A COMPARISON OF SOCIAL, EMOTIONAL, AND BEHAVIORAL HEALTH OF ELEMENTARY STUDENTS AS MEASURED BY THE B.E.S.T. SCREENER: THE EFFECTS OF THE ADDITION OF RESTORATIVE PRACTICES TO POSITIVE BEHAVIOR INTERVENTIONS AND SUPPORTS

By

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A Comparison of Social, Emotional, and Behavioral Health of Elementary Students as Measured by the b.e.s.t. Screener: The Effects of the Addition of Restorative Practices to Positive Behavior Interventions and Supports

By

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The University of Wisconsin-Eau Claire, 2022
Under the Supervision of Dr. Mary Beth Tusing

The purpose of this study was to examine the effects of the addition of restorative practices to positive behavior interventions and supports (PBIS) on the social, emotional, and behavioral health of elementary students as measured by the b.e.s.t. screener. Specifically, this study compared two similar Wisconsin elementary schools in the same district, both of which had a history of PBIS implementation. One school also implemented restorative practices. The study hypothesized that a lower proportion of students would have elevated risk levels overall on the b.e.s.t. screener in the school that implemented restorative practices in addition to PBIS. It was also hypothesized that the restorative practices school would have a lower proportion of students with elevated risk levels in measures of internalizing behaviors. The opposite result was found, with a greater proportion of students with elevated risk levels both overall and in measures of internalizing behaviors at the school with restorative practices. The limitations of this study, in addition to implications and directions for future research are addressed.

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Thesis Adviser Date

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CHAPTER I: INTRODUCTION

Social, emotional, and behavioral health are critical to student academic success and positive school outcomes. Traditional exclusionary discipline models, which address disciplinary problems with suspensions or expulsions are detrimental to both students and the community at large (Gregory et al., 2016). Students who are not at school have decreased opportunities to build positive connections within the school and practice the social-emotional skills necessary for future engagement with the community (Bilias et al., 2017). Effective responses to inappropriate behaviors as well as a framework for teaching expectations are crucial to avoiding harmful disciplinary practices. Positive Behavior Interventions and Supports (PBIS) is a research-based and commonly used practice to address these needs. While the strengths of PBIS are clear (Lee & Gage, 2020), there may be complementary models that can further improve student outcomes. One possibility is restorative practices, due to its inherently inclusive philosophy and experiential nature. Some suggest that restorative practices may be particularly effective in shaping positive behaviors and building positive school culture for students from marginalized backgrounds (Carter Andrews & Gutwein, 2020). Given that PBIS practices do not consistently improve disproportionality in school discipline outcomes, research on modifications to PBIS, such as the addition of restorative practices to a school’s positive behavior approaches, is needed.

**Positive Behavior Interventions and Supports (PBIS)**

Positive Behavior Interventions and Supports is designed to allow schools to implement a continuum of services that help prevent problem behaviors and improve the social and academic experience for all students. Four components make up the PBIS framework: outcomes, data, practices, and systems. Outcomes can be defined as measurable goals that the school, staff, and/or students are working towards. Data is used by staff and building leadership to make and
assess decision-making. PBIS practitioners use evidence-based practices that are monitored over time, through designed systems that monitor the outcomes and implementation of these practices (Bilias et al., 2017). A key argument of PBIS is that for both academics and behaviors, all students fall somewhere on a continuum. To meet all students’ needs, the school requires a continuum of supports and interventions in both the academic and behavior realms. This includes supports and interventions that all students receive as well as a support or intervention that may just be utilized for one student (Bilias et al., 2017). In a PBIS framework, all students are explicitly taught behavior expectations, such as how to sit at a desk or ask for help. All students are then positively reinforced for meeting those expectations. The extent of teaching or reinforcement required may look different for different students. For example, all students would be taught classroom rules and expectations for sitting in their seat appropriately, while students with higher needs may participate in an intervention where they receive tokens for appropriate seat-work behavior that they can trade for an incentive.

**Implementation of PBIS**

At a universal or school-wide level (referred to as Tier 1), PBIS includes several key concepts. First, behavioral expectations and desired appropriate behaviors are to be explicitly and effectively taught to all students (Welsh & Little, 2018). This is linked to the idea that students may not have appropriate models of how to conduct themselves or behave within a school setting, so it needs to be taught and practiced. A key aspect of PBIS is data-driven decision making. Data is also important to monitor student progress, determine if students are making expected gains, and determine which students require more intensive services or interventions. Data is also used to inform educators on the effectiveness of tier one interventions in supporting a safe school environment and positive school culture. For students for whom Tier 1 or universal
supports are not sufficient, additional social or behavioral interventions are implemented via a second tier of school-based supports. In addition to clear behavior expectations and teaching embedded in universal practices, students in need of additional support are provided with targeted instruction and practice with social skills and self-regulation skills. This may look like a targeted social skills curriculum, practicing how to start a conversation with a peer, or having a list of calming strategies that they have been taught and practiced with a staff member. PBIS is prevention oriented. Universal practices are one method of prevention; intervention at an early stage before unwanted behaviors escalate or entrench is a secondary method of prevention. For example, instead of a student’s behavior building to a point where they could not safely be in the classroom, which has historically been met with exclusionary discipline responses, PBIS systems of support allow students needs to be met earlier when behaviors were milder and more easily corrected (Center on PBIS, 2022).

To promote effective systems of support, PBIS tier 2 interventions, like all PBIS, are research-based, with data consistently monitored to determine the continuing appropriateness of an intervention. Data is used both for academic and behavioral decision-making. For example, a student who struggles with inappropriate behaviors to seek attention may utilize check in-check out. Check in-check out is designed to allow a student the opportunity to have more positive interactions with school staff, and therefore have social attention with positive reinforcement for desired school behavior rather than seeking attention through disruptive behavior. Baseline data is first collected by staff to determine the current rate of disruption. With baseline data in mind, the rate of disruption is analyzed throughout the intervention. Students with higher needs receive increased positive reinforcement, increased reminders of expectations, and increased supervision.
At this level, staff are likely to consider the possible functions of problem behavior in order to best address it (Center on PBIS, 2022).

**Philosophy of PBIS**

PBIS is a proactive, positive approach to school discipline. Its practices are rooted in behaviorist and social-learning theories in psychology (Center on PBIS, 2020). Instead of giving punitive consequences for behavior that has already occurred, PBIS schools attempt to prevent problematic behavior by teaching, acknowledging, and reinforcing desired school behaviors. PBIS schools work to provide transparency around how adults expect students to act by explicitly teaching, modeling, and reinforcing desired school behaviors. This increases student trust and feelings of safety in the school environment. Students are more likely to be engaged with school and less likely to behave negatively when they feel their environment is predictable, consistent, positive, and safe, and when they believe that their peers will support that environment through their own behavior choices (Freeman et al., 2016).

**Research in Support of PBIS**

In Lee and Gage’s (2020) meta-analysis of the effects of school-wide positive behavior interventions and supports, it was found that across twenty-two studies reporting behavioral outcomes, there were statistically significant decreases in problematic behavior outcomes. Specifically, office discipline referrals (ODRs) and suspensions decreased, as did referrals to law enforcement and arrests.

Teaching appropriate behavior and reinforcing students demonstrating those behaviors can also have academic impacts. Some research on the effectiveness of PBIS has demonstrated improved reading performance for students in PBIS schools compared to their peers in non-PBIS schools (Bruhn et al., 2019; Lee & Gage, 2020). In Lee and Gage’s 2020 meta-analysis, there
was an overall statistically significant benefit to academic performance in PBIS schools, including standardized testing across grade levels. Along with tangible rewards, PBIS utilizes tools like behavior specific praise to positively reinforce desired behaviors. This could sound like, “Way to go! You are using your coping skills Joey”. Some research has shown that increased positive feedback and praise can increase intrinsic motivation through increasing student self-efficacy (Bruhn et al., 2019). Other organizational outcomes, such as students feeling safe at school, attendance, organizational health, resource influence, staff, affiliation, and academic influence were significantly higher in school-wide PBIS schools than in comparison schools (Freeman et al., 2016; Lee & Gage, 2020).

Despite having a strong evidence base, PBIS is not without its criticisms or limitations. One argument is that with an emphasis on positive reinforcement, PBIS will harm intrinsic motivation and focuses too much on prizes. Further, explicitly teaching behavior expectations has been referred to as condescending for older students (Bruhn et al., 2019). PBIS can be limiting for students from diverse cultural or linguistic backgrounds as well. Because office discipline referrals (ODR) are one of the key pieces of data used to determine which students need additional behavior support, the same biases that lead to disproportionate disciplinary actions in schools can influence which students receive ODRs. Bilias et al. (2017) found that even in schools utilizing PBIS, culturally and linguistically diverse students are more likely to receive disciplinary action leading to suspension, indicating that it does not inherently improve disciplinary gaps for minority students.

Restorative Practices

Restorative Justice circles and conferencing have been utilized in both adult and juvenile courts around the world. One appeal of restorative justice is its inherent ability to collect input
from all parties involved in a community, automatically accounting for diverse or underrepresented populations through their active participation in conflict resolution and norm-setting (Drewery, 2016). Unlike PBIS, which calls for schools to first build universal systems to promote and reinforce positive behaviors, restorative practices first entered schools as an alternative to punitive discipline for school infractions. The terms restorative justice and restorative practices are often used interchangeably, both colloquially and in research. However, restorative justice often refers to criminal justice, while restorative practices often refer to education-based interventions (Kehoe et al., 2018). Some argue that restorative practices may be even more applicable in school settings, due to the community-based nature of educational institutions (Kohli et al., 2020).

**Implementation of Restorative Practices**

Restorative practices address prevention through building positive, respectful relationships amongst community members. Restorative interventions are then used when infractions occur, and relationships need repairing. While both PBIS and restorative practices argue for explicit teaching of social-emotional skills and behavioral expectations, PBIS models do not always allow students to extensively practice important social and emotional skills until behavior concerns are noted. Restorative practices, on the other hand, necessarily require all students and staff to practice important social and emotional skills, because those are the skills needed to foster community trust and cohesiveness. Gregory et al. (2016) outlined several types of restorative practices that can be implemented at the universal level to build community. Practices include fair process, restorative staff, community, and family approach, and regularly scheduled community building circles. Each of these practices is addressed below.
Fair process is the philosophy that when people in authority do things with people rather than to people, there are better outcomes. This includes engaging individuals in decisions that affect them by listening to them and considering their views. It also entails explaining the reasoning behind decisions and making sure that everyone clearly understands the decisions and the future expectations that go along with them (Wachtel, 2016). In a school environment, this might entail holding community forums involving parents, community members, students, and school staff when determining student safety policies or a new school dress code. Restorative staff, community, and family approach means that all parties who are affected by decisions, not just the students themselves, are included in these discussions. This means that the community and parents have a role in the school system and school expectations (International Institute for Restorative Practices, 2017). Commonly, restorative circles are referred to as “community-building circles,” which are similar in format but serve the purpose of building trust and encouraging sharing rather than conflict resolution or healing.

Restorative practices offer many opportunities to address behavioral problems. With a focus on harm versus blame, restorative practices at the intervention level focus on determining solutions that repair harm to all parties. Restorative questioning, reintegrative management of shame, conflict-resolution circles, and restorative conferencing are all common methods used for this purpose (Gregory et al., 2016). Restorative questioning is used to help process an incident of conflict. Reintegrative management of shame refers to shifting the focus from labeling and stigmatizing the perpetrator to encouragement to stop the behavior, with a focus on harm and repair (Drewery, 2016). All these practices are designed to move the entire community forward, with the perpetrator learning from those harmed, taking accountability, and coming away from the experience with a plan of how to behave differently going forward, while feeling as though
they are still a valued member of the community. Victims have an opportunity to share how they were harmed and to contribute to how they would like to see the perpetrator make amends.

Commonly, the focus of using restorative practices at an intervention level is through restorative circles (also known as conflict-resolution circles) and restorative conferencing. In a restorative circle, the person or people who have caused harm, person or people who have been harmed, and members of the community come together to focus on taking responsibility, repairing harm, and planning for the future. In a traditional circle process, each member takes a turn to speak, often with a “talking piece” or item to hold, and a turn to listen without interruption (Mullet, 2014). Conferencing has similar principles but instead is guided by a facilitator who does not participate directly. Rather, the facilitator asks questions of each affected party. The structure of speaking in a circle and turn-taking is not as strict, however, the ideas of respect and opportunities to speak and listen are still present (Drewery, 2004).

**Philosophy of Restorative Practices**

Restorative practices originated with many indigenous traditions. In many cultures, the idea of and sense of community is a key aspect of daily life, and this carries into disciplinary processes and procedures. Restorative practices acknowledge that harm caused by perpetrators goes beyond the victim, but to the perpetrator themselves and the greater community (Gregory et al., 2016). Restorative philosophies also acknowledge that the community has a stake in the lives and actions of other community members. As such, the community is responsible for creating an environment where pro-social behavior is supported and encouraged (Kehoe et al., 2018). The fundamental hypothesis of restorative practices is that “people are happier, more cooperative and productive, and more likely to make positive changes in behavior when those in authority do things with them, rather than to them or for them” (Wachtel, 2016).
Research in Support of Restorative Practices

Compared to PBIS, there are fewer, if any, examples of systemic, school-wide, implementation models for restorative practices that are empirically researched (Kohli et al., 2019). According to Gregory et al. (2016), there are indications to suggest that restorative practices may be most effective only at a school-wide cultural level. Contrarily, in many cases the level of implementation of restorative practices varies significantly from classroom to classroom (Gregory et al., 2016). Variability in implementation efforts limits research on restorative practices effectiveness or outcomes. While there have been successful examples of case studies utilizing restorative practices to address community-wide behavioral challenges (Cavanaugh et al., 2014; Ingraham et al., 2016; Rundell, 2007), there continues to be a need for high-quality, standardized, and comprehensive research on the effects of restorative practices in schools (Acosta et al., 2014; Song & Swearer, 2016).

There are certain, specific, or targeted restorative practice efforts that have been studied on a small scale. For example, having a restorative practices philosophy, as indicated by having students, parents, and community members involved in decision making, has been shown to reduce bullying incidents and increase caring, positive attitudes among both staff and students (Kehoe et al., 2018; Morrison, 2006). Even partial implementation of restorative practices has been demonstrated to reduce bullying incidents among middle school students (Mayworm et al., 2016). Gregory et al. (2016) found that restorative practices were positively associated with stronger relationships between students and adults in an urban high school setting. Restorative practices can also be combined with PBIS.
Combining PBIS and Restorative Practices

PBIS and restorative practices are far from mutually exclusive. In fact, many of the philosophies key to restorative practices, such as building community, prevention of harm prior to escalation, and communication of expectations are present within PBIS. In addition, the Center on PBIS (2022) includes restorative circles as an evidence-based strategy that can be incorporated into PBIS for students in need of an elevated level of intervention or tier 3 intervention plans, which are interventions for further levels of need than tier 2 interventions. Aspects of restorative justice and practices are already being implemented in PBIS schools around the nation (Song & Swearer, 2016). While PBIS has been a dominant force in school-wide practices in recent history, the last several years have also seen a shift in positive behavior approaches. Large, notable districts including Denver and New York City have replaced PBIS efforts with a restorative justice framework (Sandwick et al., 2019).

Incorporating restorative practices within a PBIS system offers potential benefits missing from existing PBIS systems. For example, even though school-wide practices like PBIS intend to provide increased access to school for all students, it does not automatically promote inclusion for underrepresented groups. Welch (2018) argued that if a school is seeing dramatic differences in how PBIS is utilized with certain minority groups of students, it may be worth evaluating whether a restorative approach may meet the school community’s needs. Teachers utilizing restorative practices have reported improved relationships between students and staff and felt that restorative practices provided staff with additional tools to connect with and further understand their students (Carter et al., 2020). The specific focus on building community and trusting relationships among all individuals in a school setting may be particularly powerful in schools where students have historically been marginalized due to culture, language, or socio-
economic differences (Bilias et al., 2017). Unfortunately, limited research exists to investigate the combination of PBIS and restorative practices.

**Current Study**

This study examines the relationship between the additional of restorative practices to PBIS for elementary students on social-emotional functioning. Existing social emotional screening data was used to compare student outcomes across two schools, one that used PBIS alone and one that combined restorative practices with PBIS. Due to the opportunity to practice social-emotional skills that comes with restorative practices, it was hypothesized that there would be a smaller proportion of students scoring in at-risk ranges on a social-emotional screener.

**Research Questions**

This study seeks to investigate two research questions. First, do students in a school using PBIS and restorative practices show lower levels of behavioral risk on teacher-rated social-emotional screeners compared to students at a school using PBIS only? Secondly, do students in a school using PBIS and restorative practices show lower levels of internalizing behavioral risk on teacher-rated social-emotional screeners compared to students at a school using PBIS only?
CHAPTER II: METHODS

This study investigated the impact of restorative practices in addition to PBIS (Positive Behavior Interventions and Supports) on elementary student’s social, emotional, and behavioral health for a school district in Wisconsin. The investigation was a post-hoc review of existing school practices. School-based mental health screening data from two schools, one with a PBIS system only and one with a PBIS system that included restorative practices, was used to compare the proportion of students identified as at-risk at each school for overall health and internalizing health as measured by the b.e.s.t. screener (Hartwig & Hayes, 2016). Each school’s positive behavior system, the b.e.s.t. assessment, and procedures for data analysis are discussed below.

Setting and Positive Behavior Programming

All participants were current students in the same school district in Northwestern Wisconsin and were enrolled in one of two elementary schools in grades Kindergarten through 5th between Fall 2018 and Fall 2019. While the district has more than two elementary schools, and the entire district utilizes PBIS, the schools were chosen for two reasons. First, in terms of demographics and school size, the schools were similar. Both schools were Title 1 schools with approximately 400 students enrolled in grades Kindergarten-Fifth. The schools are also located in the same town of about 14,000. Second, both schools have implemented PBIS since 2008, and have been recognized as having “full implementation status” through the Office of Special Education Programs Technical Assistance Center since 2013.

The restorative practices school began implementing restorative practices in the 2016-2017 school year, although based on report from the school counselor, it took a few years to “ramp up” the use of restorative practices to be in every classroom. Restorative practices used within the school setting were morning circles in every classroom and restorative conferencing
and problem-solving circles in response to student conflicts. Training on morning circles was provided for teachers by the school counselor at a teacher in-service once or twice a year. Morning circles is a daily school practice designed to build rapport and address any underlying issues within a group before beginning their day. Teachers were expected to have circles in their classroom each morning and it was built into the school schedule. No data on the consistency in which teachers used circles and the content of those circles was available for the school. Restorative Conferencing and Problem-Solving Circles involved students, teachers, and staff meeting to discuss a conflict that occurred or an ongoing behavioral problem. Restorative conferencing and problem-solving circles were considered Tier 2 or 3 interventions in the school’s PBIS system. The practices were invoked by staff after a student disciplinary incident or a disagreement between students and staff. Based on staff-report, these practices were used “as needed,” with conferencing being used more often. The actual number or frequency of tier two restorative conferences and conflict resolution circles completed each semester was not tracked by the school. The school counselor, who had completed additional training in restorative practices, acted as the facilitator for both interventions. Based on their report, tier two interventions did not follow any standardized curriculum for restorative conferences. The schools first piloted the b.e.s.t. screener in the 2017-2018 school year, with full implementation in the 2018-2019 year.

Participants

A total of 2,048 participant screeners were included in the study, with the majority of students being represented in multiple screeners. Approximately 49% of participants in the study identified as female, with 51% identifying as male. There was a slightly larger percentage of male students at the restorative practices school than female students. Race and ethnicity data
was not collected as part of the screener, and since student names were removed prior to the researcher obtaining the data, there is no way to match the data to student information sources to determine the exact proportion of participants in different racial groups.

To better appreciate the demographics of participants for this study, the Wisconsin Department of Public Instruction School Report Cards (Wisconsin DPI, 2018) were consulted. At the time of data collection, the PBIS-only school enrollment demographics were 84.4% White, 5.3% Asian, 4.8% Hispanic/Latino, 4.5% two or more races, and 1.1% Black or African American. 14.1% of students at this school were identified as having a special education disability and 44.3% were eligible for free and reduced lunch. The 2018-2019 school enrollment for the PBIS plus Restorative Practices school was 90.8% White, 4.3% two or more races, 2.0% Asian, 1.4% Hispanic/Latino, 1.2% American Indian or Alaskan Native, and less than 1% Black or African American. Fifty percent of students in the PBIS and Restorative Practices school were eligible for free and reduced lunch and 18.8% of students were identified as having a special education disability. Unlike the PBIS-only school, the PBIS plus Restorative Practices school was a cluster site for students with significant special education needs, which explains the higher percentage of students with special education eligibility. The cluster site students were not included as participants in the study, as data was not collected from them in the sample. The remainder of the student population including special education students were included in the sample, and their data was included in the study.

Measures

*Behavioral Emotional Social Traits (b.e.s.t.) Screener*

The Behavioral Emotional Social Traits (b.e.s.t.; Hartwig & Hayes, 2016) is a school-wide social-emotional screener designed to identify students who may be at risk for behavioral,
emotional, or social challenges at school. The b.e.s.t. is a brief, online social-emotional screening assessment including 26 questions scored on a six-point Likert scale. The assessment is completed by classroom teachers and can also be completed by additional raters such as specialist teachers. The b.e.s.t. is designed to identify children who would most benefit from additional behavioral supports and interventions. It can be used as benchmark and long-term tracking data for students. It was chosen as a measure of social, emotional, and behavioral health for this study due to it being utilized as the measure of behavioral risk for students in the school district in this study. The scores from this screener as used in the same manner as FastBridge reading and math scores to determine which students require intervention. Technical information on the scale’s measurement properties, including reliability and validity is provided on the b.e.s.t. website. However, this portion of the website is only accessible to schools that have purchased licenses to use the assessment for school-wide screening. Therefore, it was difficult to fully evaluate the b.e.s.t.’s measurement properties relative to the purposes of this study.

Three scale scores are determined from b.e.s.t items: a total score or G-Scale, the C-Scale, and the P-Scale. The C-Scale assesses externalizing behaviors, such as aggression or conduct problems. The P-Scale assesses internalizing behaviors, such as anxiety or somatization. Student screening scores are classified into one of four categories: core, emerging, strategic, and intensive. Screening scores in the “core” range suggest that there are no concerns for the student’s social and emotional functioning and the student is perceived as having age-appropriate social skills and emotional functioning. This includes students scoring in less than the 80th percentile compared to the standardization sample. The “emerging” category indicates that the student is at risk for emotional or behavioral challenges. This category includes students scoring between the 80th and 85th percentile. The “strategic” level indicates that the student shows more
behavior or emotional concerns and needs some level of intervention. Students scoring between the 85th and 95th percentile are categorized in the strategic range. The “intensive” level indicates significant concern and a need for immediate, intensive intervention or support. This level is reserved for students scoring in the 95th percentile or greater compared to the standardization sample (Hartwig & Hayes, 2020).

**Social Acceptability.**

Based on reports from the building school psychologist and school counselor, all three types of restorative practices were “well liked,” but no formal data was collected since the beginning of implementation.

**Procedure**

The b.e.s.t. was chosen as it is the primary measure of social, emotional, and behavioral health used to make student decisions in the school district participating in this study. PBIS and restorative practices both seek to universally support students’ social, emotional, and behavioral health, as well as provide more intensive intervention for students who are identified as having additional need. The b.e.s.t is described as an opportunity to identify students with additional needs (as well as the severity of those needs) and track their progress over time. With verbal permission from both principals, de-identified b.e.s.t. screening data was provided to the researcher by the district PBIS coordinator. To maintain anonymity, student data other than gender associated with scores and score lists by schools and assessment dates were all removed prior to receiving this information. Screening scores were provided via an Excel document, which was password protected and kept on a password-protected computer used on a secure network.
In this school district, b.e.s.t. screening data was collected twice per year, once in the fall and once in the spring. Screeners were completed by teachers for all students in the schools, except those enrolled in self-contained classroom “cluster site” special education programs. Data from five screening dates was obtained: fall 2018, spring 2019, fall 2019, spring 2020, and fall 2020, but due to possible effects from the COVID-19 pandemic, only screening data from fall 2018 to fall 2019 was included in subsequent analyses. For this study, b.e.s.t. scores were converted into two categories: at risk and not at risk. Scores in the core range were considered not at risk. Scores in emerging, strategic, and intensive categories were classified as at risk. Scores from the three indicated screening dates were collapsed such that there was one set of scores for each school. This means that if a student was enrolled at a school for each of the screening periods, they would be represented as three screening cases in the sample. In total, 2,048 screening cases were obtained. Each case had a b.e.s.t. G-, C- and P-scale score. The G and P scales were used to address the research questions for this study. These scales were chosen because the G scale is the total symptoms scale, and the P scale measures internalizing symptoms.

**Statistical Analyses**

Rates of students scoring in the at-risk range on the b.e.s.t were compared between the PBIS only and PBIS plus Restorative Practices schools. All three levels classified as at-risk including emerging, strategic, and intensive were combined and compared with the core score, labeled as not at risk. The proportion of students in an at-risk category was compared between schools using a chi-square test of association. Statistical significance and effect size were calculated. Differences in the proportion of students in each school who scored in the at-risk
range on both the b.e.s.t. total score and the internalizing score were examined. Analyses were completed with Jamovi statistical analysis.
CHAPTER III: RESULTS

The purpose of this study was to compare social emotional outcomes for two elementary schools with different approaches to supporting student positive behavior. One school used traditional PBIS approaches; the second school added restorative practices to their PBIS system. School-wide social-emotional screening data from the b.e.s.t. screener of social, emotional, and behavioral health was examined. Specifically, the study sought to examine the proportion of students between schools scoring in an elevated risk range beyond the typical “core” range for their overall score, and the proportion of students between schools scoring beyond the typical “core” range on the internalizing behaviors scale. All student scores were combined for each school, collected across three time periods (fall 2018, spring 2019, and fall 2019) to conceptualize the overall health of the school.

Proportion of Students with Elevated Risk Levels on the b.e.s.t. Total Score

It was hypothesized that the proportion of students scoring in at-risk ranges on the b.e.s.t. total (G-Scale) and internalizing score (P-Scale) would be smaller for the PBIS plus restorative practices school when compared to the PBIS only school. For the total score, the opposite proved to be true. The difference in the proportion of students scoring in an at-risk category was significantly higher (Chi-Squared =21.0, p <.001) for the PBIS plus restorative practices school (17.5%) when compared to the proportion of students scoring in an at-risk range in the PBIS only school (10.5%). More students in the PBIS plus restorative practice school were rated by teachers as demonstrating challenging social-emotional concerns and behaviors. The effect size was small (Cramer’s V= 0.101). Of 2048, screening cases collected across three time periods, 1765, scored in the “core” or average range (86.18%). A total of 283 cases scored in one of the three elevated categories.
Table 1

Proportion of Students with Elevated Total-Scores in PBIS only and PBIS Plus Restorative Practices Schools

<table>
<thead>
<tr>
<th>Exposure to Restorative Practices</th>
<th>Elevated</th>
<th>Average</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>112</td>
<td>957</td>
<td>1069</td>
</tr>
<tr>
<td>% within row</td>
<td>10.5 %</td>
<td>89.5 %</td>
<td>100.0 %</td>
</tr>
<tr>
<td>Yes</td>
<td>171</td>
<td>808</td>
<td>979</td>
</tr>
<tr>
<td>% within row</td>
<td>17.5 %</td>
<td>82.5 %</td>
<td>100.0 %</td>
</tr>
<tr>
<td>Total</td>
<td>283</td>
<td>1765</td>
<td>2048</td>
</tr>
<tr>
<td>% within row</td>
<td>13.8 %</td>
<td>86.2 %</td>
<td>100.0 %</td>
</tr>
</tbody>
</table>

Figure 1

Percentage of Students with Elevated Total Scores

![Percentage of Students with Elevated b.e.s.t. Risk Levels by Condition](image)
Proportion of Students with Elevated Risk Levels on the Internalizing Scales

One criticism of PBIS is that it addresses externalizing behaviors but does not address internalizing behaviors as well. Anecdotally, some restorative justice practitioners have hypothesized this is an advantage of its implementation. However, the hypothesis that a lower proportion of students in the PBIS plus restorative practices school would score in an elevated range on the internalizing scale was not supported. In fact, the discrepancy between the two conditions was greater than the total behavior score. The Chi-Square Test of Association (Chi-Square = 27.2) found the difference in the proportion of students scoring in an at-risk range was statistically significant (p<.001), with fewer students in the PBIS only condition (11.9%) with an elevated risk score compared to the PBIS plus restorative practices condition (20.3%). The effect size was small (Cramer’s V = 0.115).

Table 2

<table>
<thead>
<tr>
<th>Exposure to Restorative Practices</th>
<th>Internalizing Scores Elevated or Average</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Elevated</td>
<td>Average</td>
</tr>
<tr>
<td>No</td>
<td>127</td>
<td>942</td>
</tr>
<tr>
<td>% within row</td>
<td>11.9%</td>
<td>88.1%</td>
</tr>
<tr>
<td>Yes</td>
<td>199</td>
<td>780</td>
</tr>
<tr>
<td>% within row</td>
<td>20.3%</td>
<td>79.7%</td>
</tr>
<tr>
<td>Total</td>
<td>326</td>
<td>1722</td>
</tr>
<tr>
<td>% within row</td>
<td>15.9%</td>
<td>84.1%</td>
</tr>
</tbody>
</table>
Figure 2

Percentage of Students with Elevated Internalizing Scores

Internalizing Symptoms Scale, Percentage of Elevated b.e.s.t. Student Scores

- Elevated
- Average
CHAPTER IV: DISCUSSION

This study examined whether the addition of restorative practices to existing PBIS practices was associated with a smaller proportion of students scoring in an at-risk range on a social-emotional screener. The study had two hypotheses. First, I hypothesized that a smaller proportion of students in the restorative practices condition would score in an at-risk range for the overall score on the screener compared to students in the PBIS only condition. Second, I hypothesized that a smaller proportion of students in the restorative practices condition would score in an at-risk range on the scale measuring internalizing behaviors compared to students in the PBIS only condition. The hypotheses were not supported. There were not fewer students in the at-risk ranges in the school using restorative practices than in the school using PBIS only. Instead, there was a significantly higher proportion of students in the PBIS plus restorative practices school who scored in at-risk ranges for both the overall scale and the internalizing symptoms scale. For both hypotheses, there was a small effect size.

This research is the first known direct examination of the relationship between social/emotional screener scores and the implementation of restorative practices in an elementary school setting. With successful case studies (Cavanaugh et al., 2014; Ingraham et al., 2016; Rundell, 2007), showing a relationship between restorative practices and improvements in areas such as bullying, school climate, and community engagement, there was reason to believe there may be a benefit to social-emotional risk levels. However, in this study students in the PBIS and restorative practices school actually showed higher levels of social-emotional risk. This may suggest that there were not additional benefits for the incorporation of restorative practices with PBIS, and instead indicates that there could be negative outcomes with how restorative practices were included in this school. However, an alternative interpretation of the results is that
participation in restorative practices with their students made teachers more aware of their
students’ needs, leading to more accurate identification of students with social-emotional needs. While the data indicates that there is a higher level of risk or intervention need for students at the restorative practices school, one explanation is that the needs are not in reality different, but the teacher’s awareness of their students’ needs is higher. Considering that the classroom teacher is both the individual completing the b.e.s.t. and the individual facilitating morning circles, this may have skewed the data. With fewer opportunities for direct conversation, teachers in the PBIS only school may have been unaware of some of their students needs, particularly internalizing needs that would be harder to see at more minor levels.

There are unique setting characteristics to consider before making generalized conclusions about the unexpected findings. This study was quasi-experimental in design, and one potentially impactful demographic difference across the school was determined after the study was designed and data were analyzed. Specifically, students enrolled in cluster sites, or self-contained classrooms attended the restorative practices school, but not the PBIS-only school. While students in cluster site classrooms were not included in school-wide screening assessments, there could be other effects of that setting difference that may have changed outcomes. For example, many of the students’ siblings attending cluster site also attended the restorative practices schools (and had their data included in the sample), and other impacts, such as witnessing more significant behaviors in common spaces cannot be ruled out as confounding variables. Witnessing higher levels of behavior could be stressful for students or could change how students considered behavioral expectations in their school environment. An additional setting factor to consider is the overall demographic make-up of both schools. Neither school was a particularly diverse school regarding race, linguistic status, or socio-economic status of
students. Proponents of restorative practices in school settings (Cavanaugh et al., 2014; Ingraham et al., 2016; Payne & Welsh, 2015; Welsh & Little, 2018) have argued there may be more value added to students from diverse or marginalized backgrounds. Relatedly, teachers utilizing restorative practices have reported that it provided them opportunities to connect and further understand their students from different backgrounds (Carter Andrews & Gutwein, 2020). In a district demographically similar to the one in this study, there may be fewer opportunities for cultural misunderstanding, and fewer behaviors or social-emotional concerns may be related to cultural differences.

The quality with which restorative practices were implemented in the PBIS plus restorative practices school may have also played a role in the unexpected outcomes. While all classrooms reportedly used morning circles, there were no reported standards at which they were to be implemented, nor was there data taken on the fidelity or frequency with which practices were used. Similarly, there was no school-wide or continuous training on the philosophy around restorative practices, and no way for those philosophies to be further incorporated throughout the school day. When developing sustainable, effective positive behavior systems, schools are most effective when they are planful in program rollout and data collection (Fixsen, 2021). Data-based decision-making is critical to ensuring that anything being utilized with students is effective and appropriate, and without any form of standardization or data collection it is impossible to determine whether what is reportedly occurring is the reality, or if there is a benefit. In this study, it is difficult to determine meaningful implications due to limitations of restorative practices implementation.
Limitations

This study had multiple limitations that should indicate caution when considering the meaningfulness and generalizability of the results. First, methodologically, the data was collected across three collection periods, in fall 2018, spring 2019, and fall 2019, and combined into one participant sample. Utilizing data that was condensed together, rather than separating the data or choosing a specific data collection date, limits the meaningfulness of proportional comparisons. More importantly, analyzing the data together prevents being able to look at patterns over time. Given that the PBIS plus restorative practices school was developing and refining various restorative practices, it may have been more helpful for school planning to consider changes in social emotional outcomes over time. An alternative method that may have been a better fit to the research questions would be to only analyze spring collection data. Fall screening data represents the social-emotional health of a study body upon school entry and before any lengthy exposure to school-wide positive behavior practices. Theoretically, spring is the point at which students would have been exposed to a larger quantity of restorative practices compared to the fall. Thus, considering spring screening data in isolation is likely a better indicator of whether school-wide practices had an influence on student social-emotional health.

Second, this study was quasi-experimental in its approach. Instead of implementing a program with specific intervention method guidelines and randomly assigning students to different conditions, the study retrospectively examined a program that had already been occurring. The researcher was unable to meaningfully account or control for all factors associated with attendance at each school that could have influenced the student outcomes. While the two schools are the most similar of the district elementary schools, several differences were noted over the course of the study. As mentioned, the PBIS plus responsive practices
school included self-contained special education classrooms. It is possible that there were other factors, such as teacher seniority, community programs, or other school-wide programming that impacted the results.

The fidelity of the implementation of restorative practices in the study is a large limitation. While the circle process that was being used is a form of restorative practices, it was not standardized. There was no data collected relating to how often or the way these circles were conducted beyond a few hours of staff development per year at workshops. While all teachers reportedly received the same training, the training was minimal and not regularly practiced or updated. For these reasons, we cannot have confidence in the internal validity of school-based restorative practices. This is not a school-specific problem. A major challenge of restorative practices is that unlike PBIS where there are highly specific standards and school certifications, restorative practices refer to a diverse umbrella of systems and practices that can but do not need to all occur simultaneously. Restorative practices, like PBIS, has a strong philosophy governing its approach. Unlike PBIS and restorative justice used in the criminal justice system, universally accepted rules for implementation do not yet exist (Song & Swearer, 2016). Without standardization, it is impossible to study the efficacy of an approach and rule out confounding variables.

Last, there are also potential validity issues within the dependent variable. The b.e.s.t. screener is characterized as a measure of social, emotional, and behavioral risk level and needs, and had face validity for staff and administrators within the school. However, other reliability and validity information is not publicly available. Since the construct validity and diagnostic accuracy of the tool are less known, there is no way to determine if students who are identified as at higher risk or in need of greater intervention are truly students that are of higher risk.
Similarly, it is possible that the b.e.s.t. content and items do not validly represent social-emotional domains restorative practices would be most likely to influence. The screener asks twenty-six questions on a Likert scale, but why those questions were chosen and others excluded is also unknown. There is also no information publicly available about test-retest reliability or interrater reliability.

**Implications for Practice**

While the outcomes of this study do not encourage the use of restorative practices, there may be opportunities for practice in schools worth exploring. The schools involved in this study were not very racially or culturally diverse, and in a more diverse school, particularly a school in which the students have significantly different lived experiences from each other or their teachers, restorative practices may offer greater benefits. Additionally, in a school community where conflict or misunderstanding frequently occurs related to cultural or lived experiences, restorative practices’ ability to promote trust and open conversation could provide value beyond a traditional PBIS system. In both schools involved in this study, there were high rates of students in the “core,” or low levels, indicating schools with overall low levels of social-emotional concerns regardless of their use of restorative practices.

A critical consideration for practice based on this research is that schools need to be thoughtful about whether implementing processes without fidelity can cause harm. Educators need to consider the philosophy and approaches embedded in something like restorative practices and it’s fit to its current school population. If PBIS is working as a system, and through data-collection a school determines they are meeting their goals, there is little reason to implement another system. If a current system has gaps that may be met through the nature of restorative practices, then investment into supporting those practices needs to also occur. Restorative
practices, and sharing of any kind in a school setting, requires vulnerability for students and staff. This is particularly true if restorative practices are being implemented based on its philosophy, where genuine, honest communication is a requirement for it to be effective. If this kind of sharing is encouraged, or even forced, without the safeguards of school wide understanding and procedure, it could easily cause harm to members of the school community. Children have been trained in and can understand and respect restorative philosophies (Drewery, 2016), but it is a substantial time investment that is crucial for ensuring that practices are implemented safely and effectively.

For these reasons, while not every available restorative practice needs to occur in a school setting for a school to be considered a “restorative practice school,” some level of school wide adoption of the philosophy is likely necessary to have both safe and effective outcomes. Like any school-wide philosophy, it would need to be thoughtfully and carefully evaluated as it increases in scale, and data would need to be used to continually adjust its implementation. One intervention alone such as circle process could work- if it was supported by school-wide philosophy and framework. On the PBIS website itself, it lists restorative circles as a tier three intervention (Center on PBIS, 2022), but there is no mention on what needs to be in place for the intervention to work. Similar to the common PBIS intervention check-in/check-out, the environment and relationships need to be considered to have improved outcomes- just doing the procedure without considering those factors will not inherently make improvements.

**Implications for Research**

There are many directions for future research, and a critical need to do high-quality, randomized control studies of restorative practices in schools. In addition, future research should critically consider the match between dependent variables and key outcomes that restorative
practices propose to address. For example, other measures that might be more meaningfully associated with desired outcomes for restorative practices are things like school connectedness, teacher-student relationships, attendance, bullying, disciplinary referrals, or exclusionary discipline like suspensions and expulsions. There are also opportunities to examine whether adding restorative practices within a PBIS model changes outcomes for diverse students, especially in areas where there are significant differences between staff and students or students from a wide range of backgrounds in one school community. There may be aspects of restorative practices that can be embedded within PBIS and still have positive outcomes within a greater PBIS framework. The level of school-wide implementation that needs to occur for positive outcomes to occur has not yet been determined by rigorous, consistent evaluation of student outcomes.

The present study did not support the hypothesis that restorative practices, in addition to PBIS, was associated with a smaller proportion of students scoring in at-risk ranges on a teacher completed social-emotional screener. This was true for both the overall risk scale and the internalizing behavior scale. Future research is needed to examine additional dependent variables, the impact in settings with more diverse populations, and data-based program evaluations assessing the level of implementation required for positive outcomes within a PBIS framework, in order to draw conclusions about the potential impact of restorative practices for educational use.
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