	NA		City Small	Town Fringe	City Small	City Small	Town Distant	Rural Fringe	Town Remote	Rural Fringe	

*NA = not available.

Table 2. *Number of completed surveys returned from number of participating schools.*

	Fall 2019 (T1)		Spring 2020 (T2)		Fall 2020 (T3)		Spring 2021 (T4)	
	Intervention	Control	Intervention	Control	Intervention	Control	Intervention	Control
Fidelity of Implementation (Administrator)	8 (8)*	8 (8)	8 (8)	8 (8)	N/A	N/A	3(3)	5(5)
Staff Survey	299 (8)	168 (8)	126 (6)	186 (8)	75 (6)	151 (6)	89 (5)	48 (3)
Student Survey	2232 (8)	2129 (8)	320 (5)	609 (6)	560 (6)	362 (5)	243 (4)	377 (5)
Parent Survey	286 (8)	221 (6)	36 (3)	155 (7)	104 (5)	42 (5)	19 (2)	4 (2)

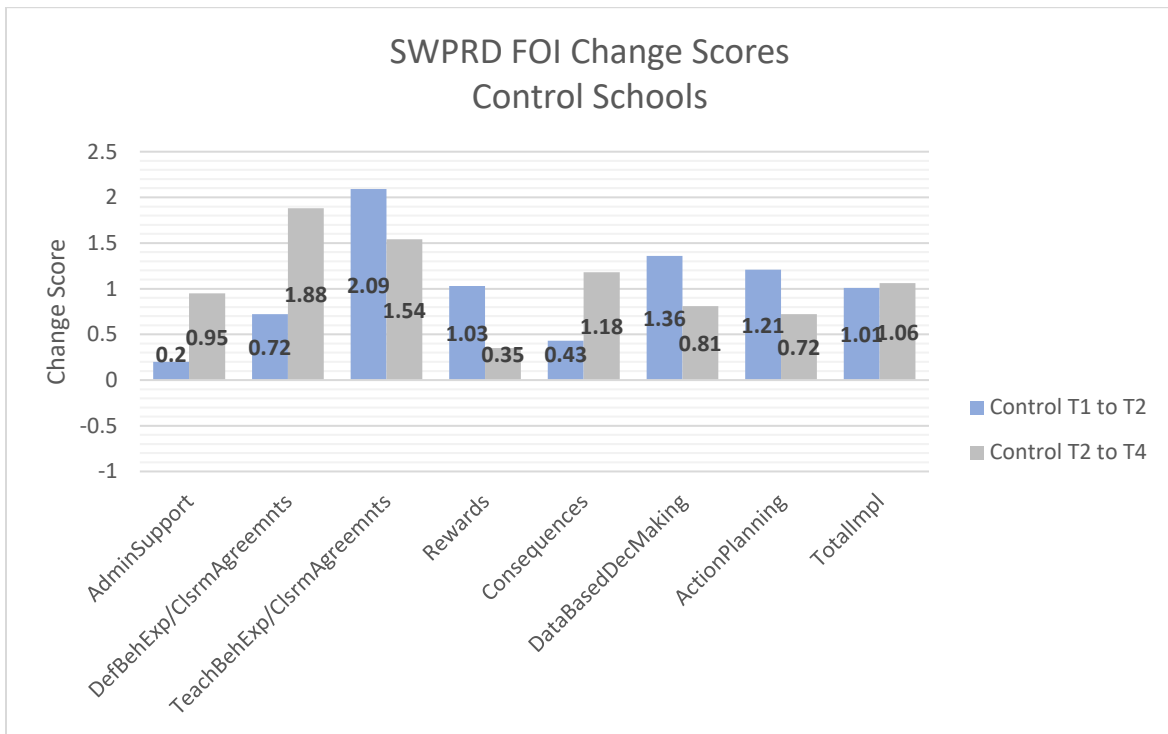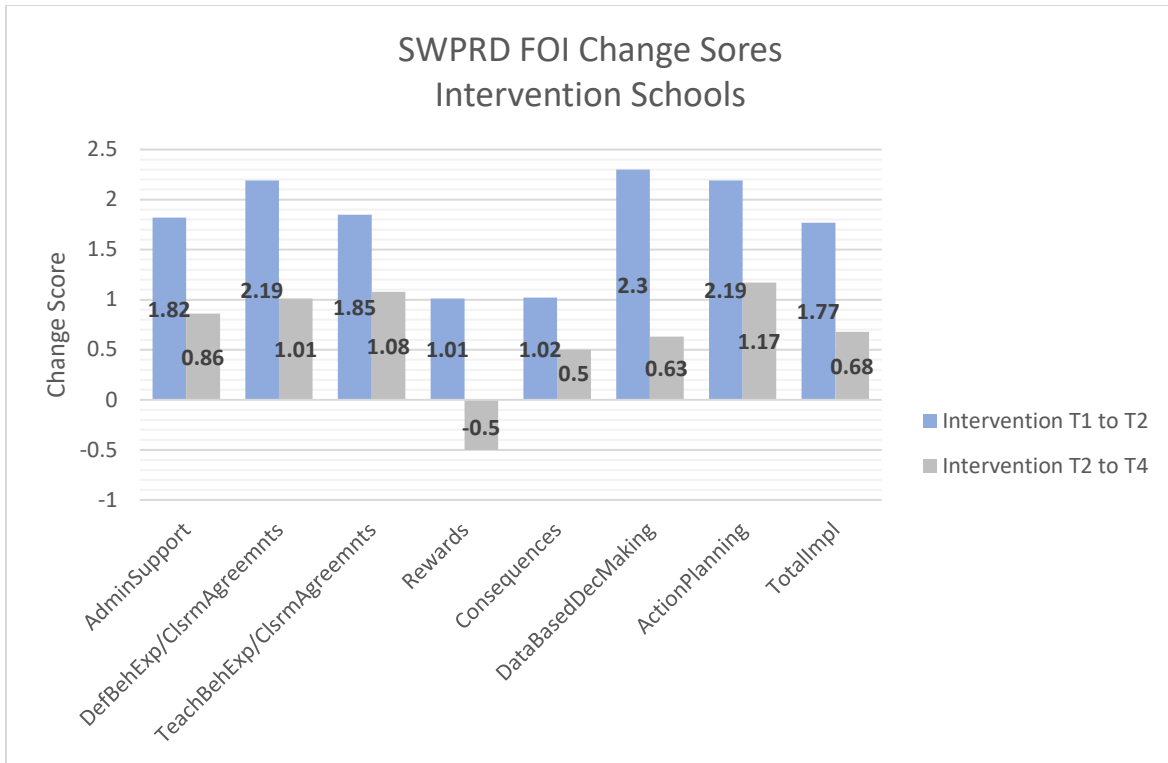*Number in parentheses represents the number of participating schools.

Figure 1: Change in implementation fidelity across condition and time.
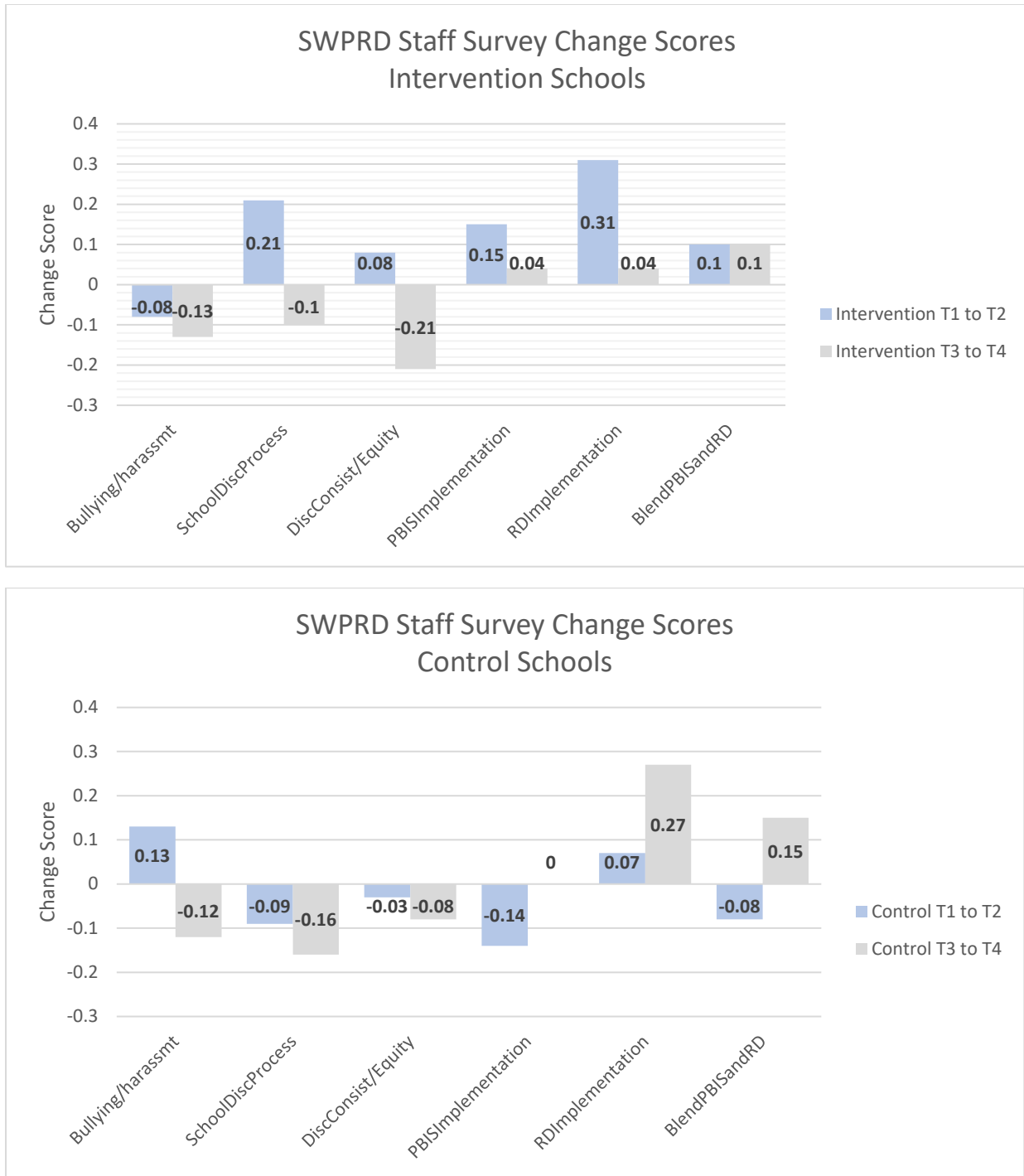
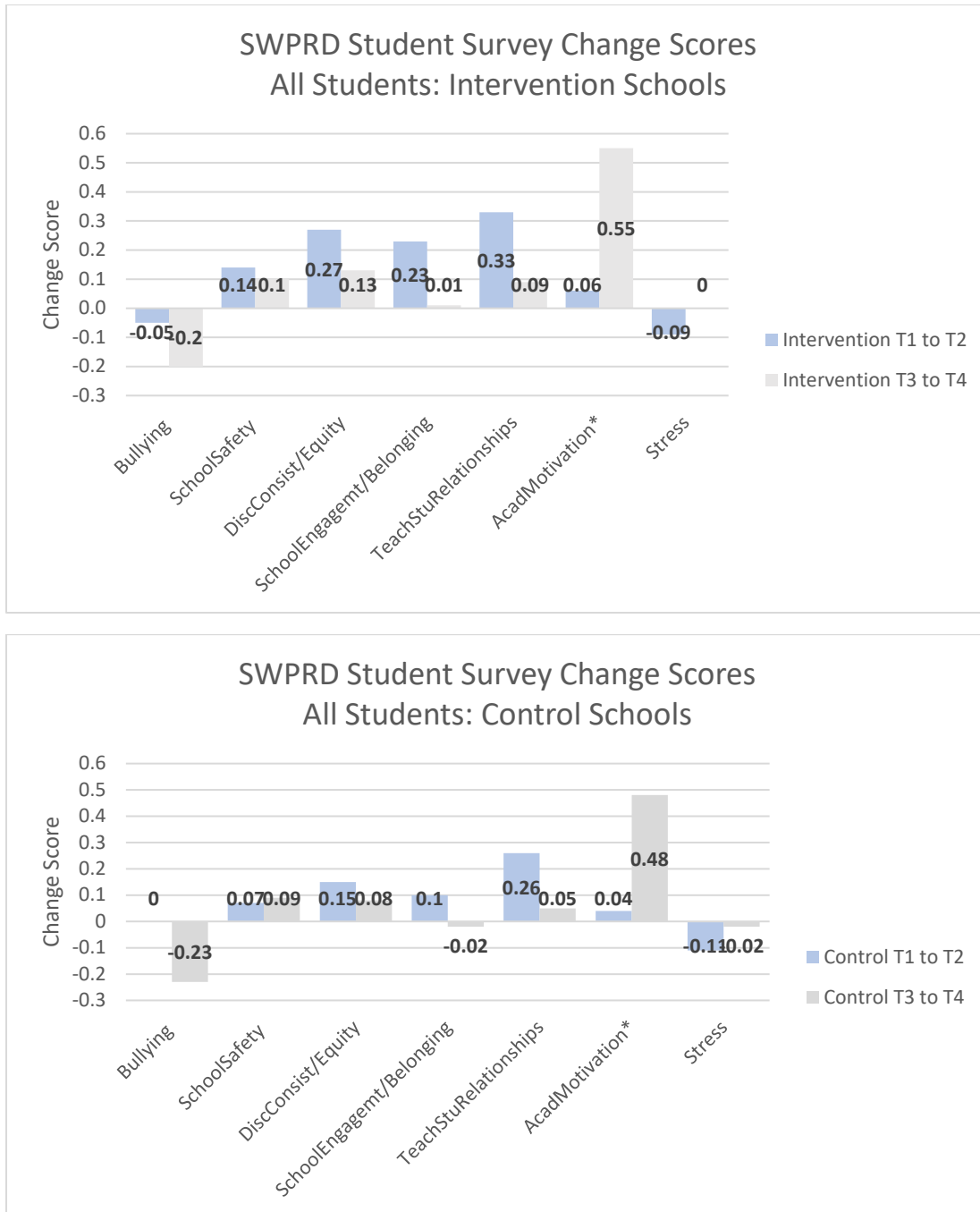Figure 2: Change in staff perceptions across condition and time.

Figure 3: Change in student perceptions across condition and time.
*Academic motivation was scored on a 4-point scale, while all other domains were scored on a 5-point scale.
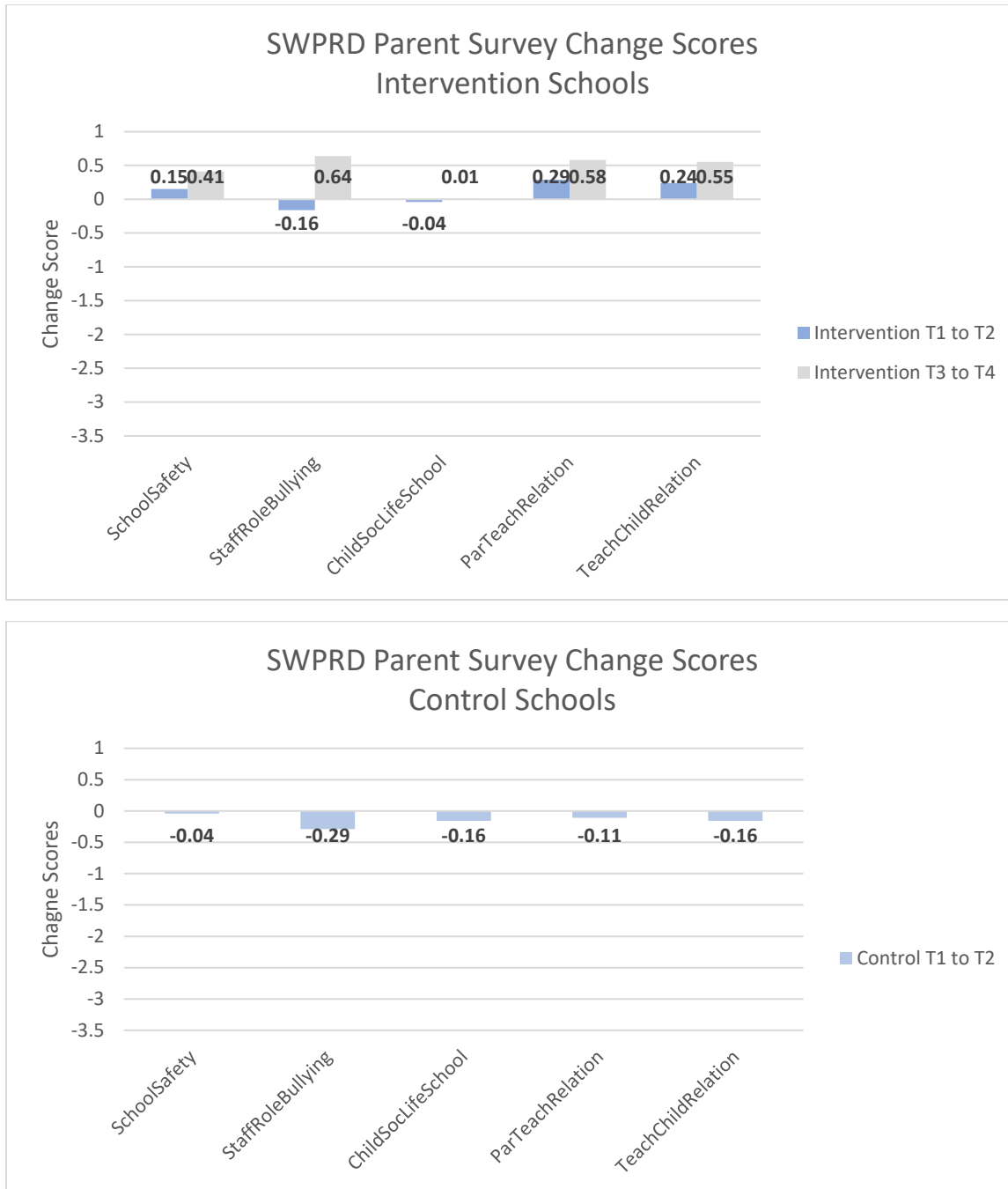
Figure 4: Change in parent perceptions across condition and time.

Appendix

Tables 3-6 summarize the results of statistical follow-up testing for fidelity of implementation, staff survey, student survey, and parent survey outcomes across time and condition. If the omnibus test is not significant, then by definition the groups are not different across time points.

For the fidelity of implementation measure, we conducted a two-way mixed ANOVA with time (3 time points) as a within-subjects factor and intervention condition as the between-subjects factor. As there were eight separate measurement domains, we controlled for inflation of Type I error by using a Bonferroni correction (i.e., statistical significance was set to .05/8 = .00625). Table 3 summarizes outcomes.

Table 3. *Change in fidelity (school) scores across time by intervention condition.*

Outcome	Time 1	Time 2	Time 3
Admin Support (N = 8; α ≥ .42)	Omnibus test: $F(2,12) = 2.13$, $p = .16$, ns.		
Intervention Group (N = 3)	4.52 (.67)[a]	4.78 (2.25)[a]	5.67 (2.80)[a]
Control Group (N = 5)	4.81 (1.27)[a]	4.80 (1.89)[a]	5.64 (1.10)[a]
Def Beh Exp (N = 8; α ≥ .43)	Omnibus test: $F(2,12) = .01$, $p = .99$, ns.		
Intervention Group (N = 3)	5.67 (.52)[a]	6.50 (2.14)[a]	6.79 (2.32)[a]
Control Group (N = 5)	6.55 (2.25)[a]	7.40 (.86)[a]	7.85 (.58)[a]
Teach Beh Exp (N = 8; α ≥ .68)	Omnibus test: $F(2,12) = .80$, $p = .47$, ns.		
Intervention Group (N = 3)	5.08 (3.39)[a]	6.42 (1.76)[a]	6.21 (1.75)[a]
Control Group (N = 5)	3.52 (1.22)[a]	6.45 (1.37)[a]	6.70 (2.35)[a]
Reward System (N = 8; α ≥ .41)	Omnibus test: $F(2,12) = .11$, $p = .89$, ns.		
Intervention Group (N = 3)	4.53 (3.21)[a]	5.73 (3.84)[a]	5.40 (3.54)[a]
Control Group (N = 5)	6.43 (1.40)[a]	8.20 (2.26)[a]	7.40 (1.68)[a]
Consequences (N = 8; α ≥ .65)	Omnibus test: $F(2,12) = .61$, $p = .56$, ns.		
Intervention Group (N = 3)	3.10 (1.30)[a]	4.76 (2.08)[a]	4.88 (2.21)[a]
Control Group (N = 5)	4.54 (1.74)[a]	4.73 (1.55)[a]	5.43 (2.15)[a]
Data-based Decision-making (N = 8; α ≥ .60)	Omnibus test: $F(2,12) = .65$, $p = .54$, ns.		
Intervention Group (N = 3)	.30 (.17)[a]	1.85 (2.06)[a]	4.30 (3.41)[a]
Control Group (N = 5)	2.83 (2.65)[a]	4.58 (1.80)[a]	4.98 (2.52)[a]
Action Plan (N = 8; α ≥ .57)	Omnibus test: $F(2,12) = .79$, $p = .48$, ns.		
Intervention Group (N = 3)	.07 (.12)[a]	1.67 (2.20)[a]	4.60 (3.33)[a]
Control Group (N = 5)	1.72 (1.75)[a]	3.40 (1.83)[a]	4.00 (3.18)[a]
Total (N = 8; α ≥ .71)	Omnibus test: $F(2,12) = .29$, $p = .76$, ns.		
Intervention Group (N = 3)	3.04 (.94)[a]	4.53 (2.09)[a]	5.41 (2.51)[a]
Control Group (N = 5)	4.34 (1.13)[a]	5.65 (1.20)[a]	6.00 (1.41)[a]

Note: Cell values are group means (standard deviations).

[a, b] = Cell-values that share the same superscript are not significantly different.

For the staff survey, we averaged all staff in each school to create a school average at each time point, which served as the dependent variables for two-way mixed ANOVAs with time (4 time points) as the within-subjects factors and intervention condition as the between-subjects factors. We controlled for inflation of Type I error by using Bonferroni corrections based on the number of separate outcome measures. Because there were six separate outcome measures and we set statistical significance to $.05/6 = .008$. Table 4 summarizes results.

Table 4. *Change in staff (school) scores across time by intervention condition.*

Outcome	Time 1	Time 2	Time 3	Time 4
Bullying (N = 7; α ≥ .72)	Omnibus test: $F(3,15) = 1.49$, $p = .36$, ns.			
Intervention Group (N = 4)	2.74 (.28)[a]	2.71 (.30)[a]	2.60 (.41)[a]	2.31 (.43)[a]
Control Group (N = 3)	2.69 (.27)[a]	2.93 (.53)[a]	2.89 (.31)[a]	2.59 (.45)[a]
School Disciplinary Process (N = 7; α ≥ .94)	Omnibus test: $F(3,15) = 1.35$, $p = .30$, ns.			
Intervention Group (N = 4)	3.21 (.21)[a]	3.46 (.43)[a]	3.53 (.46)[a]	3.48 (.51)[a]
Control Group (N = 3)	3.63 (.33)[a]	3.66 (.30)[a]	3.69 (.14)[a]	3.56 (.15)[a]
DiscEquity (N = 7; α ≥ .77)	Omnibus test: $F(3,15) = .56$, $p = .65$, ns.			
Intervention Group (N = 4)	3.45 (.33)[a]	3.51 (.36)[a]	3.59 (.42)[a]	3.52 (.45)[a]
Control Group (N = 3)	3.75 (.33)[a]	3.76 (.14)[a]	3.72 (.13)[a]	3.62 (.12)[a]
PBIS Implementation (N = 7; α ≥ .81)	Omnibus test: $F(3,15) = 2.15$, $p = .14$, ns.			
Intervention Group (N = 4)	3.44 (.13)[a]	3.46 (.21)[a]	3.51 (.13)[a]	3.57 (.13)[a]
Control Group (N = 3)	3.82 (.05)[a]	3.76 (.11)[a]	3.77 (.08)[a]	3.73 (.10)[a]
RD Implementation (N = 7; α ≥ .92)	Omnibus test: $F(3,15) = 1.02$, $p = .41$, ns.			
Intervention Group (N = 4)	3.49 (.31)[a]	3.72 (.18)[a]	3.93 (.15)[a]	3.93 (.21)[a]
Control Group (N = 3)	3.48 (.08)[a]	3.65 (.11)[a]	3.58 (.08)[a]	3.86 (.31)[a]
Blend (N = 7; α ≥ .85)	Omnibus test: $F(3,15) = .12$, $p = .95$, ns.			
Intervention Group (N = 4)	3.30 (.12)[a]	3.27 (.43)[a]	3.42 (.20)[a]	3.52 (.11)[a]
Control Group (N = 3)	3.37 (.29)[a]	3.25 (.26)[a]	3.39 (.11)[a]	3.54 (.29)[a]

Note: Cell values are group means (standard deviations).

[a, b] = Cell-values that share the same superscript are not significantly different.

For the student survey, we averaged all students in each school to create a school average at each time point, which served as the dependent variables for two-way mixed ANOVAs with time (4 time points) as the within-subjects factors and intervention condition as the between-subjects factors. We controlled for inflation of Type I error by using Bonferroni corrections based on the number of separate outcome measures. Because there were seven separate outcome measures, and we set statistical significance to .05/7 = .007). Table 5 summarizes outcomes.

Table 5. *Change in student (school) scores across time by intervention condition.*

Outcome	Time 1	Time 2	Time 3	Time 4
Bullying (N = 8; α ≥ .78)	Omnibus test: F(3,18) = .12, p = .95, ns.			
Intervention Group (N = 4)	1.87 (.23)[a]	1.82 (.18)[a]	2.00 (.37)[a]	1.76 (.58)[a]
Control Group (N = 4)	2.09 (.12)[a]	2.09 (.29)[a]	2.26 (.74)[a]	2.16 (.82)[a]
School Safety (N = 8; α ≥ .89)	Omnibus test: F(3,18) = .27, p = .85, ns.			
Intervention Group (N = 4)	4.02 (.27)[a]	4.05 (.13)[a]	4.19 (.15)[a]	4.27 (.17)[a]
Control Group (N = 4)	3.82 (.22)[a]	3.84 (.40)[a]	4.04 (.41)[a]	4.01 (.35)[a]
DiscEquity (N = 8; α ≥ .77)	Omnibus test: F(3,18) = 1.28, p = .31, ns.			
Intervention Group (N = 4)	3.65 (.36)[a]	3.82 (.30)[a]	4.50 (.35)[a]	4.47 (.38)[a]
Control Group (N = 4)	3.45 (.21)[a]	3.63 (.21)[a]	4.10 (.50)[a]	4.07 (.47)[a]
School Belonging (N = 8; α ≥ .64)	Omnibus test: F(3,18) = 3.82, p = .03, ns.			
Intervention Group (N = 4)	3.34 (.32)[a]	3.53 (.35)[a]	3.68 (.25)[a]	3.90 (.37)[a]
Control Group (N = 4)	3.18 (.23)[a]	3.30 (.35)[a]	3.50 (.28)[a]	3.44 (.27)[a]
Student-Teacher Relationship (N = 8; α ≥ .86)	Omnibus test: F(3,18) = 5.08, p < .01, ns.			
Intervention Group (N = 4)	3.61 (.36)[a]	3.90 (.34)[a]	4.08 (.20)[a]	4.25 (.31)[a]
Control Group (N = 4)	3.53 (.30)[a]	3.81 (.35)[a]	3.97 (.38)[a]	3.89 (.27)[a]
Academic Motivation (N = 8; α ≥ .87)	Omnibus test: F(3,18) = .20, p = .90, ns.			
Intervention Group (N = 4)	2.96 (.03)[a]	2.99 (.11)[a]	2.98 (.08)[a]	3.49 (.10)[a]
Control Group (N = 4)	2.98 (.07)[a]	3.00 (.14)[a]	2.97 (.07)[a]	3.44 (.06)[a]
Stress & Discrimination (N = 8; α ≥ .75)	Omnibus test: F(3,18) = .45, p = .72, ns.			
Intervention Group (N = 4)	2.94 (.08)[a]	2.74 (.23)[a]	1.03 (.01)[a]	1.01 (.02)[a]
Control Group (N = 4)	2.95 (.10)[a]	2.63 (.27)[a]	1.02 (.03)[a]	1.02 (.02)[a]

Note: Cell values are group means (standard deviations).

[a, b] = Cell-values that share the same superscript are not significantly different.

For the parent survey, we averaged all parents in each school to create a school average at each time point, which served as the dependent variables for two-way mixed ANOVAs with time (4 time points) as the within-subjects factors and intervention condition as the between-subjects factors. We controlled for inflation of Type I error by using Bonferroni corrections based on the number of separate outcome measures. Because there were five separate outcome measures, and we set statistical significance to $.05/5 = .01$. Table 6 summarizes results.

Table 6. *Change in parents (school) scores across time by intervention condition.*

Outcome	Time 1	Time 2	Time 3	Time 4
School Safety (N = 4; α ≥ .80)	Omnibus test: F(3,6) = .65, p = .61, ns.			
Intervention Group (N = 2)	4.15 (.01)ᵃ	4.28 (.13)ᵃ	4.41 (.13)ᵃ	4.45 (.07)ᵃ
Control Group (N = 2)	4.21 (.38)ᵃ	4.25 (.38)ᵃ	4.28 (.22)ᵃ	4.33 (.47)ᵃ
Staff Role in Bullying (N = 2; α ≥ .89)	Omnibus test: could not be calculated; insufficient control schools.			
Intervention Group (N = 2)	3.96 (.53)ᵃ	4.28 (.13)ᵃ	2.13 (1.13)ᵃ	3.50 (.71)ᵃ
Control Group (N = 0)	-	-	-	-
Child Social Life at School (N = 4; α ≥ .68)	Omnibus test: F(3,6) = .99, p = .46, ns.			
Intervention Group (N = 2)	3.81 (.09)ᵃ	3.92 (.35)ᵃ	3.91 (.04)ᵃ	3.93 (.36)ᵃ
Control Group (N = 2)	3.92 (.03)ᵃ	3.53 (.24)ᵃ	3.72 (.57)ᵃ	4.31 (.18)ᵃ
Parent-Teacher Relationships (N = 4; α ≥ .75)	Omnibus test: F(3,6) = .05, p = .98, ns.			
Intervention Group (N = 2)	3.99 (.34)ᵃ	4.13 (.24)ᵃ	4.08 (.01)ᵃ	4.09 (.22)ᵃ
Control Group (N = 2)	3.87 (.85)ᵃ	4.08 (.34)ᵃ	3.91 (.04)ᵃ	3.88 (.18)ᵃ
Teacher-Child Relationship (N = 4; α ≥ .68)	Omnibus test: F(3,6) = .08, p = .97, ns.			
Intervention Group (N = 2)	4.07 (.42)ᵃ	4.21 (.09)ᵃ	4.24 (.05)ᵃ	4.35 (.13)ᵃ
Control Group (N = 2)	4.03 (.95)ᵃ	4.07 (.45)ᵃ	4.03 (.22)ᵃ	4.29 (.41)ᵃ

Note: Cell values are group means (standard deviations).

[a, b] = Cell-values that share the same superscript are not significantly different.