IS TIER 1 PBIS FEASIBLE AND EFFECTIVE IN RURAL, HIGH POVERTY SECONDARY SCHOOLS?
Initial Examination of a Model Demonstration

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Introduction

The National Center on Positive Behavior Interventions and Supports (PBIS) provides professional development and technical assistance to approximately 29,000 schools nationwide, many of which are rural (OSEP Technical Assistance Center on Positive Behavioral Interventions and Supports, 2021). While much has been documented on the impact of PBIS, implementing and building capacity for PBIS in rural high poverty school districts with a lack of resources can be challenging. To better understand the supports needed to positively impact student outcomes, the Center on PBIS has been examining several model demonstrations of PBIS implementation in schools residing within high need Local Education Agencies (LEAs). In particular, this brief provides an initial examination on the impact of PBIS implementation in two rural, high poverty, and majority Black/African American schools at the secondary level (5-12th grade) from a high need LEA. The information learned from this model demonstration may assist others working in and supporting schools in similar settings.
Rural Schools

According to a report from the Center for Public Education (CPE, 2018), approximately 50% of school districts, 33% of schools, and 20% of students in the United States are located in rural areas. Further, approximately 64% of rural counties experience high child poverty rates. Comparatively, 14% of all rural students attend a high-poverty school, defined as public schools where more than 75% of the students are eligible for free or reduced-price lunch. Exacerbating the challenge of high poverty is often the inadequate availability of quality resources. When funding is typically tied to size of the student population, severe operational challenges exist for districts and schools with smaller student pools. While schools are often called upon to create supportive environments that support teaching and learning in all settings (Goodwin, 2012), this can be challenging to meet student needs given a lack of resources, including material and technology with an ongoing struggle to hire and retain teachers (Pierce & Mueller, 2018; Rude & Miller, 2018; Steed et al., 2013) in rural, high poverty locales.

Rural Schools and PBIS

One of the ways to support a positive school environment is through the use of the evidence-based three-tiered Positive Behavioral Interventions and Supports (PBIS) framework. PBIS creates environments where all students across all kinds of schools are successful by improving and integrating all of the data, systems, and practices affecting student outcomes every day (Center on PBIS, 2021). Rural schools are implementing PBIS across all school levels (elementary: Leedy et al., 2004; middle: Luiselli, Putnam, & Sunderland, 2002; high: Johnson-Gros et al., 2008) and have demonstrated improved student outcomes, such as reductions in suspensions (Doggett et al., 2008) and tardies (Johnson-Gros et al., 2008). In fact, researchers have found rural schools to be more in favor of implementing PBIS (McDaniel et al., 2018) and less likely to abandon PBIS implementation compared to urban schools (Nese et al., 2016).

Rural, High-Needs, Secondary PBIS Schools

This model demonstration brief highlights the work done with two high poverty, rural (as defined by distance from city center), historically low performing, mostly Black/African American secondary schools. Both schools were chosen because of high numbers of suspensions and office discipline referrals. The middle school served as the feeder school to the high school and included the following students:
Middle School (Grades 5 – 8)

- Total: 614 students
- Attendance: 97% (average daily)
- Gender: 57% Male; 43% Female
- Race/Ethnicity: 70% African American; 30% White
- Free or reduced-price child nutrition program: 79%

High School (Grades 9 – 12)

- Total: 657 students
- Attendance: 94% (average daily)
- Gender: 53% Male; 47% Female
- Race/Ethnicity: 70% African American; 30% White
- Free or reduced-price child nutrition program: 67%

Trainer and Technical Assistance Center Partnership

This project was part of a long-term partnership between the local Instructional Accountability Specialist (IAS) for the district, the state PBIS Technical Assistance Center, and a state Department of Education employee. Together, these educators collaborated on the State PBIS Advisory Board. Co-facilitated by the State Department of Education and the State PBIS TA provider, the Advisory Board included classroom teachers, district leaders, a school nurse, a school mental health provider, and a school resource officer. The Board met quarterly to develop PBIS guidance, provide awareness training in all regions across the state, and inform state procedures and documents. In addition, local expertise and training were considered more relevant and culturally responsive than using outside external technical assistance. Coaches included the following:

Internal Coach

The IAS was employed in the district for more than 10 years, resided in the community served by the school district, and functioned as the local expert and the internal PBIS trainer and coach.

External Coaches

The State PBIS TA provider was a university faculty member who directed the local PBIS TA Center and trained the IAS on PBIS. The state department employee worked in student services across the areas of school safety, attendance, and PBIS, oversaw progress reporting, and advised the IAS and State PBIS TA provider.

Training

Overview of Process

The PBIS Tier 1 training consisted of two full-days of team training and ongoing monthly follow-up with the school leadership teams. The IAS conducted the training, with support for materials, agendas and training procedures from the State PBIS TA center. Incorporating recommendations of the National Technical Assistance Center on PBIS (PBIS Implementation Blueprint and the Training and Professional Development Blueprint for PBIS), the school-level training relied on a local statewide technical assistance center training and coaching model.
Content

The training covered the following content:

- Overview of PBIS and the reason to use three tiers
- Explanation of core components of Tier 1
  - schoolwide expectations
  - strategies for teaching expectations
  - a formal recognition system
  - standardized processes and definitions for classroom- and office-managed behaviors
- Explanation of key teaming features
  - membership
  - agendas and roles
  - data analysis and decision making
  - fidelity and Tiered Fidelity Inventory (TFI) overview

Ongoing Coaching

The local PBIS trainer (Instructional Accountability Specialist) visited each secondary school and attended regularly scheduled monthly PBIS meetings. For the first three months, coaching focused on Tier 1 implementation (e.g., posters, lesson plans, planning roll out). For the remainder of the year, meetings included implementation check-ins, but focused more on teacher and student buy-in and discipline data reviews. No regularly scheduled coaching was provided across subsequent years. However, support was provided upon request (e.g., when new questions arose, or when personnel changed).

Data Collection

See Table 1 for the range of data sources collected before training and every year for three years after training.

Table 1. Definitions of Data Sources Collected

<table>
<thead>
<tr>
<th>Data Source</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office Discipline Referrals (ODR)</td>
<td>A referral by a teacher or school employee on behalf of a student who has violated a school or classroom rule and who is sent to the office for further assistance in addressing problem behavior (Meador, 2017).</td>
</tr>
<tr>
<td>Level of Infractions</td>
<td>In the target state, code of conduct infractions are categorized based on level of severity. Level 1 infractions are minor and classroom managed. Level 2 infractions are office managed but often do not result in suspension. Level 3 infraction led to in- or out-of-school suspension and Level 4 infractions lead to placement in alternative school or expulsion.</td>
</tr>
<tr>
<td>Attendance</td>
<td>Broadly defined as unexcused absences daily, not per class period.</td>
</tr>
<tr>
<td>Suspension</td>
<td>Major student behavior offense imposed by the local board of education resulting in an in-school or out-of-school suspension.</td>
</tr>
<tr>
<td>Grade Point Average (GPA)</td>
<td>Indicator measuring academic performance with average grades earned. These data are only available for the high school population with comparative results.</td>
</tr>
<tr>
<td>Fidelity (Tiered Fidelity Inventory; TFI; Algozzine et al., 2014)</td>
<td>The TFI is a PBIS fidelity measure that evaluates fidelity at each of the three tiers separately. Tier 1 data were collected as part of this project.</td>
</tr>
</tbody>
</table>
Key Findings

Overall, the results were promising for both the middle and high school, with several desired outcomes showing positive decreases after three years of implementation. See Table 2 for a summary of outcomes.

Fidelity

Using the TFI as the measure, both schools were able to maintain a high level of implementation fidelity, meaning that they were able to implement all of the Tier 1 components of PBIS successfully. The following graphs compare fidelity of implementation at the end of Year One compared to the end of Year Three. Both the middle and high school showed a 50% increase in the rate of change between years. This increase of fidelity occurred after the second year of implementation and continued throughout the third year.

Figure 1. Increase in Percent of Middle School Implementation Fidelity at the End of Years 1 and 3.

Student Outcomes

Both schools saw reductions in office discipline referrals, suspensions, and some large decreases in infractions of different levels when comparing baseline to Year Three outcomes. Results of some infraction levels varied with increases seen at the middle school (See Table 2). There was little change for attendance across both schools.

Figure 2. Increase in Percent of High School Implementation Fidelity at the End of Years 1 and 3.
Table 2. Summary of Student Outcomes Comparing Baseline to Year 3 Implementation

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Before PBIS (Baseline)</th>
<th>After PBIS (Year 3)</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Middle School (5th-8th)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Office Discipline Referrals</td>
<td>4138</td>
<td>3308</td>
<td>📈 20% Decrease</td>
</tr>
<tr>
<td>Level 1 Infractions</td>
<td>8</td>
<td>215</td>
<td>📈 2,588% Increase</td>
</tr>
<tr>
<td>Level 2 Infractions</td>
<td>2779</td>
<td>2300</td>
<td>📩 17% Decrease</td>
</tr>
<tr>
<td>Level 3 Infractions</td>
<td>585</td>
<td>760</td>
<td>📘 30% Increase</td>
</tr>
<tr>
<td>Level 4 Infractions</td>
<td>193</td>
<td>33</td>
<td>📘 83% Decrease</td>
</tr>
<tr>
<td>White</td>
<td>375</td>
<td>259</td>
<td>📘 31% Decrease</td>
</tr>
<tr>
<td>Black/African American</td>
<td>3173</td>
<td>3031</td>
<td>📘 5% Decrease</td>
</tr>
<tr>
<td>Attendance</td>
<td>94.1%</td>
<td>93.6%</td>
<td>📞 1% Decrease</td>
</tr>
<tr>
<td>Suspensions</td>
<td>645</td>
<td>406</td>
<td>📘 37% Decrease</td>
</tr>
<tr>
<td>Fidelity (Tiered Fidelity Inventory: TFI)</td>
<td>50%</td>
<td>100%</td>
<td>📘 50% Increase</td>
</tr>
<tr>
<td><strong>High School (9th-12th)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Office Discipline Referrals</td>
<td>10719</td>
<td>4733</td>
<td>📉 56% Decrease</td>
</tr>
<tr>
<td>Level 1 Infractions</td>
<td>1190</td>
<td>35</td>
<td>📉 97% Decrease</td>
</tr>
<tr>
<td>Level 2 Infractions</td>
<td>8725</td>
<td>4228</td>
<td>📘 52% Decrease</td>
</tr>
<tr>
<td>Level 3 Infractions</td>
<td>659</td>
<td>366</td>
<td>📘 44% Decrease</td>
</tr>
<tr>
<td>Level 4 Infractions</td>
<td>90</td>
<td>79</td>
<td>📘 12% Decrease</td>
</tr>
<tr>
<td>White</td>
<td>1663</td>
<td>560</td>
<td>📘 22% Decrease</td>
</tr>
<tr>
<td>Black/African American</td>
<td>9003</td>
<td>4145</td>
<td>📘 31% Decrease</td>
</tr>
<tr>
<td>Attendance</td>
<td>90%</td>
<td>90%</td>
<td>No Change</td>
</tr>
<tr>
<td>Suspensions</td>
<td>1172</td>
<td>455</td>
<td>📞 61% Decrease</td>
</tr>
<tr>
<td>GPA</td>
<td>2.09</td>
<td>2.27</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Fidelity (Tiered Fidelity Inventory: TFI)</td>
<td>50%</td>
<td>100%</td>
<td>📘 50% Increase</td>
</tr>
</tbody>
</table>
Key Take-Aways

Overall, this initial examination demonstrated positive impact of PBIS implementation in two rural, high poverty, and majority Black/African American schools at the secondary level (5-12th grade) from a high need LEA. The information learned from this model demonstration may assist those working in and supporting schools in similar settings. A few take-aways include:

- high-poverty rural secondary schools in a high needs LEA can successfully implement PBIS with fidelity using local coaching supported by external resources
- high-poverty rural secondary schools in a high needs LEA may initially need more time and support to implement PBIS with fidelity
- implementation in areas with less resources might benefit from collaboration with external university trainer/s and state department of education guidance
- initial investment that relies on high quality resources might help reduce future funding needs
- PBIS can be successfully implemented using a locally trained PBIS district trainer that allows the high need LEA to rely on their local implementation expertise and enhance culturally responsive training practices
- implementing PBIS with fidelity in high poverty secondary schools can lead to improved outcomes, especially in the reduction of suspensions for African American students

Summary

Schools play a significant role in both preventing and intervening with students who experience behavioral and academic challenges. The multi-tiered PBIS framework establishes early intervention supports in schools and aims to improve a range of student outcomes. Regardless of where PBIS is being implemented, leadership teams benefit from using their data to examine how well they are implementing PBIS systems and practices (fidelity) and to consider whether they are achieving their target student outcomes (goals). This model demonstration in two schools summarizes preliminary evidence that the PBIS framework can be used in rural, high poverty, secondary schools in a high needs LEA.
Additional Resources

Websites
1. https://www.narmh.org
2. https://www.ruralsmh.com

Practice Briefs

References


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