

Positive Behavior Interventions & Supports

June 2021

Background

Positive Behavioral Interventions and Supports (PBIS) is an evidence-based, data-driven framework proven to reduce disciplinary incidents, increase a school's sense of safety, and support improved academic outcomes. The premise of PBIS is that continual character education instruction, combined with acknowledgment or feedback of positive student behavior, will reduce unnecessary discipline and promote a climate of greater productivity, safety, and learning.

PBIS schools apply a multi-tiered approach to prevention, using disciplinary data and principles of behavior analysis to develop school-wide, targeted, and individualized interventions. PBIS also aims to improve the school climate for all students. PBIS implementation has taken place in all school levels (ES, MS, and HS). PBIS is a school-wide program impacting all students in the school across different classrooms.

Initiation of the PBIS Program in FCS began in SY 2013-14. In the 2016-17 school year, ten schools had a fully operational PBIS program, and 32 schools had an emerging PBIS program, with all other schools working toward installing PBIS. As of academic year 2018-19, 84 schools were implementing PBIS.

The Department of Program Evaluation (DPE) evaluated PBIS to gather information on how implementation related to anticipated outcomes. The intent is that this evaluation provides actionable insights for the continuous improvement of this program.

Evaluation Questions

The PBIS program evaluation addressed the following questions:

- 1) What is the impact of PBIS on school climate?
- 2) What is the impact of PBIS on school discipline by student demographic group?
- 3) How does PBIS' impact on school discipline and school climate vary by implementation?

Methodology and Data

Data

Data for this evaluation came from the State of Georgia Governor's Office of Student Achievement (GOSA), the Georgia Department of Education, and the district's records of PBIS implementation. The analysis focused on the 2017-18 and 2018-2019 school years to provide a more accurate depiction of the PBIS program before the COVID-19 pandemic. 84 schools were included in this analysis; however, some of these schools were excluded from specific statistical models used in our analysis because their data was incomplete.

The measure that was available for an implementation fidelity metric was the PBIS [Self-Assessment Survey](#) (SAS). This instrument is used by school staff for the initial and annual assessment of effective behavior support systems in their school. The survey examines the status and needs for improvement of the four behavior support systems used by PBIS:

- (a) school-wide discipline systems,
- (b) non-classroom management systems (e.g., cafeteria, hallway, playground),
- (c) classroom management systems, and
- (d) systems for individual students engaging in chronic problem behaviors.

The data from Georgia Student Health Survey 2.0, the Georgia School Personnel Survey, and the Georgia Parent Survey were used to assess student, staff, and parent perceptions of school climate. These are measures that are also used to calculate the Georgia School Climate Star Rating.

Methodology

To address the first research question, DPE was unable to measure impact due to the staggered implementation of PBIS. There was a lack of parity between schools implementing and schools not implementing over time, ultimately preventing the ability to create comparison groups of those implementing and not implementing PBIS to measure impact. Instead, DPE measured the relationship between a school's SAS score and key outcome metrics using a Pearson Correlation. The outcome metrics included were:

- out-of-school suspensions (OSS)
- in-school suspensions (ISS)
- office discipline referrals (ODRs)
- student perceptions of school climate
- teacher perceptions of school climate
- parent perceptions of school climate
- PBIS recognition level (installing, emerging, operations, distinguished)

We measured the relationship between PBIS implementation and discipline index by racial/ethnic groups for the second evaluation question using a Pearson Correlation.

Lastly, we ran multivariate linear regressions to test this hypothesis: the higher the PBIS implementation fidelity, PBIS recognition level, and year implemented would yield a decrease in OSS, ISS, and ODRs as well as an increase in Climate STAR scores and perception of school climate from students, parents, and personnel.

Results

PBIS Implementation Fidelity Correlations with Intended Outcomes

While the Pearson Correlation coefficients cannot be used to determine causality, they show a promising trend between implementation fidelity and the intended outcomes.

SAS implementation fidelity has a moderate negative correlation with OSS rates (-0.29), ISS rates (-0.34), and the number of office discipline referrals (-0.30). As we see fidelity scores increase, we see a decrease in OSS, ISS, and ODRs.

Figure 1: Negative Correlation between PBIS Implementation Fidelity and ISS Rate

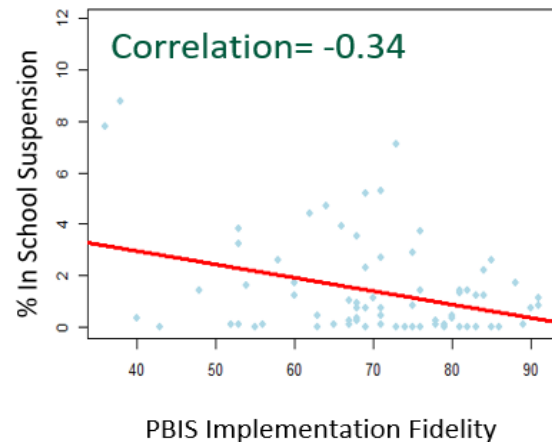
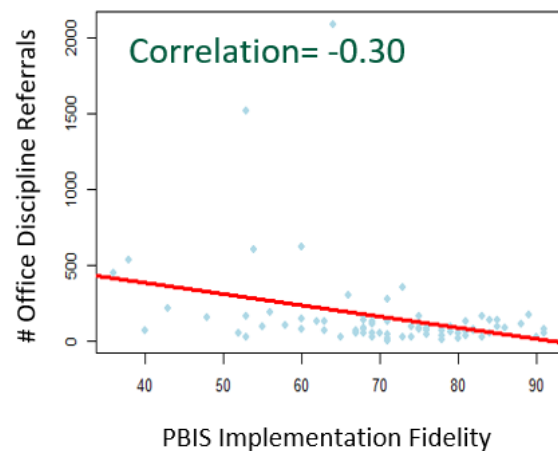
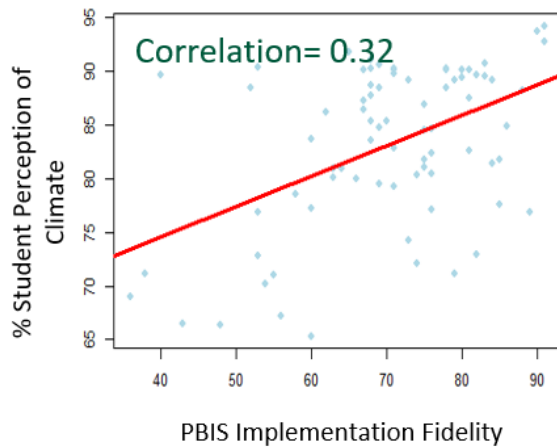


Figure 2: Negative Correlation between PBIS Implementation Fidelity and Number of ODRs



PBIS implementation fidelity has a moderate positive correlation with perception of school climate from students (0.32), parents (0.39), and personnel (0.47). Interestingly, there was a weak positive correlation between implementation fidelity and Star Rating (0.18). This may be due to other variables used to calculate the Star rating. Implementation fidelity also had a moderate positive correlation with years of PBIS implementation (0.31) and PBIS recognition level (0.30). Ultimately, as implementation fidelity increases, so do positive perceptions of school climate and recognition level.

Figure 3: Positive Correlation between PBIS Implementation Fidelity and Perceptions of Positive Schools Climate



PBIS Implementation Fidelity & Discipline by Racial/Ethnic Group

There is a statistically weak relationship between PBIS implementation fidelity and discipline index by racial/ethnic groups. The correlations, while weak, also vary by racial group and year. Table 1 shows the Pearson Correlation Coefficient for the SAS and discipline index for each racial/ethnic group. Due to the weak and varied nature of the coefficients, DPE recommends further study of this area when more data is available.

The district began a three-year intensive discipline disproportionality action plan in 2016

to specifically target the disproportionality of discipline of various disability and racial groups of students. This targeted program may influence why this correlation is weakly associated with PBIS implementation as schools, regardless of their PBIS implementation, were engaging in this discipline initiative.

Table 1: Pearson Correlation Coefficient for SAS and Discipline Index

<i>Racial/Ethnic Group</i>	<i>2018</i>	<i>2019</i>
<i>Asian</i>	0.126	0.071
<i>Black</i>	0.051	0.140
<i>Hispanic</i>	-0.243	-0.009
<i>Multiracial</i>	0.057	-0.135
<i>White</i>	0.152	-0.116

PBIS Implementation Impact on School Climate

The regression analysis showed that implementation fidelity is a statistically significant predictor of personnel perception of school climate. This is not surprising as the SAS is a fidelity measure developed from staff surveys. 82% of the variance in personnel perception of school climate can be explained by the model containing SAS, years implementation, number of ODRs, percent ELs, and ELA Milestone scores.

Limitations and Considerations

Limitations should be considered when unpacking the results, as these limitations may have impacted our observed outcomes.

Limited Data

The PBIS Self-Assessment Survey (SAS) data was not available for all schools that were implementing PBIS. Therefore, this analysis only includes schools with SAS data. Before 2017-18 there were few schools with SAS data, and consequently, we could not analyze implementation fidelity prior to 2017-18.

The COVID-19 pandemic and school closures impacted discipline data in 2019-20 and 2020-21. These academic years have been excluded from the analysis.

The discipline data from the Georgia Governor's Office of Student Achievement only included the discipline rate by racial/ethnic group. We could not include other demographic groups in this analysis, such as students with Free/Reduced Price Lunch status, students with exceptionalities, and English learners.

Evaluation Design

The implementation of PBIS was staggered and inconsistent across the district. To evaluate impact, having clear comparison groups of schools implementing PBIS and schools not implementing PBIS is critical. Limited implementation data before SY 2017-18 and a limited number of schools not implementing PBIS after 2017-18 compromised the ability to form comparison groups and to design an impact analysis.

Conclusion

Overall, we see that PBIS implementation fidelity as measured by the SAS is correlated with the intended outcomes of the intervention. Due to inconsistent historical data, we cannot determine the impact of this intervention. We recommend that program evaluation be involved in programs as they are implemented to ensure more rigorous analyses are possible to assess impact. Moreover, additional study is recommended when data is available to determine how PBIS is associated with various demographic group discipline rates and proportionality.

References

- Gagnon, J. C., Barber, B. R., & Soyuturk, I. (2020). [Policies and practices supporting Positive Behavioral Interventions and Supports \(PBIS\) implementation in high-poverty Florida middle schools.](#) *Exceptionality*, 28(3), 176-194.
- Friez, M. R. (2020). [Evaluation of PBIS Implementation in an Urban School District](#) (Doctoral dissertation, University of Pittsburgh).
- James, A. G., Noltemeyer, A., Ritchie, R., Palmer, K., & University, M. (2019). [Longitudinal disciplinary and achievement outcomes associated with school-wide PBIS implementation level.](#) *Psychology in the Schools*, 56(9), 1512-1521.
- Pas, E. T., Johnson, S. R., Debnam, K. J., Hulleman, C. S., & Bradshaw, C. P. (2019). [Examining the relative utility of PBIS implementation fidelity scores in relation to student outcomes.](#) *Remedial and Special Education*, 40(1), 6-15.
- Rodriguez, B. J., Loman, S. L., & Borgmeier, C. (2016). [Tier 2 interventions in positive behavior support: A survey of school implementation.](#) *Preventing School Failure: Alternative Education for Children and Youth*, 60(2), 94-105.
- Swain-Bradway, J., Network, M. P., Freeman, J., Kittelman, A., & Nese, R. (2018). [Fidelity of SW-PBIS in high schools: Patterns of implementation strengths and needs.](#) Technical Assistance Center on Positive Behavioral Interventions and Supports.