Are Fewer Students with Disabilities Suspended When Schools Implement PBIS?

This evaluation brief explores the relationship between (a) schools' implementation of Tier 1 (universal) support within a positive behavioral interventions and supports (PBIS) framework and (b) the proportion of students with disabilities suspended. This brief summarizes a larger evaluation of the relationship between PBIS implementation and exclusionary discipline among students with disabilities (Simonsen et al., 2021).

Students with Disabilities Experience High Rates of Exclusionary Discipline

Relative to peers without disabilities, students with disabilities are more likely to experience exclusionary discipline. Specifically, students with disabilities experience disproportionate levels of restraint, seclusion, out-of-school suspension, expulsion, and contacts with law enforcement (U.S. Department of Education's Office of Civil Rights, 2018). Further, after controlling for race (Black/African American) and gender identity (male)—demographic characteristics known to predict higher rates of exclusionary discipline—scholars have documented that the effects of disability persist (e.g., Sullivan et al., 2014). To reduce exclusionary discipline and improve student outcomes, many (>25,000) schools in the U.S. implement a continuum of social, emotional, and behavioral (SEB) support within a PBIS framework.

Promise of PBIS for Students with Disabilities

Although teams strive to implement a full continuum of support, more schools implement Tier 1 and measure fidelity than the other two tiers combined: in 2019, for example, more than 15,000 schools implemented Tier 1 and measured fidelity, compared to fewer than 14,000 implementing Tiers 2 and/or 3 and measuring fidelity (Center on PBIS, 2021). Further, when schools implement Tier 1 PBIS with fidelity, students with disabilities likely benefit. Preliminary research and several state evaluations support a potential relationship between implementation of Tier 1 practices and reductions in exclusionary discipline for students with disabilities (Benner et al., 2010; Bradshaw et al., 2012; Farkas et al., 2012; Grasley-Boy et al., 2019; Loman et al., 2018; Simonsen et al., 2010. Tobin et al., 2012). Given the national scale of Tier 1 PBIS implementation in the U.S., a national exploration is an important next step to understand if PBIS is associated with reduced exclusionary discipline (e.g., suspension) for students with disabilities.

Evaluation Question

This brief addresses one evaluation question: Is there a relationship between (a) schools implementing PBIS with fidelity and (b) the proportion of students with disabilities suspended?

Method

We combined two national datasets for this evaluation: **PBIS Assessment** fidelity data (University of Oregon, 2019) and **Civil Rights Data Collection (CRDC)** discipline data (n.d.). The PBIS Assessment dataset includes all schools that report PBIS fidelity data to the Center on PBIS. The CRDC dataset includes all U.S. schools, as all schools are required to report data to CRDC. There are limitations to these datasets, as they both rely on school-reported data. For example, schools may implement PBIS, but not report data to PBIS Assessment. Similarly, schools may engage in exclusionary discipline practices but not report data to CRDC (National Council on Disability, June 2015; U.S. Government Accountability Office, 2019). Therefore, we advise readers to use caution when interpreting the findings.

This evaluation brief includes data from the **2015-2016 school year** (the most recent year with CRDC data when we completed the analysis). The larger evaluation includes earlier waves of data; patterns for suspensions were similar across years.[1] After merging data sets, the sample included **4,058 schools** representing 955 districts. **Table 1** presents definitions and descriptive data for this sample for each evaluation variable.

Table 1. Definitions and Descriptive Data for Primary Independent and Dependent Variables

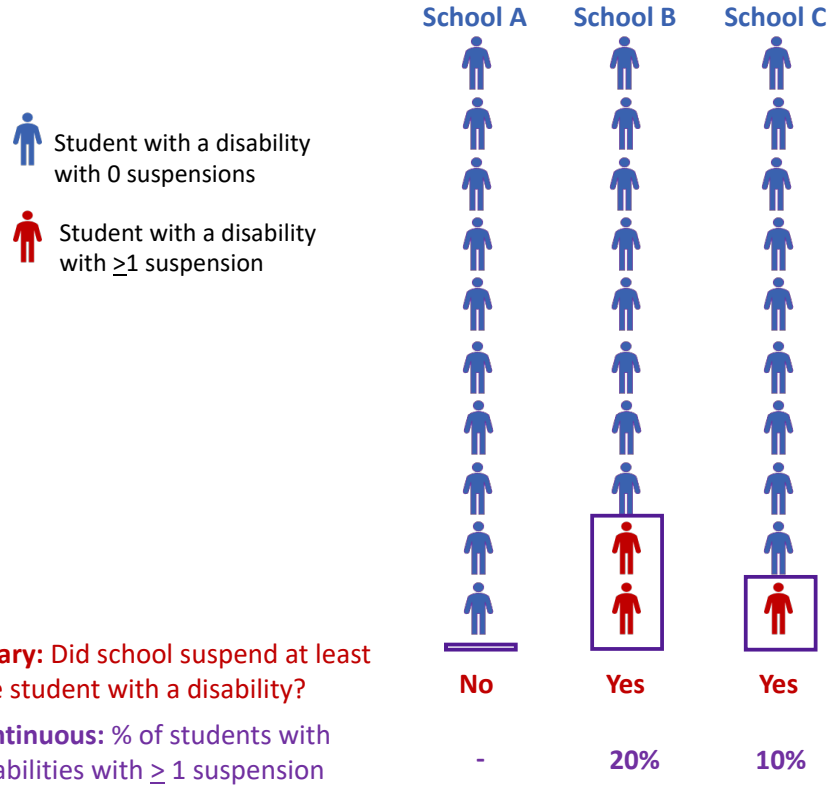
Variables	Definition	Descriptive Data
PBIS Fidelity	Schools met or exceeded fidelity criterion on ≥1 validated measure[2] • ≥70 on Tiered Fidelity Inventory (TFI) • ≥70 on Benchmarks of Quality (BoQ) • ≥80 on Schoolwide Evaluation Tool (SET)	4,058 schools measured fidelity using a validated tool, and 3,043 (75%) met fidelity • 1,214 met fidelity on the TFI • 1,804 met fidelity on the BoQ • 328 met fidelity on the SET
In-school suspension (ISS)	Temporary removal "for at least half a day for disciplinary purposes" in which student "remains under the direct supervision of school personnel"	• Of 88,435 schools reporting ISS, 47% reported 0 ISS for students with disabilities • Among schools reporting ISS for students with disabilities, 16% of students with disabilities received ISS on average
Out-of-school suspension (OSS)	Temporary removal "for at least half a day for disciplinary purposes" in which student removed "to another setting," such as home) suspension	• Of 88,453 schools reporting OSS, 31% reported 0 OSS for students with disabilities • Among schools reporting OSS for students with disabilities, 16% of students with disabilities received OSS on average

Note. See CRDC (n.d.) for full definitions.

[1] See Simonsen et al. (2021) for all waves of data and additional dependent variables. Patterns among other variables (i.e., restraint, seclusion, expulsion) were less consistent across years.
[2] See the PBIS Evaluation Blueprint for additional detail on fidelity measures and criteria.

Given known concerns with schools underreporting exclusionary discipline in the CRDC, we modeled a two-part path analysis (Boulton & Williford, 2018; Olsen & Schafer, 2001). First, we explored the relationship between PBIS fidelity and whether the school reported suspending at least one student with a disability (**binary part**, with schools coded 0 or 1 for each suspension variable). Second, among schools reporting suspension for at least one student with a disability, we explored the relationship between PBIS fidelity and the proportion of students suspended (**continuous part**). Figure 1 illustrates this model.[3]

Figure 1. Illustration of Two-Part Model



As illustrated, each school reported the number of students with disabilities suspended (ISS or OSS) each year. In this figure, **Schools A, B, and C** reported suspending 0, 2, and 1 student(s) with disabilities, respectively.

The **binary part** of the model examines whether each school reported suspending 0 or ≥1 students with disabilities.

Among schools reporting suspension(s) for at least one student with a disability, the **continuous part** of the model examines the proportion of students with disabilities suspended at least one time.

[3] See Simonsen et al. (2021) for full method.

Is there a relationship between (a) schools implementing PBIS with fidelity and (b) the proportion of students with disabilities suspended?

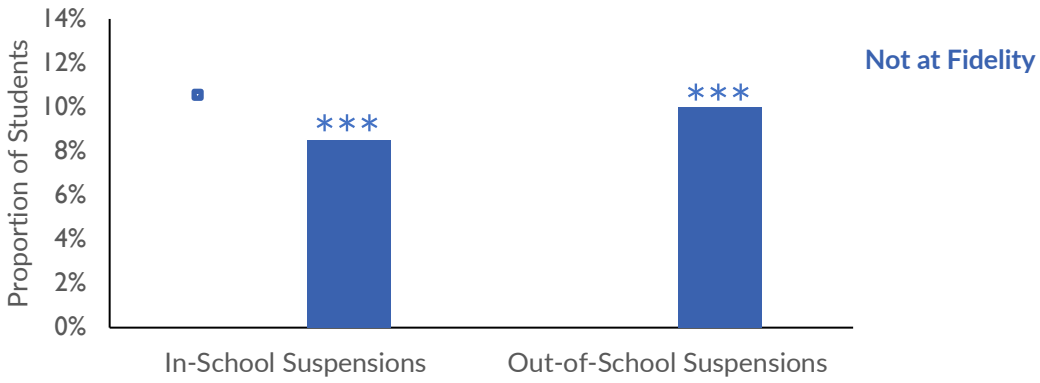
Schools implementing PBIS with fidelity were ***less likely*** to report at least one student with a disability experienced ISS and OSS (**binary model**), and that difference was statistically significant for OSS. Specifically, the statistical model estimated

- a **65.2% chance** that an average size school ***not* at fidelity** would use ISS with at least one student with a disability, compared to **a 62.2% chance** for an average size school **at fidelity**; and
- an **84.8% chance** that an average size school ***not* at fidelity** would use OSS with at least one student with a disability, compared to an **80.2% chance** for an average size school **at fidelity** ($p < .01$).

Importantly, among schools reporting suspension data (**continuous model**), a statistically significantly ***smaller proportion of students with disabilities were suspended*** (ISS and OSS) in schools implementing PBIS with fidelity (see Figure 2). Specifically, the statistical model estimated that

- **10.4% of students with disabilities** would experience ≥1 ISS in an average size school ***not* at fidelity**, compared to **8.5% of students with disabilities** in an average size school **at fidelity** ($p < .001$); and
- **12.4% of students with disabilities** would experience ≥1 OSSs in an average size school ***not* at fidelity**, compared to **10.0% of students with disabilities** in an average size school **at fidelity** ($p < .001$)

Figure 2. Relationship Between PBIS Fidelity and the Proportion of Students with Disabilities Suspended



***$p < .001$

Summary: Big Idea

Schools implementing PBIS with fidelity may suspend fewer students with disabilities. We recommend that schools continue to implement universal (Tier 1) SEB support within a PBIS framework to create safe, positive, and predictable environments for all students, including students with disabilities.

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