PBIS and Behavior Interventions in Early Childhood Settings.

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ABSTRACT

The purpose of this study was to see if there is a difference in student behaviors when PBIS is implemented into an early childhood setting. Challenging behaviors are increasing in early childhood settings leaving teachers feeling inadequately trained to manage behavior problems. Data was retrieved from two schools PBIS-SWIS system to compare students’ behaviors resulting in office referrals. The amount of office referrals was compared between the first year of implementing PBIS to year 3 of full PBIS implementation. After compiling and reviewing literature, it was found PBIS can be modified to fit an early childhood setting. After analyzing the data there was a difference found but not a significant difference in student behaviors with the implementation of PBIS.
INTRODUCTION

Background, Issues and Concerns

There is a rise of challenging behavior problems in early childhood settings. Studies have shown that children who exhibit these behaviors during early childhood are more likely to be at-risk in their school career. Positive Behavior Intervention Support (PBIS) is a research-based program for proactive behavior management and is growing popular in school settings to help improve children’s behavior. PBIS is founded off of setting clear expectations for children, displaying consistency across school settings, teaching student expectations, and strongly reinforcing children meeting the expectations by showing prosocial behaviors rather than unwanted behaviors. PBIS has shown to decrease unwanted behaviors and increase prosocial behaviors in children starting from primary grades going up.

An issue that early childhood educators face is a lack of research on how well PBIS works in an early childhood setting. It takes years to fully implement the PBIS system into a school. If the research is not there to support the use of PBIS in early childhood settings, then educators might be less likely to try the system.

There are different factors to consider when working with younger children. Concerns are raised if the children are developmentally and emotionally mature enough to understand how the system works. Children in this age range are typically in the preoperational stage of their life. Some aspects of the PBIS system may be too abstract for the young minds.
Practice under Investigation

This study investigates the practice of Positive Behavior Intervention Supports in the classroom setting. Many schools use PBIS in elementary schools. This study will investigate to see the outcome of PBIS in an early childhood study.

School Policy/practice to be Informed by Study

This study will help inform us if Positive Behavior Intervention Support systems should be implemented into early childhood classrooms to help improve student behaviors.

Conceptual Underpinning

Challenging behaviors from students can impact all aspects of the classroom. These behaviors can affect relationships, learning, and safety. Challenging behaviors take away from instruction time and puts the focus on negative behaviors. Studies show being proactive to manage behaviors with PBIS can improve prosocial behaviors in students and overall positively affect the classroom dynamic.

Theories state that students thrive on structure and routine. When PBIS is implemented school-wide, it creates a consistency when dealing with challenging behaviors. In theory, students are more likely to succeed if consistent expectations are enforced throughout the different school settings.
Statement of the Problem

If there is a significant difference in student behavior after the implementation of PBIS in an early childhood setting, teachers need to be educated about the results of using PBIS. Teachers should be trained on how PBIS can affect your classroom management.

Purpose of the Study

This study will help determine if PBIS has an impact on student behaviors in an early childhood setting. Improved student behavior will influence the amount of time spent on teacher instruction and student learning.

Research Question(s)

Is there a difference in the behaviors seen in an early childhood setting when PBIS is implemented into a classroom?

Null Hypothesis

There is not a difference between classroom behaviors resulting in student office referrals when PBIS is implemented in the classroom.

Anticipated Benefits of the Study

It is anticipated that implementing PBIS into a classroom will help decrease the amount of unwanted or negative behaviors from students resulting in office referrals. The study will help develop a better understanding if children this age can understand PBIS or if it is too abstract of a concept for them.
Definition of Terms

Early childhood - Age range of children birth through 7 years old.

PBIS – Positive Behavior Intervention Support – A proactive system setup
school-wide to proactively deal with challenging behaviors.

PBS – Positive Behavior Supports – A positive behavior management system
used to help maintain an individual’s challenging behaviors.

Preoperational Stage – Children in this stage can mentally represent events and
objects, and engage in symbolic play. Children’s thoughts and communication in this
stage are typically egocentric.

SWIS Suite – A web-based information system to collect, summarize, and use
student behavior data for decision making.

Summary

A study was conducted to see if there was a difference in negative student
behaviors after PBIS was implemented into a preschool classroom. Challenging
behaviors are present and growing today in classrooms. These behaviors can impact a
classroom negatively. The study will help determine if the time put into PBIS is worth the
outcome. This study will also help inform early childhood educators how well PBIS can
be integrated into a preschool setting.
REVIEW OF LITERATURE

PBIS is implemented into many grade schools and educational staff seem to value the outcome of the process. A significant amount of literature is available on various PBIS studies. However, there has not been as much research completed on PBIS in an early childhood setting. The following literatures address PBIS in multiple settings.

Author, Steed (2011), examines programs that have adapted PBIS into an early childhood setting. The study suggests, aspects of PBIS may need to be altered to be developmentally appropriate and to best fit the needs of early childhood centers. Adjustments include simplifying the terms and scoring system and exchanging tangible rewards for desired activities or privileges. In a preschool setting, BEPs or Behavior Education Programs have been researched the most out of the interventions used within PBIS. This article takes a look at the thumbs up BEP, adapted for preschool. BEPs have several steps. The student checks in with an adult at arrival, has a daily points sheet, checks-in periodically throughout the day with the teacher, the student checks out with their adult and receives reinforcement for his/her goals met with desired selected activities. A case study provides an example of a BEP in place in an early childhood center. The study showed improvement of the child’s behavior after implementation of the BEP.

Steed, Pomerleau, and Muscott (2013) discuss program-wide PBIS implemented into rural preschools. The article builds the research of PBIS in rural school settings rather than in urban and suburban schools. The study showed a decrease in challenging behaviors and an increase in prosocial behaviors after fours years of implementing PBIS.
to the rural preschools. The study also found the number of students referred for mental health interventions had decreased after the implementation of PBIS (Steed, Pomerleau, & Muscott, 2013). Findings from the article concluded that to successfully implement PBIS you need a multi-year commitment, informed decision making when looking into the PBIS system, administrative support at the preschool level, and creating effective leadership teams to lead the implementation.

An article from Teaching Exceptional Children, examines applying the main features of positive behavior support systems in preschool settings. The authors look at many aspects and concerns of the system. The authors stress the importance of having systems in place that are proactive to support appropriate behaviors in early childhood settings. Studies demonstrate that children who show early signs of behavior problems are at risk to be successful in school as they get older. Consistency is important to the structure of PBS. Establishing a program-wide matrix rather than school-wide is important when implementing PBS in preschool settings due to the number of staff, such as service providers, rotating into different buildings (Stormont, Lewis, & Beckner, 2005). The authors discuss the researched-based practices of PBIS has been found successful in elementary and secondary schools. For the implementation of PBIS in an early childhood setting the authors suggest several adaptations to PBS for successful implementation.

Authors, Filcheck and McNeil (2004), review the effectiveness of token systems in a preschool classroom. The article suggests that token systems could be effective for improving behavior problems among children in preschool settings. Questions have been raised if preschoolers are developmentally able to comprehend a token economy. The author’s research suggests that if token systems are created to be developmentally
appropriate, taking into account that children in this age range are within the symbolic-representational stage of cognitive development, children would be able to understand the systems. This would result in using symbolic objects to represent earned positive reinforcements. The article also examines the philosophical concerns of using token economies such as systems taking away from instructional time and decreasing children’s intrinsic motivations. They also raised the concern of token systems promoted competition between students.

A case study is examined in an article about facilitating positive behavior support into an inclusive environment. The article describes the four-step process of implementing PBS into a school setting. The literature supports the philosophy behind PBS, preventing predictable behavior by establishing a set of clear and consistent rules through all settings of the school (Scott, Park, Swain-Bradway & Landers, 2007). The article highlights the steps of implementing PBS. Step one is foreseeing what behaviors will happen in different settings. Step two is creating specific routines and rules for each environment. Step three includes applying and teaching these consistent rules and expectations. Step four is collecting data to evaluate and monitor if the procedures are working or not. The teacher found success through the experience. In addition to improved student behavior, the process also allowed her identify who needed continued support in the classroom. Resulting in PBS helping the teacher assess and plan for students with special needs.

Carter and Pool (2012) discuss how to build a matrix for Positive Behavior and Supports (PBIS) in a preschool to prevent challenging behaviors and promote prosocial behaviors. The article explains how to modify PBIS to fit a preschool classroom. The
steps taken include defining broad expectations, defining detailed rules, teach expectations, allow students to practice the rules, and give student feedback (Carter and Pool, 2012). School age children typically have at least five broad expectations. Preschool classrooms should focus on two to four expectations instead. Normally, the specific rules are given for the different settings student in kindergarten and up go to throughout the day, such as, the cafeteria, the hallway and the restroom. Preschoolers usually spend the majority of their day in their classroom. The expectations can be changed to different class activities, for example, carpet time, small group, or gross motor time rather than the other school settings. Carter and Pool (2012), again support developing program-wide expectations and lessons plans that can be used across a school district (Carter & Pool, 2012).

McClean and Gray (2012) studies the components that go into implementing positive behavior support plans. It examines the components to see which aspects are the most effective and which portions might acquire more adjustment. The four components are; altering the environment before the behavior occurs, teaching behaviors that are appropriate, strongly reinforcing appropriate behaviors more than challenging behaviors, and carefully planning your reactions to behaviors to ensure safety while trying not to reinforce unwanted behaviors. Significant decreases in challenging behaviors were seen over the 6 months of the study (McClean & Grey, 2012). However, the study did not find one intervention component to be more effective than another. The authors feel the overall model or the combinations of interventions contribute to the effectiveness of positive behavior support plans.
Another article upholds the growing circumstance that challenging behaviors are increasing in preschool. To assist with these behaviors, preschools implement school-wide PBIS. The article stresses the importance of having a leadership team to be there to support teachers when implementing PBIS (Hemmeter, Fox, Jack, & Broyles, 2007). A focus group of teachers who had implemented PBIS were questioned by a non-bias source. The teachers had positive views of PBIS and felt they were better prepared to deal with challenging behaviors after they had been using PBIS. The focus group also felt this was a good program to model through family involvement activities.

Johnson and et al. (2013) examine a juvenile facility that adopted school-wide positive behavior interventions and supports (SW-PBIS) in hopes of reducing problematic behaviors to create a more conducive learning environment. The study found when comparing a year of data with no SW-PBIS to a year of SW-PBIS implementation, there was a reduced amount of total problematic incidents by 46% (Johnson et al., 2013). The study also found an increase of academic achievement after the year of SW-PBIS. The article discusses how this contrasts from other studies done about PBIS. Previous articles did not consistently show improvement of academic success as it did with the decreased problematic behaviors.

Authors, Carter, Norman, and Tredwell (2011) discuss the benefits of PBS in the primary grade levels and feel that it can be promising in an early childhood environment as well. The article explains how positive behavior support systems focus on social-emotional development and preventing behavioral issues with children. The article examines how to implement PBS into your early childhood environment using the phases of implementation. The literature supports other authors suggesting similar steps taken to
implement PBS. Key factors needed were staff commitments, identifying students’ expectations, setting up systems to deal with challenging behaviors, and using data to drive decision-making and planning family involvement activities (Carter, Norman, Tredwell, 2011). Teachers who received extra consultation and feedback on implementing the system saw more growth in their classroom compared to teacher who did not.
RESEARCH METHODS

Research Design

A quantitative study was done to see if there was a change in student behavior resulting in office referrals after implementing PBIS into a school setting. The independent variable being tested is the implementation of PBIS into the classroom. The dependent variable is the outcome of student behavior resulting in office referrals. If there is a significant improvement in student behaviors after PBIS has been implemented, teachers should be informed of the information found and educated on the outcomes of using PBIS in school program.

Study Group Description

The study group consists of students from two elementary schools in within the same district. During the time data was collected, school A had an average of 29.9% of students eligible for free or reduced lunch prices. School B had an average of 89.5% of students eligible for free or reduced lunch prices. During the years of the study, the average demographics of school A were 82% Caucasian, 5% African American, and 3% Hispanic. The average demographics for school B were 53% Caucasian, 23% African American, and 16% Hispanic. The demographics included kindergarten through 6th grade.
Data Collection and Instrumentation

 Archived data was retrieved from the PBIS-School Wide Information System (SWIS) database to identify the number of office referrals during the years of 2010-2015 school years.

Statistical analysis methods

 A T-test was used to analyze the data collected to find if there is a significant difference in student behavior resulting in office referrals with the implementation of PBIS.
FINDINGS

A T-test was used to evaluate student behaviors resulting in office referrals. The number of office referrals were compared prior to full implementation of school-wide PBIS with year three of implementation of school-wide PBIS. Year three was chosen due to the fact it takes three years to fully implement PBIS into a school.

Figure 1

**T-Test Analysis of Pre and Post PBIS Student Office Referrals**

<table>
<thead>
<tr>
<th>Source</th>
<th>Mean</th>
<th>Mean D</th>
<th>t-test</th>
<th>df</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-PBIS</td>
<td>459.90</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post-PBIS</td>
<td>93.50</td>
<td>366</td>
<td>1.34</td>
<td>1</td>
<td>0.41</td>
</tr>
</tbody>
</table>

Note: Significant when p<=0.25

The independent variable was the implementation of PBIS. The dependent variable was student behaviors resulting in office referrals. Two schools were selected for the study. One school has a lower percentage of free and reduced lunch rates while the other school has a higher percentage of free and reduced lunch rates. The mean pre-PBIS implementation student office referrals were 459.9, while the mean Post-PBIS implementation student office referrals were 93.5. The difference between the mean scores was 366. The t-test value was 1.34. The degrees of freedom were 1.

The null hypothesis was: There is not a difference between classroom behaviors resulting in student office referrals when PBIS is implemented in the classroom. The null is not rejected because the p-value is .41 is greater than the alpha level of .25. This means
that there is not a significant difference between pre-PBIS and post-PBIS implementations and student behaviors resulting in office referrals.

Figure 2.

![Student Office Referrals Chart](image)

Figure 2 shows, school A, with lower percentages of free and reduced lunch rates, overall had fewer student office referrals than School A. School A reduced student office referrals from 167 referrals pre-PBIS to 75 referrals post-PBIS, resulting in 92 less referrals a year. School B reduced student offices referrals from 752 post-PBIS to 112 office referrals post-PBIS, resulting in 640 less referrals a year.
CONCLUSIONS AND RECOMMENDATIONS

The outcomes from this study display mixed conclusions. Findings show there is a difference in student behavior resulting in office referrals. However, the statistical analysis of the data does not reveal it is a significant difference. When referring back to figure 2, a reduction of student office referrals is shown after the implementation of PBIS. While the t-test did not find the difference in office referrals significant, there was still a great decline in office referrals. Teachers would benefit from implementing PBIS, resulting in less behavioral episodes and more instructional teaching time.

The conceptual underpinning of positive reinforcement from theorist B.F. Skinner is a concept that is strongly adapted in the world of education. Educators everywhere are finding ways to modify positive reinforcement into their behavior management style that best fits their needs of the classroom. Whether it is a positive verbal praise or a reward of extra recess time, successful teachers know positive connections with your students help aid in behavior management. B.F. Skinner’s theory on positive reinforcement supports the concepts of PBIS in school settings. Best practices from early childhood research states children show the most growth when they are given the opportunities for positive relationships with adults and peers (Copple, 2009). Combining positive relationships with the consist expectations of PBIS would benefit a early childhood environment.

The conclusion of my research from literature suggests that PBIS can be successfully implemented into an early childhood environment. However, the system needs to be altered and adapted to fit the developmental needs of young children. The literature suggests PBIS should be a program-wide system instead of school-wide, include less rules/expectations for each environment/setting, and the reinforcements need
to have a symbolic representation. There is a lack of data of PBIS in Early Childhood settings. While the data collected for this study includes the age ranges of children labeled as Early Childhood, it also includes children older. PBIS data is not available for educators unless they have access to the SWIS Suite database of a school using PBIS. If this evidence was more widely available, I believe more Early Childhood educators would be willing to try the program.

Another aspect that needs more research is whether or not PBIS is developmentally appropriate for Early Childhood. Are the children truly grasping the concept of the program in place? Educators would benefit from extended studies on this topic to make a more informed decision on whether or not to implement PBIS into their Early Childhood setting.

My recommendation to educators who are experiencing behavioral challenges in their early childhood program would be to try a modified version of PBIS. Serious consideration from all staff needs to take place before implementing this program. Success is shown from the system when all parties are invested and contributing in the development of the program. Examples of how the program can be modified for your program are available through research. Educators would benefit from professional development in PBIS geared towards early childhood to better assess if this is a system that could benefit their program.
REFERENCES


