Northwestern College, Iowa

NWCommons

Fall 2021

The Effectiveness of Positive Behavior Interventions and Supports (PBIS) in Schools

Jennifer L. Van Otterloo

The Effectiveness of Positive Behavior Interventions and Supports (PBIS) in Schools

Jennifer L. Van Otterloo

Northwestern College

A Literature Review Presented

in Partial Fulfillment of the Requirements

for the Degree of Master of Education

November 2021

Dr. Angila Moffitt

Table of Contents

Abstract

Negative student behaviors are increasing in schools today (Molly et al., 2013). When students engage in problem behaviors, they are more likely to fall through the cracks and their educational gap increases. Therefore, something needs to be done in school systems to decrease these problem behaviors. PBIS is an implementation framework that is designed to improve academic and social behavior outcomes for all students (Sungai & Simonsen, 2012). The purpose of this literature review is to explore the effects of PBIS on student behavior and ways to implement PBIS successfully. Overall, research shows that when PBIS is implemented correctly and with fidelity, negative student behaviors decrease because of this preventative framework.

*Keywords***:** positive behavior intervention and supports, PBIS, office discipline referrals, ODRs, framework, behavior, schools, student outcomes, implementation, fidelity

Positive Behavior Interventions and Supports

Positive Behavior Interventions and Supports, otherwise known as PBIS, has been defined, described, and considered ever since its introduction in the reauthorization of the Individuals with Disabilities Act in 1997. PBIS is an implementation framework that is designed to improve academic and social behavior outcomes for all students (Sungai & Simonsen, 2012). PBIS is a multi-tiered framework for behavioral supports that has gained traction in thousands of schools around the nation (Gage et al., 2018). PBIS is a problem-solving approach that alters the emphasis of an educator from a reactionary to a preventative mentality. Tyre et al. notes, "PBIS shifts the major focus from reacting to inappropriate student behavior through the use of punishment to restructuring discipline systems to provide universal, targeted, and intensive supports that encourage positive social, emotional, and behavioral growth in all students" (Tyre et. al, 2018, pg. 77). The PBIS framework relies on a coordinated approach that incorporates systems, practices, and data to achieve better student outcomes both academically and behaviorally (Robbie et al., 2021). Because use of the PBIS framework is growing so fast, it can be hard for schools to implement successfully without knowing the appropriate protocols and without researching the effectiveness of the framework and how it works.

Student behaviors like bullying, substance abuse, defiance, physical aggression and other deviant behaviors are increasing in schools today (Molloy et al., 2013). Such behaviors include bullying along with many others that result in a variety of "disciplinary consequences aimed at increasing safety, including error corrections, time outs, office discipline referrals (ODR), in- and out-out-school suspensions, and ultimately expulsion" (Gage et al, 2018, pg. 142). When students engage in problem behaviors, they are more likely to fall through the cracks and their educational gap increases. Therefore, something needs to be done in school systems to decrease

these problem behaviors. The purpose of this literature review is to explore whether when PBIS is implemented correctly and with fidelity, negative student behaviors actually decrease because of the PBIS preventative framework. Tyre et al. (2018) point out that proper implementation of the PBIS framework has shown an increase in direct instructional time in the classroom, improvement of students' academic achievement, more positive connections and relationships between students and their teachers and improved overall climate of the school itself.

Two database websites, including DeWitt Library with Northwestern College and through Google Scholar were used to gather research articles. Peer reviewed journal articles dating between 2011 through 2021 were collected. Keywords searched included PBIS, positive behavior interventions and supports, office discipline referrals, behavior practices in schools, and implementing PBIS.

Each school that adopts the PBIS framework works together to create positive discipline practices that are constant across all staff, students, and settings. The PBIS framework is considered a noncurricular model, which means it is flexible enough to fit different school cultures and contexts at all school levels (Bradshaw, 2013). Ultimately, this flexibility means that any school (elementary, middle, or high school) can adopt this framework and modify it for their specific needs: each school can adapt PBIS to their school culture and expectations. Initial findings show that PBIS is effective because it targets each and every student in the school within one of its three tiers: universal (tier 1), selective (tier 2), and indicated/targeted (tier 3). These tiers target all students and thus meet individual needs, making PBIS so successful.

This literature review is structured into five main sections: student behaviors and how they affect the academic culture of a school, office discipline referrals (ODRs) and discipline practices, implementation of fidelity and sustainability, the positives and negatives of PBIS, and

PBIS across different settings. The gaps in research, as well as tips for successful PBIS implementation, is explored later in this literature review. This literature review concludes that when PBIS is implemented correctly and with fidelity, negative student behaviors decrease because of the PBIS preventative framework.

Review of Literature

PBIS

When positive behavior interventions and supports is implemented correctly and with fidelity, negative student behaviors decrease because of the PBIS preventative framework. The research of Petrasek et al. (2021) asked the question of how schools can enhance the motivation and engagement of the PBIS framework into their settings. PBIS is a framework that provides an opportunity to create positive climates that promote setting and achieving social, behavior, and academic goals and supports the positive climate that is created within the framework (Petrasek et al. 2021). The problem the researchers found was that the students and staff need to be more engaged and motivated in order to properly implement PBIS and to do so successfully. Facilitating both the balance of motivation and engagement can be tricky because "highly motivated individuals are more likely to be engaged, and highly engaged individuals are more likely to be motivated" (Petrasek et al. 2021). For this motivation and engagement to happen, relationships were found to be essential.

There is research outlining some concerns staff have when implementing PBIS. The research of Tyre et al. (2018) explored concerns of staff members of nine schools in Western Washington that were planning to implement PBIS or already were implementing PBIS. These concerns were explored by using the concerns-based adoption model (CBAM). The concerns

were then coded and combined to produce group concern profiles. Planning and implementing staff most frequently reported task-related concerns associated with managing, organizing, and implementing PBIS. The report explained, "more staff in planning schools were unaware of PBIS, while more staff in implementing schools were concerned with the impact of PBIS on students. Across all schools, the majority of staff reported their support for PBIS implementation, but they were concerned about the support and implementation of their colleagues" (Tyre et al., 2018, pg. 77).

Tyre et al. (2018) and Petrasek et al. (2021) both demonstrate the important role PBIS can play for school districts, but Tyre et al. (2018) points out the concerns of staff buy-in and how that can affect the success of the PBIS framework. In order for the framework to work, there must be a sense of ownership and buy-in. If these things happen, then a more meaningful and lasting change may occur.

Although PBIS is more popular among elementary and middle schools, there are some high schools implementing PBIS in their settings as well. A high school in eastern New Hampshire was the focal point of a research project. Malloy et al. (2018) discussed the problem of schools not meeting the social, emotional, and academic needs of all students. Malloy et al. states that ethnically and racially diverse students with emotional and behavioral disorders (EBD) are more vulnerable (Malloy et al., 2018) and are the victims of an achievement gap. In order to address this gap, there has recently been emphasis on personalizing the school atmosphere and meeting the diverse social and emotional needs of all students by executing guidelines, procedures, and evidence-based instructional practices using a positive behavior supports framework, which in this school's case is PBIS.

When the three tiers of PBIS are all used together and implemented correctly, positive results arise. The purpose of the Malloy et al. (2018) research study was to describe the implementation and outcomes experienced by a high school that fully implemented PBIS and all three of its tiers. The study includes a description of practices implemented by the school and school- and student- level outcomes pre- and postimplementation, including changes in rates of problem behavior, attendance of students, dropout rates, and academic performance of the high school students. The results of this case study specify that implementation of tier 1 interventions, through techniques such as direct teaching of classroom expectations, are related to improvements in student behaviors and students' connection with the school, such as dropping out. Whereas there was an increase in in-school-suspensions, the staff indicated that they purposefully increased their use of ISS instead of OSS to keep students in the building and offer them some chances for academic recovery. According to the descriptive data, the increased number of ISS counterbalances the number of fewer OSS, a factor that indicates a need to work with teachers to implement positive supports in the classroom to keep students in the instructional setting and to reduce the number of suspensions of any kind. Future research is needed to support whether or not tiers 2 and 3 implemented properly is related to the improved student outcomes. Research proved that when PBIS is implemented properly even at the high school level, the PBIS multitiered framework results in improved student outcomes including lower school dropout rates, higher student engagement, decreased behavior problems, and academic progression, just to name a few.

On the contrary, not all studies show significant positive results. Ryoo et al. (2018) investigated the effect of PBIS on student learning and behavioral problems in elementary and middle schools. Ryoo et al. (2018) studied the longitudinal effect of PBIS on student behavior

problems and academic achievement growth in both elementary and middle schools in Minnesota using propensity score matching over the course of three years. The study showed no statistically significant longitudinal effects of PBIS on student behaviors or academic achievement among elementary or middle schools, even though the positive direction of longitudinal changes were identified. This result raised questions about the efficacy of PBIS using a statewide achievement test when scaled up to a state level.

The tiered fidelity inventory is being used within schools to gain insight on the implementation process of PBIS. Noltemeyer et al. (2019) used this inventory to study the longitudinal disciplinary and achievement outcomes associated with school wide PBIS implementation. Noltemeyer et al. (2019) researched eighty-five schools in Ohio by giving the teachers the tiered fidelity inventory or TFI to gain their insight regarding the implementation quality of PBIS in their school. Linear regressions were conducted to examine the degree to which changes in TFI scores predicted changes in out-of-school suspensions (OSS) and achievement scores when controlling for school-level demographic variables. Changes in the TFI scores were found to significantly predict changes in OSS per 100 students but not changes in achievement scores. The use of longitudinal data is important when looking at change over time. The TFI was the tool chosen to measure if implementation fidelity was happening (Noltemeyer et al., 2019).

Behaviors and PBIS

As PBIS is often implemented to reduce negative student behavior, several studies have examined whether implementation does, indeed, have that desired effect. Bullying is a major behavior concern in schools. Researcher Catherine Bradshaw (2013) studied the prevention of behaviors, specifically bullying, through PBIS: a multitiered approach to prevention and

integration. School-aged children are becoming more and more victimized by bullying in schools; bullying is an increasing public health concern (Bradshaw, 2013). Bradshaw's research was a randomized, controlled trial of PBIS implementation completed on fifty-eight schools in Maryland. The results of the trial suggested that there were positive impacts of the PBIS framework such as implementation fidelity. Even though the impacts of PBIS were found to be positive, additional research is still needed to determine appropriateness for different types of aggressive and problem behaviors, and more broadly on the role of youth in the prevention of bullying. The social-ecological framework suggests that a poor school climate is connected with the increase of bullying and negative student outcomes. On the flip side, positive, schoolwide approaches to student behavior management, such as the PBIS framework, led to improved school climates and will, in turn, reduce bullying (Bradshaw, 2013).

High schools are starting to wonder if PBIS can be implemented in their setting as well. Bradshaw et al. (2015) did more research on the bullying topic, but more specifically at the high school level. There is a growing interest in the use of a multitiered system of supports framework to address issues related to school climate and bullying. Thirty-one high schools were randomly assigned to implement PBIS within the larger fifty-eight high school randomized trial in Maryland. Bradshaw et al. (2015) conducted a multilevel analysis of the longitudinal implementation data over a two-year period. This analysis showed that schools with higher baseline rates of bullying commonly implemented PBIS with greater fidelity over time. The result suggests that schools with amplified bullying may be predominantly driven to adopt the PBIS framework because many high schools struggle to address issues related to bullying and admit that it is a problem in their school climates. However, other baseline indicators of disorder

were generally not connected with PBIS implementation and thus do not appear to be barriers to adoption (Bradshaw et al., 2015).

Nurturing positive behavior among elementary students can also be a challenging and difficult task. Teachers that set out to complete this task require a lot of careful effort and dedication to implement effective methodologies that support every child. It takes more than energy, time, and commitment to support students with behaviors (Marshall, 2018). Marshall (2018) researched the influence that a PBIS-based program, Kickboard, had on achievement in reading and math and the number of office referrals in third and fourth grade classes at a low-income elementary school. Eight teachers and two principals were interviewed for this research, and data was collected over a two-year period. Data from this research showed that Kickboard did not have significant impacts on student achievement. However, a significant impact was made in terms of discipline. Data from the interview participants showed that both schools found strength and value in the discipline management systems and practices on their school campuses (Marshall, 2018). Establishing rapport with students is essential for classrooms to function smoothly. There will always be those students who seem difficult or near impossible to reach. For those students, a more systematic approach to develop rapport may be essential. This is where the PBIS becomes useful.

Part of the second tier of PBIS is the check-in, check-out (CICO) process. CICO is a targeted behavioral intervention that works on reducing the problem behaviors of students. Sobalvarro et al. (2016) specifically looked at the CICO intervention and its effect on kindergarten students in an urban setting in Pennsylvania. Students in this case were referred by their teacher for disruptive behaviors in the classroom setting across a period of nine weeks to obtain appropriate data. Results indicated that the CICO intervention process led to a reduction

in off-task behaviors and an increase in on-task behaviors for both students in the case study. The Sobalvarro et al. (2016) study provides support for the practicality of school support personnel and the primary interventionist using the CICO. The intervention of check-in, check-out holds several components, which were not assessed independently in this study. Therefore, the future research component for this study should include an analysis study to help determine if the intervention of CICO could be done using fewer resources from the teacher or mentor. Maintenance data was not collected: hence, future research is needed to document CICO procedures- whether they can be sustained by the staff implementing it with fidelity and effectiveness through time (Sobalvarro et al., 2016).

Early childhood teachers often mention difficult behaviors as a barrier to their success in creating inclusive environments. Statistics suggest that approximately one-third of preschool children demonstrate some sort of challenging behaviors, yet the teachers continue to feel ill-equipped to address and handle the behaviors in their settings. As these early childhood teachers continue to struggle to support these young students with behaviors, the students are at a higher risk for exclusion or expulsion from their pre-school classrooms (Carr & Boat, 2019). A participatory action research study conducted at the Arlitt Child Development Center, a laboratory preschool at the University of Cincinnati, used naturalistic inquiry to create a solution for addressing these challenging behaviors within the early childhood framework. In focus groups facilitated by a school psychology doctoral student, the center's preschool teachers created constructivist strategies for addressing a Tier I PBIS framework that was based on Response to Intervention processes. The goal was to assess the disagreement between behavioral and constructivist approaches to early childhood interventions (Carr & Boat, 2019). The findings indicated that an eco-constructivist approach to PBIS may serve as a model for blended practices

in early childhood programs. Within the scope of Tier I of PBIS, the goal is to determine if a

more comprehensive and intensive intervention is needed for the persistent and at-risk behavior

students.

Students with severe emotional and behavior disorders can also benefit from PBIS. The

investigation action research by McCurdy et al. (2016) involved school psychology consultants

and educators. Their goal was to design and evaluate the impact of school-wide PBIS in a self-

contained school serving students with emotional and behavior disorders (EBD). The question

researched was whether or not the PBIS framework could help students with severe EBD. The

participants of this study were students with significant educational, emotional, and behavior

support needs that are beyond the services that can be provided in traditional public schools.

After implementation of tier 1, the results showed a reduction in the frequency of discipline

referrals and the number of emergency safety interventions, with a sustained impact across three

years. The problem with this specific research was the lack of experimental control in evaluating

the intervention (McCurdy et al., 2016). Students with EBD are unfortunately more likely to be

educated in alternate or more restrictive settings such as self-contained classrooms or even self-

contained schools and over time these students show minimal improvement in academics and

social skills or behaviors (McCurdy et al., 2016). Barry McCurdy and his research team explain

that as a recommendation, "school psychologists seeking to redefine their roles within schools by

promoting the adoption of EBPs for high-risk student populations may be in the best position to

consult with and coach teams of educators in self-contained schools interested in improving

services for their students" (McCurdy et al., 2016).

Discipline and Office Discipline Referrals

PBIS, along with other programs that are implemented in the "real world," often look significantly different from what was initially intended by the developers of the program. Molloy et al. (2013) took advantage of a large dataset to obtain an understanding of PBIS and its real-world implementation. Data was collected from 27,689 students and 166 public primary and secondary schools across seven states over a span of three years, with the third year's data being the primary source of data. The reason data from the third year of the study was examined was to ensure that the schools being studied had at least two years of implementation. In light of the findings, the researchers recognize components of PBIS that schools are failing to implement correctly, the components that were most related to lowering rates of problem behaviors. Overall, findings of the research highlighted the importance of assessing implementation quality in "real world" settings and the need to continue improving understanding of how and why programs such as PBIS work. The need of a program that focused on prevention was shown to be a significant need for schools who face problems of bullying, substance abuse, and other major behaviors (Molly et al., 2013). Ultimately, the implementation quality of such programs truly matters because when these programs are delivered with high quality and fidelity, they are more likely to produce the desired effects and outcomes.

Part of PBIS evaluation is collecting data on office discipline referrals or ODRs. Information on ODRs is recorded each time a student is referred to the office for a problem behavior. Most ODRs record the date, time, location, and behavior (Molloy et al., 2013). School behavior violations result in a wide range of consequences aimed at increasing safety, including error corrections, time outs, ODRs, suspensions, and expulsion (Gage et al., 2018). According to Gage et al. (2018), exclusionary measures, which are ODRs, suspensions, and expulsions, remove students from instructional settings and could potentially put students at increased risk

for poor academic engagement and performance, increased drop-outs, and possibly future incarceration. In other words, if these disciplinary exclusions are used, students will spend less time in the classroom, receive less instructional time, and will ultimately fall further behind their peers academically.

Gage et al. (2018) conducted a systematic review of research studies that examined the relationship between PBIS and disciplinary exclusion following WWC (What Works Clearinghouse) procedures. The search was conducted in three phases: (a) abstract search and coding, (b) full text review, and (c) final coding and data extraction. The focus of the study was on evidence-based interventions and systems that are needed to reduce disciplinary exclusion. A total of 90 schools were included across four studies in four U.S. regions. Schools included both elementary and high schools. The findings of research by Gage et al. (2018) a statistically significant large treatment effect ($g = -.86$) was found for school suspension, but no treatment effect was found for ODRs) are important because of the significant impact that suspension can have on students. The findings contribute to literature by highlighting the potential value of PBIS on disciplinary exclusion and showing the need for more high-quality experimental research. The results suggested that more research is needed to increase the high-quality evidence-base supporting continued scale-up of PBIS (Gage et al., 2018).

PBIS is a framework that focuses on the prevention and interventions to support behavior needs and reduce behavior referrals. Another research study entitled, "The Effect of School-Wide Positive Behavior Interventions and Supports on Disciplinary Exclusions: A Conceptual Replication," was conducted by Gage et al. (2020). These authors suggested that PBIS is a prevention and intervention framework that addresses school problem behaviors and has a significant and important impact on reducing the likelihood of suspensions and expulsions of

students. The goal of PBIS is to prevent the problem behavior from happening before it occurs by implementing an evidence-based intervention, driven by data. PBIS's main emphasis is to focus on positive reinforcement instead of punishments or negative consequences (Gage et al., 2020). The research by Gage et al. (2020) used propensity score matching on ninety-eight schools in California. The results suggest that schools that implement PBIS with fidelity have significantly fewer suspensions. However, no effects were found for expulsions. There is a lot of work that needs to be done to better understand the mechanisms and components of PBIS implementation that directly impact school suspensions, both in-school and out-of-school. Further studies and research should consider examining student-level data to see the likelihood of being suspended more than once in a school that implements PBIS, number of days missed due to suspensions, and other related outcomes including academic achievement (Gage et al., 2020). Gage et al. (2020) also stated that future research should look at the impact PBIS implementation has on suspension rates specifically for students with disabilities, more specifically students with EBD.

The Tiered Fidelity Inventory (TFI) can be used to predict changes and outcomes in the implementation of PBIS. Noltemeyer et al. (2019) looked at the longitudinal disciplinary and achievement outcomes associated with school wide PBIS implementation. The team wanted to know what the relationship was between changes of PBIS and disciplinary outcomes in eighty-five schools in Ohio. Over the course of two years, linear regressions were conducted to examine the degree to which changes in the Tiered Fidelity Inventory (TFI) scores predicted changes in out-of-school-suspensions (OSS) and achievement scores when controlling for school-level demographic variables. The changes in TFI scores were found to significantly predict changes in OSS per one-hundred students, but not changes in achievement scores (Noltemeyer et al., 2019).

Future studies should explore whether more profound longitudinal changes in outcomes might emerge when schools reach a TFI score of seventy percent or higher (Noltemeyer et al., 2019). Essentially, changes in implementation fidelity over time are inversely related to changes in behavioral problems such as OSS, but unrelated to academic outcomes as measured by performance index scores (Noltemeyer et al., 2019).

School counselors play an important role in the PBIS process and implementation fidelity. Successful implementation of PBIS should also include culturally appropriate responsive practices to reduce disproportionality in schools and their ODRs and to create effective environments for learning for all the students in their building (Betters-Bubon et al., 2016). Sustaining this culturally responsive PBIS program requires detailed attention to the demographics of students and the cultural context of their particular school. PBIS research has lacked focus on sustainability and cultural responsiveness within implementation of the framework (Betters-Bubon et al., 2016). The study of Betters-Bubon et al. (2016) delves into how one school made up of the principal, school counselors, psychologist, and teachers who used culturally responsive practices within the PBIS framework to meet the social, behavioral, and emotional needs of the students in a diverse school. This case study looked specifically at the role of the school counselor and how they can impact PBIS. National, district, school, and individual levels have a lot at stake; school counselors can play a vital role in ensuring that the PBIS program is being implemented with fidelity and in culturally responsive ways (Betters-Bubon et al., 2016). The findings of the Betters-Bubon et al. (2106) study suggest that school counselors can use their knowledge and recommendations to reduce the very real problem of disproportionality in discipline practices at schools, including the implementation of PBIS. They suggest that future research should examine whether or not the approaches of tier two have an

impact on ODR data and on the continued equity conversations happening among key

stakeholders in the schools (Betters-Bubon et al., 2016).

PBIS Implementation Fidelity and Sustainability

The sustainability and implementation of PBIS done with fidelity is extremely important

to the success of the PBIS framework. McIntosh et al. (2016) conducted a study on identifying

and predicting patterns in PBIS implementation. The purpose of the study was to examine the

extent to which distinct patterns of fidelity of implementation emerged for 5,331 schools in

thirty-seven states over a five-year period of implementing PBIS. The findings of the case study

showed that elementary schools, larger schools, schools in districts with more schools already

implementing PBIS, and those within a larger district cohort were more likely to sustain the

implementation of PBIS (McIntosh et al., 2016). Unfortunately, there were many limitations and

pitfalls to this research case study. The nature of the dataset used in this study presented a few

limitations. The first limitation was that the measures used were completed by school teams or

coaches, not the researchers. Secondly, because the type of measures varied within and between

schools across the years, they used each measure's criteria for implementation to indicate

implementation. Using the same measure could have permitted more granularity in the analyses.

Third, each school was collecting and reporting fidelity data to a national technical assistance

center, and as such, the sample collected may not be a true representative of all schools in the

population. More research is necessary to reproduce these classes (McIntosh et al., 2016).

When done with fidelity, PBIS can be an essential component in closing educational

gaps. Evidence-based practices, such as PBIS, are becoming more important than ever in schools

as they attempt to close gaps between achievement of students with disabilities and their non-

disabled peers. Coffey & Horner (2012) also delved into the sustainability of PBIS. They

researched the question of how PBIS can be sustained in schools. What they found is that an educational innovation is more likely to be implemented and sustained with fidelity if it has support from an administrator and uses data to guide planning for changes (Coffey & Horner, 2012). Sustainability of educational practices produces a large number of theoretical models and recommendations, but few experimental analyses (Coffey & Horner, 2012). Coffey & Horner (2012) give a breakdown of variables that are critical for sustainability of an implemented practice such as PBIS. The variables include a contextually appropriate innovation, staff buy-in, a shared vision, administrative support, leadership at various levels, ongoing technical assistance, data-based decision making and sharing, and continuous regeneration. Regeneration is required to prevent or to remedy an implementation lull which is a decrease in implementation fidelity that occurs after a period of implementation and is the outcome of decreasing levels of interest in the program (Coffey & Horner, 2012). Limitations of Coffey & Horner's (2012) research state that without question, administration support is an important part of the organizational features of PBIS implementation. So, deciding if there is a way to create a stand-alone organizational feature of admin support could be a next step in this line of research.

Administration support is more important than one might think. McIntosh et al. (2016) did research on this very thing. Their research supported that principal or administrative support is a crucial variable for implementing and sustaining evidence-based practices such as PBIS. However, there still remains little understanding of the factors that may influence a principal's individual personal decision to support such a practice or framework (McIntosh et al., 2016). McIntosh et al. (2016) demonstrated that principal support changed over time when they saw the effectiveness of the PBIS framework. This study showed that administration can play a vital role in the adoption, implementation, and sustaining practices like PBIS in their schools. Their

support or lack of can truly make the difference between successful implementation or abandonment of the practice or framework (McIntosh et al., 2016).

There are many factors that can impact the implementation and sustainability of PBIS. The research of Pas et al. (2015) examined 1,056 teachers from thirty-seven elementary schools through a randomized control trial where they focused on what the growth in implementation of PBIS strategies in the classrooms are. The multi-level results identified several school-level contextual factors and teacher-level factors that are associated with variability in the implementation of PBIS. The factors include school size, behavioral disruptions, perceptions of school organizational health, and grade level being taught (Pas et al., 2015). Future research on this specific topic should consider focusing more resources on assessing teacher and classroom variables in a more explicit way. A strength of the Pas et al. (2015) study is that the inclusion of a measure of classroom rather than school-based implementation of positive strategies like the use of PBIS. On the contrary, though, the use of the self-report is a pitfall. It would have been preferred to have used a more objective measure of implementation, although the sheer magnitude of the study made that hard to accomplish (Pas et al., 2015).

Some may ask the question of what elements contribute to the sustainability of PBIS type frameworks that focus on positive effects. Yeung et al. (2015) investigates that very question. Positive behavior interventions, like PBIS, have shown positive results of school behavior and academic gains in a wide range of school settings across the world. However, there are studies that recognize sustainability of these positive behavior intervention programs as a chief concern. A focus on coaching classroom-level implementation fidelity is of noteworthy importance, as is the development and validation of evaluation tools for sustainability. Just like in the research of McIntosh et al. (2016), Yeung et al. (2015) noted that in order to sustain positive effects of

positive behavior intervention, future implementation efforts need administrator support for the school team, on-going high-quality professional development, and technical assistance (Yeung et al., 2015). One direction for future research in this area could be to provide a better, more in-depth understanding of crucial factors related to the sustainability of school-based PBIS and to understand the interaction of such factors (Yeung et al., 2015).

There are many implementation fidelity measures including the schoolwide evaluation tool (SET). However, there is limited experiential examination authenticating the association between specific fidelity cut point scores and student outcomes (Pas et al., 2019). Therefore, Pas et al.'s (2019) research examines the different cut points of the SET- in reference to the school-level outcomes across 180 schools who participated in random PBIS trials. These schools were encouraged to use their data tools to track the fidelity of PBIS implementation as well as student outcomes, with the SET being the most common tool used. The SET has a widely-used cut point of 80% as a suggestion of high fidelity (Pas et al., 2019). The results of this study indicate that almost half of the schools met the 70% and 80% cut points of the SET. Approximately 90% of the schools that reached an 80% on subscale B (example: expectations taught) also reached 80% or higher on the overall scale and vice versa. Consequently, it was rare that schools would attain one and not the other, conceivably signifying that subscale B is foundational to meeting the overall high fidelity threshold. The middle schools, which had the longest acquaintance with PBIS, had the highest fidelity scores as compared to the elementary and high schools that were also examined (Pas et al., 2019). Pas et al. (2019) determined that future research should look at the relationship between implementation fidelity scores and longer-term student outcomes, as well as account for years of PBIS implementation and individual school demographics such as student poverty and diversity.

Another evaluation tool, the tiered fidelity inventory (TFI) was used to measure the

implementation fidelity of PBIS in schools. Swain-Bradway. (2017) assesses the reliability and

validity of the TFI. Twelve experts in PBIS implementation were invited to participate in the

content validity study. Research took place in five districts across five different states. The

results of this study showed strong construct validity for assessing fidelity at all three tiers. Even

though the results are hopeful, it would be helpful to have further justification to assess the

adequacy of the TFI. First, it will be required to validate the finalized TFI measure based on the

changes to the measure from the last round of feedback. Next, the standard for acceptable

implementation (example: 70% of total points) has not yet been studied. It is necessary to

identify empirical norms for adequate implementation. In absence of this research, 70% seems to

be a reasonable measure for adequate implementation at each tier, although average

implementation at tiers two and three was significantly lower. Third, a rigorous, quantitative

assessment of the TFI's factor structure is essential. Lastly, it would be beneficial to further

study the role of coaches in facilitating accurate assessment of fidelity and what factors improve

accuracy in self-rating of fidelity (Swain-Bradway et al., 2017).

School communities are very important when it comes to PBIS implementation.

Lampron & Gonsoulin (2013) state that the key to successful PBIS implementation is the

community-wide nature of the implementation. Implementation cannot be done by only a few

individuals alone. It may take some convincing of others to jump on board with the idea of the

framework. Once that happens, successful implementation can happen.

PBIS Across Different Settings

PBIS cannot be implemented without a full supportive team**.** To develop Lampron &

Gonsoulin's (2013) idea that it takes more than just a few people to fully implement a framework

like PBIS, Garbacz et al. (2018) suggests that family engagement is a vital component of the development and success of their children in school. Research has shown that there are benefits of family engagement in school and provides implications for schools implementing PBIS (Garbacz et al., 2018). That research examining the engagement of families has shown positive links with an increase in students' academic success, higher attendance rates, and fewer problem behaviors. The purpose of the study completed by Garbacz et al. (2018) was to pinpoint and examine how schools who implement PBIS were engaging their families in their Tier I systems. The participants included PBIS leadership team representatives from 302 schools across three states: Colorado, Florida, and Illinois. Findings of the study exposed the most common ways in which schools communicated with families about their PBIS systems, worked with families to support PBIS at school, supported family use of PBIS at home, and built relationships to support PBIS. Lastly, communication with families about PBIS and supporting those families to help their children follow school expectations were related to fidelity of PBIS implementation (Garbacz et al., 2018). One weakness about this study was that family members were not included in the making of the survey, nor where they given the chance to respond to or fill out the survey.

Some may think that minority students, such as those of aboriginal status, may be treated differently or unfairly when PBIS is implemented. Greflund et al. (2014) did an exploratory study whose purpose was to inspect the extent to which students with aboriginal status receive unequal rates of ODRs and more severe administrative consequences compared to students without such status. The results of the study were surprising. Students with aboriginal status were found to be no more likely to receive ODRs than students of a different status. Students with the aboriginal status were not statistically more likely to obtain suspensions and harsher

consequences from the discipline referrals. Some factors for these findings include the implementation of PBIS with culturally responsive adaptations for students with aboriginal status (Greflund et al., 2014). Because this study was the first of its kind, there needs to be more studies done to verify and reproduce the results.

How does PBIS affect students with behavioral health challenges? The behavioral health needs of children across our country is becoming an increasing problem today, and our society's ability to respond to these needs continues to fail with estimates that only one-third of youth with mental health disorders ever receive any treatment at all (Battal et al., 2020). The behavioral health needs of children within urban schools and communities give an additional urgency to the study by Battal et al. (2020). Their research examined the implementation of a comprehensive behavioral health model for social, emotional, and behavioral development in urban school districts over the course of three years. Results from the research of Battal et al. (2020) indicate that a widespread, integrated approach is connected with enhanced outcomes for students with a confirmed level of risk, with the greatest impact on students with risk of internalizing behaviors. The findings of this practical study highlight the benefits of a universal approach and adds to the discourse on vigorous universal screenings that can identify the needs and assets of children within urban communities and schools (Battal et al., 2020).

The implementation of PBIS in low-income urban schools poses several challenges. Implementation of a framework like PBIS is very difficult for many reasons, including high turnover of staff and lack of internal capacity for the implementation of evidence-based practices (Eiraldi et al., 2019). Studies of the effectiveness of these interventions have revealed discouraging results in urban schools. The research of Eiraldi et al. (2019) looked at the Tier I and II outcomes of PBIS and mental health supports over the course of three years. The findings

showed that Tier I and II interventions of the PBIS framework were implemented with fidelity but the program feasibility for tier II was in question because school personnel needed a lot of external support in order to properly implement the interventions needed. However, tier I interventions were associated with the decrease in ODRs (Eiraldi et al., 2019). On the other hand, rural schools also have challenges that they face when educating children, such as accessing resources and highly qualified staff and teachers. However, they have strengths such as stronger community and family involvement, unlike some urban schools (Robbie et al., 2021).

The problem-solving and solution-based intervention of PBIS emphasizes a preventative angle that relies on systems, practices, and data to obtain better student outcomes. All schools, rural and urban schools alike, face on-going challenges every day as they look to educate the students within their walls effectively and efficiently. There is a problem-solving process for PBIS where schools can match their interventions with available resources and increase their capability to work smarter, not always harder, to achieve their goals (Robbie et al., 2021). PBIS can promote these goals within settings (including more restrictive settings) and meet the needs of students. PBIS's goals include (1) safety for staff and students; (2) social, behavioral, educational, vocational, and other skill acquisition; and (3) student responsibility and desire to connect with their communities (Lampron & Gonsoulin, 2013).

Future Research

Student behaviors are increasing in schools today, and not just in one type of school or one school level. Students who engage in problem behaviors are more likely to fall through the cracks and are more likely to struggle academically. Therefore, something needs to be done to decrease these problem behaviors, which is where PBIS comes into play. PBIS is a successful framework that has worked in several settings and school levels. Even though there has been

some research on the effects and success of PBIS in urban schools, restricted settings, and rural

settings, further research of PBIS is needed in these different settings such as rural, urban, and

inner-city schools is needed. The research should focus on the implementation of PBIS with

fidelity in each setting over a period of time that is more than two years. For PBIS to work best,

it needs to be implemented for a few years with fidelity in order for its real success to take place

and be visible. Proper implementation of the PBIS framework has shown an increase in direct

instructional time, improvement of academic achievement, more positive connections and

relationships between students and teachers, and overall improvement of the school climate

(Tyre et al., 2018).

Conclusion

PBIS focuses on preventative measures rather than reactionary practices. When

implemented and sustained properly and with reliability, PBIS can improve problem behavioral

outcomes in schools. However, PBIS needs full support from staff and administration in order to

work appropriately. One teacher or principal cannot successfully implement PBIS on their own.

It is essential for administration to really buy into the framework and then it is their

responsibility to delegate implementation practices to a team of trusted leaders and staff

members. Once a leadership team is established, education of the framework needs to be rolled

out to all staff and buy-in needs to be obtained from everyone in order to achieve full success. It

is equally important to get the communities and families involved in the process so that PBIS is

carried out across multiple settings in each child's life. If PBIS across the community is

established, staff and students will live and breathe PBIS and its outcomes. The benefits of the

framework and the success it can bring to schools and communities will be seen.

References

Battal, J., Pearrow, M. M., & Kaye, A. J. (2020). Implementing a comprehensive behavioral

    health model for social, emotional, and behavioral development in an urban district: An

    applied study. *Psychology in the Schools*, *57*(9), 1475–1491.

Betters-Bubon, J., Brunner, T., & Kansteiner, A. (2016). Success for all? the role of the school

    counselor in creating and sustaining culturally responsive positive behavior interventions

    and supports programs. *Professional Counselor*, *6*(3), 263–277.

Bradshaw, C. (2013). Preventing bullying through positive behavioral interventions and supports

    (PBIS): A multitiered approach to prevention and integration. *Theory into Practice, 52*(4),

    288-295. Retrieved August 30, 2021, from http://www.jstor.org/stable/43893898

Bradshaw, C. P., Koth, C. W., Bevans, K. B., Ialongo, N., & Leaf, P. J. (2008). The impact of

    school-wide positive behavioral interventions and supports (PBIS) on the organizational

    health of elementary schools. *School Psychology Quarterly, 23*(4), 462–

    473. https://doi.org/10.1037/a0012883

Bradshaw, C. P., Koth, C. W., Thornton, L. A., & Leaf, P. J. (2009). Altering school climate

    through school-wide positive behavioral interventions and supports: Findings from a

    group-randomized effectiveness trial. *Prevention Science*, 10, 100-115. doi:10-

    1007/s11121-008-0114-9.

Bradshaw, C. P., Pas, E. T., Debnam, K. J., & Johnson, S. L. (2015). A focus on implementation

    of positive behavioral interventions and supports (PBIS) in high schools: associations

    with bullying and other indicators of school disorder. *School Psychology Review*, *44*(4),

    480–498.

Eiraldi, R., McCurdy, B., Schwartz, B., Wolk, C. B., Abraham, M., Jawad, A. F., Nastasi, B. K.,

    & Mautone, J. A. (2019). Pilot study for the fidelity, acceptability, and effectiveness of a

    pbis program plus mental health supports in under-resourced urban schools. *Psychology*

    in the Schools, *56*(8), 1230–1245.

Coffey, J. H., & Horner, R. H. (2012). The sustainability of schoolwide positive behavior

    interventions and supports. *Exceptional Children*, *78*(4), 407–422.

Cressey, J. M., Whitcomb, S. A., McGilvray-Rivet, S. J., Morrison, R. J., & Shander-Reynolds,

    K. J. (2014). Handling PBIS with care: scaling up to school

    wide implementation. *Professional School*

    Counseling. https://doi.org/10.1177/2156759X0001800104

Gage, N. A., Whitford, D. K., & Katsiyannis, A. (2018). A review of schoolwide positive

    behavior interventions and supports as a framework for reducing disciplinary

    exclusions. *The Journal of Special Education*, *52*(3), 142–151.

    https://doi.org/10.1177/0022466918767847

Garbacz, S. A., McIntosh, K., Vatland, C. H., Minch, D. R., & Eagle, J. W. (2018). Identifying

    and examining school approaches to family engagement within schoolwide positive

    behavioral interventions and supports. *Journal of Positive Behavior Interventions*.

    Retrieved September 22, 2021, from

    https://nls.ldls.org.uk/welcome.html?lsidyva321b4df.

Greflund, S., McIntosh, K., Mercer, S. H., & May, S. L. (2014). Examining disproportionality in

    school discipline for aboriginal students in schools implementing PBIS. *Canadian*

    Journal of School Psychology, *29*(3), 213–235.

James, A. G., Noltemeyer, A., Ritchie, R., & Palmer, K. (2019). Longitudinal disciplinary and

    achievement outcomes associated with school-wide PBIS implementation

    level. *Psychology in the Schools*, *56*(9), 1512–1521. https://doi.org/10.1002/pits.22282

Jessica, S.-B., Heather, P. G., Robert, F. A., Michelle, M. M., Robert, H. H., Timothy, J. L., &

    Kent, M. I. (2017). Technical adequacy of the swpbis tiered fidelity inventory. *Journal of*

    Positive Behavior Interventions, *19*(1), 3–13. https://doi.org/10.1177/1098300716637193

Lampron, S., & Gonsoulin, S. (2013, November 3). PBIS in restrictive settings: The time is

    now. *Education and Treatment of Children*, *36*, 161-174.

Maggin, D. M., Robertson, R. E., Cook, B. G., Gage, N. A., Grasley-Boy, N., Lombardo, M., &

    Anderson, L. (2020). The effect of school-wide positive behavior interventions and

    supports on disciplinary exclusions: a conceptual replication. *Behavioral*

    Disorders, *46*(1), 42–53. https://doi.org/10.1177/0198742919896305

Malloy, J. A. M., Bohanon, H., & Francoeur, K. (2018). Positive behavioral interventions and

    supports in high schools: a case study from New Hampshire. *Journal of Educational and*

    Psychological Consultation. Retrieved September 22, 2021, from

    https://nls.ldls.org.uk/welcome.html?ark:/81055/vdc_100063504044.0x00002f.

McIntosh, K., Kelm, J. L., & Canizal Delabra, A. (2016). In search of how principals change: A

    qualitative study of events that help and hinder administrator support for school-wide

    PBIS. *Journal of Positive Behavior Interventions*, *18*(2), 100–

    110. https://doi.org/10.1177/1098300715599960

McIntosh, K., Mercer, S. H., Nese, R. N. T., & Ghemraoui, A. (2016). Identifying and predicting

    distinct patterns of implementation in a school-wide behavior support

framework. *Prevention Science*, *17*(8), 992–1001. https://doi.org/10.1007/s11121-016-
0700-1

Molloy, L. E., Moore, J. E., Trail, J., Van Epps, J. J., & Hopfer, S. (2013). Understanding real-
world implementation quality and "active ingredients" of PBIS. *Prevention
Science*, *14*(6), 593–605. https://doi.org/10.1007/s11121-012-0343-9

Marshall, C. P. (2018, July 27). Positive behavior interventions and supports: a study of
implementation at the elementary level in a low-income district. In *University of Houston
Clear Lake Alfred R. Neumann Library*. Retrieved from https://uhcl-
ir.tdl.org/handle/10657.1/1407

McCurdy, B. L., Thomas, L., Truckenmiller, A., Rich, S. H., Hillis-Clark, P., & Lopez, J. C.
(2016). School-wide positive behavioral interventions and supports for students with
emotional and behavioral disorders. *Psychology in the Schools*, *53*(4), 375–389.
https://doi.org/10.1002/pits.21913

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. https://doi.org/10.1177/0741932518805192

Pas, E. T., Waasdorp, T. E., & Bradshaw, C. P. (2015). Examining contextual influences on
classroom-based implementation of positive behavior support strategies: findings from a
randomized controlled effectiveness trial. *Prevention Science*, *16*(8), 1096–1106.
https://doi.org/10.1007/s11121-014-0492-0

Petrasek, M., James, A., Noltemeyer, A., Green, J., & Palmer, K. (2021). Enhancing motivation and engagement within a pbis framework. *Improving Schools*, *136548022110022*, 136548022110022–136548022110022. https://doi.org/10.1177/13654802211002299

Robbie K., Van Lone, J., Kern, L., & George, H. P. (August, 2021). Using a PBIS framework: working smarter, not harder in rural schools. Center on PBIS, University of Oregon. www.pbis.org.

Ryoo, J. H., Hong, S., Bart, W. M., Shin, J., & Bradshaw, C. P. (2018). Investigating the effect of school-wide positive behavioral interventions and supports on student learning and behavioral problems in elementary and middle schools. *Psychology in the Schools*, *55*(6), 629–643. https://doi.org/10.1002/pits.22134

Sobalvarro, A., Graves, S. L., & Hughes, T. (2016). The effects of check-in/check-out on kindergarten students in an urban setting. *Contemporary School Psychology: The Official Journal of the California Association of School Psychologists*, *20*(1), 84–92. https://doi.org/10.1007/s40688-015-0058-6

Sugai, G., & Simonsen, B. (2012, June 19). Positive behavioral interventions and supports: history, defining features, and misconceptions. In *Center for PBIS & Center for Positive Behavioral Interventions and Supports*. Retrieved September 29, 2021, from https://www.pbis.org/resource/positive-behavioral-interventions-and-supports-history-defining-features-and-misconceptions

Tyre, A. D., Feuerborn, L. L., & Woods, L. (2018). Staff concerns in schools planning for and implementing school-wide positive behavior interventions and supports. *Contemporary School Psychology*, *22*(1), 77–89. https://doi.org/10.1007/s40688-017-0130-5

Victoria, C., & Mary, B. (n.d.). "You say praise, I say encouragement- negotiating positive

behavior support in a constructivist preschool. *Athens Journal of Education*, *6*(3), 171–188.

https://doi.org/10.30958/aje.6-3-1

Yeung, A. S., Craven, R. G., Mooney, M., Tracey, D., Barker, K., Power, A., Dobia, B., Chen,

Z., Schofield, J., Whitefield, P., & Lewis, T. J. (2016). Positive behavior interventions:

the issue of sustainability of positive effects. *Educational Psychology Review*, *28*(1),

145–170. https://doi.org/10.1007/s10648-015-9305-7