DIFFERENCES IN OFFICE DISCIPLINE REFERRALS AFTER IMPLEMENTATION OF
SCHOOL-WIDE POSITIVE BEHAVIOR INTERVENTION AND SUPPORT

By

CHELSEA WALLACE

Submitted to

Professional Education Faculty
Northwest Missouri State University Missouri
Department of Professional Education
College of Education and Human Services
Maryville, MO 64468

Submitted in Fulfillment for the Requirements for
61-683 Research Paper

Fall 2014

November 13, 2014
ABSTRACT

This study was conducted to determine whether there is a significant difference in Major and Minor Office Discipline Referrals during each phase of School-Wide Positive Behavior Intervention and Support implementation at the middle school level. Behavior issues must be approached proactively, rather than reactively. This creates a safer, more productive learning environment that in turn can promote higher levels of student achievement. Research shows that students respond better to positive, rather than punitive responses. Positive Behavior Intervention and Support is centered on that idea. The study was conducted using discipline data, including major and minor office referrals, as compiled by a discipline management system at a Midwestern middle school. The data was analyzed using an ANOVA analysis to determine if School-Wide Positive Behavior Intervention and Support makes a significant difference on student discipline incidents. After reviewing the findings of this study and current literature on the topic, it is found that implementation of Positive Behavior Intervention and Support makes a significant difference in Major Office Discipline Referrals, but not in Minor Office Discipline Referrals.
INTRODUCTION

Background, Issues and Concerns

Student achievement is at the forefront of just about every discussion in education. Teachers are being asked to help students reach their full potential while helping them develop into productive, respectful citizens. One of the biggest struggles teachers face in achieving these goals is managing behavior in the classroom. Teachers can take a class-wide approach to behavior management; however, there is no continuity from teacher to teacher with this system. A school-wide approach may develop more consistency for all stakeholders, but also requires a certain level of fidelity to be successful. In order to ensure this high level of fidelity, schools must provide quality initial training to all teachers, administrators, and support staff. This training must be ongoing to ensure that all stakeholders are up-to-date on best practices in school-wide behavior management.

School-wide behavior management also requires teacher buy-in. Teachers tend to be very autonomous and enjoy having full control within their classroom. When teachers are told how they must manage their classroom, they sometimes reject this directive. Getting all teachers on board with a school-wide behavior management system is half the battle in making this process effective. Student behavior must be handled well in order to have a strong learning environment. Once these misbehaviors are handled, instruction can create better student achievement.

Practice under Investigation

The practice under investigation will be the office discipline referrals (ODRs) under different phases of School-wide Positive Behavior Intervention and Support (SWPBIS) implementation. The data will be major and minor office referrals during each of the three phases of implementation as reported by the current principal of Excelsior Springs Middle School.
**School Policy to be Informed by Study**

A school-wide behavior management system would need to be clearly defined in school policy and student handbooks. If there is a significant difference in ODRs with SWPBIS implementation, research and practices will be included in the behavior policy for the school, stakeholders will be trained, and implementation can continue.

**Conceptual Underpinning**

Student behavior can be managed on either a classroom level, or on a school-wide level. School-wide behavior management supports consistency between teachers, grade levels, and classrooms, as long as there is fidelity in implementation across the school. According to Missouri School-Wide Positive Behavior Support (2014), students react more positively to rewards for appropriate or desired behavior than they do to punitive, reactive consequences for inappropriate or undesired behavior. A proactive approach to student misbehavior is more effective than a reactive approach to student misbehavior. School environments become safer and more productive when these misbehaviors are managed efficiently and effectively.

In addition to creating safer, more productive learning environments, effective behavior management also increases time on task for students. This, in turn, increases student success and levels of student achievement. When misbehaviors are taking place, learning cannot occur.

**Statement of the Problem**

If there is a significant difference in ODRs with SWPBIS implementation, schools need to be implementing these systems and practices with fidelity to decrease student misbehavior and increase time on task.
Purpose of the Study

To find if there is a significant difference in Office Discipline Referrals for major and minor behavior incidences at the middle school level with the implementation of School-Wide Positive Behavior Intervention and Support (SWPBIS).

Research Question(s)

RQ #1: Is there a significant difference in major and minor office referrals between a traditional classroom management system compared to School-Wide Positive Behavior Intervention and Support at the middle school level?

Null Hypothesis(es)

There is not a significant difference in major and minor office referrals between a traditional classroom management system compared to School Wide Positive Behavior Intervention and Support at the middle school level.

Anticipated Benefits of the Study

If there is a significant difference in major and minor office referrals with the implementation of School-Wide Positive Behavior Intervention and Support at the middle school level, then additional middle schools can implement this classroom management system in their building and see a difference in their own student discipline data. Instructional time will be more effective when there are less behavior incidences occurring in the classroom.

Definition of Terms

ODR - Office Discipline Referral - An office discipline referral occurs when a student’s misbehavior results in being sent to the principal’s office. The principal then becomes in charge of that incident and the consequences. These are separated into two categories: major and minor.
Major Office Referral - A major office referral is a severe ODR. This is generally a large-scale classroom disruption, major disrespect, threats, or physical aggression. This type of referral generally results in ISS or OSS.

Minor Office Referral - A minor office referral is a much less severe ODR. It is usually caused by a student being sent out of the classroom or other less severe behavior incident. This type of referral usually results in a detention or ISS.

SWPBIS/PBS - School-wide Positive Behavior Intervention and Support/School-wide Positive Behavior Support - This is a process for creating safer and more effective schools by structuring the learning environment to support the academic and social success of all students (Missouri School-Wide Positive Behavior Support, 2014).

Behavior management - This is all of the verbal and nonverbal directives that are given to produce positive, effective behaviors in students.

Class-wide behavior management - These are the behavior management strategies that teachers use in their own classrooms. These are not the same from one classroom to the next.

School-wide behavior management - These are the behavior management strategies that are used across an entire school, in every setting and by every teacher.

ISS - In-School Suspension - This behavior consequence removes a student from their regular classroom into a supervised room. They are still marked as in attendance and can complete class work.

OSS - Out of School Suspension - This behavior consequence bans a student from school grounds. Students are marked absent for these days.
Summary

A study was conducted to determine whether there is a significant difference in student office discipline referrals (ODRs) during each phase of implementation of School-Wide Positive Behavior Intervention and Support (SWPBIS). If the ANOVA test determines there is a significant difference in ODRs when SWPBIS is implemented, middle schools can adjust their behavior management and discipline procedures to reflect these practices. Schools or districts considering implementing SWPBIS in their buildings can use the findings of this study to determine the possible impact this initiative could have on their students’ discipline incidents.
REVIEW OF LITERATURE

Implementing School-Wide Positive Behavior Intervention and Support (SWPBIS or SWPBS) incorporate three tiers of interventions with increasing strategic support that take a proactive approach in dealing with behavioral expectations of students, (Martens & Andreen, 2013). The intent of this behavior management program is to “eliminate challenging behaviors and replace them with prosocial skills,” (Cohn, 2001, para. 1). Schools that implement SWPBIS in their buildings can expect better preventative measures for inappropriate behavior, decreased patterns of these behaviors, and a positive influence on students’ academic achievement, (Missouri Schoolwide Positive Behavior Support, 2012). With clear goals for students, expectations for both behavior and learning, and supportive guidance from the adults in the building, SWPBIS can strengthen classroom behavior management practices, (Pereira, 2011).

Carter (2012) defines Positive Behavior Intervention and Support (PBIS or PBS) as “a proactive prevention program that focuses on promoting social-emotional development, supporting the use of adaptive, pro-social behaviors, and preventing challenging behavior.” (p.3) Furthermore, PBIS is data-driven and team-based with a continuum of effective practices to teach positive behaviors and discourage negative behaviors, (Sugai, Simonsen, & Horner, 2008). The focus of PBIS is to teach expectations that can be applicable across many different settings for all students.

Systems are established to support best practices. Data is tracked to monitor achievement towards desired outcomes. These four words are defined by Missouri Schoolwide Positive Behavior Support (2012).

Outcomes are academic, social, behavioral targets that are endorsed and emphasized by students, families, and educators. Systems are the supports that are needed to enable
accurate and durable implementation of the practices of PBIS by all staff. Data is the information that is used to identify the current status, the need for change, and the effects of interventions. Practices are the evidence-based interventions and strategies that are taught and structure the way staff interact with students. (Missouri Schoolwide Positive Behavior Support, 2012)

Together these terms create a full image of the various pieces of SWPBIS.

In examining possible behavior management systems, school professionals review best practices. Many of these items can be found in the tenets of SWPBIS. This approach is focused more on being proactive, rather than reactive. Instead of handing out consequence after consequence, SWPBIS drills down to possible functions of the behavior using contexts and outcomes of the problem behavior, (Cohn, 2001). To create an environment conducive to PBIS, schools must decide on desired outcomes, establish these schoolwide systems, implement these practices well, and use the data to make any subsequent decisions, (Simonsen, Sugai, & Negron, 2008). These school-wide outcomes generally are seen as the expectations set forth for students. Schools should identify the broad categories of these expectations that can pertain to various settings; using a behavior matrix, specific examples of each expectation within a setting can be further detailed, (Carter, 2012). These expectations must be taught to students just like any academic skill is taught to students, (Carter, 2012).

To maintain effective implementation of SWPBIS, fidelity must be held as a top priority. This is “crucial to maximize outcomes,” (Cohn, 2001). To be more specific, a strong SWPBIS system includes shared leadership, data-based problem solving, layered continuum of supports, instruction, intervention, assessment, universal screening, progress monitoring, and a partnership between family, school, and the community, (Colorado Department of Education, 2014). At the
heart of SWPBIS is the notion that students with problem behavior respond best to positive incentives and attitudes, (Cohn, 2001). Keeping the focus of a behavior management system on the children helps them “find their own strengths, make choices for themselves, and accept the consequences of their choices,” (Pereira, 2011, p. 1).

To support these best practices that are engrained in SWPBIS, researchers have found studies and evidence that highlight the impact of PBIS on student behavior and school climate. In IDEA 1997, PBIS was identified as the most effective intervention when dealing with students with disabilities’ behavior issues, (Cohn, 2001). This is because PBIS focuses on more than just the problem behavior. This behavior management system focuses on the physical school setting, task demands, curriculum, instructional pace, and individualized outcomes; this makes it applicable for many different students in many different settings with many different behavior issues, (Cohn, 2001). Martens and Andreen (2013) state that over 18,000 schools in the country have implemented SW-PBIS. If it is implemented well, 80-85% of students are expected to respond positively to SWPBIS, (Martens & Andreen, 2013). Implementation of primary tier interventions is associated with increases in consistency among staff and increases in positive interactions, (Simonsen, Sugai, & Negron, 2008). Not only does PBIS improve school climate for students, but also for faculty and staff.

School culture and climate revolve around all stakeholders in the educational system. Students, teachers, administrators, and parents each play a unique role in implementation of SWPBIS.

Students should come to school knowing they are in a safe place where they will be respected and are free to learn. “Children thrive in effective environments that are consistent, predictable, positive, and safe,” (Carter, 2012, p. 14). PBIS reaches to each of these aspects as it
plays a role in the social, behavioral, and academic achievement of students. The social experiences children have in school can play a large part in their behavior, development, and learning, (Pereira, 2011). Students deserve to have the best learning opportunities possible and to be set up for success later in life. Therefore, it is crucial that students’ behavior as dealt with effectively and efficiently; these behaviors can quickly spread to other areas of the student’s life or intensify if not handled correctly during the formative years, (Feuerborn & Chinn, 2012).

On the front lines of dealing with students’ problem behaviors, teachers must have an effective system in place to handle these disruptions. In fact, problem behavior is the biggest reason students are removed from the classroom, (Cohn, 2001). Teachers who can maintain child-centered classroom management strategies have better control over their classroom while taking a prominent role in social and emotional interventions in the classroom, (Pereira, 2011). Structuring the classroom to consistently tie social and behavioral skills to instruction produces more successful student behavior, (Missouri Schoolwide Positive Behavior Support, 2012). When the problem behaviors can be reduced or eliminated, more instruction can occur; students’ academic achievement can be improved.

Teachers must be thoroughly trained on the systems and philosophy of SWPBIS, and this training must be ongoing from year to year. As Feuerborn and Chinn (2012) found in their research, teachers still carry many misconceptions about being reactive or proactive or whose responsibility it is to teach students social, emotional, and behavioral coping strategies. Unfortunately, for students exhibiting problem behaviors, they are typically not taught these behavior strategies at home; it then falls on the teachers’ shoulders as part of a hidden curriculum. Many teachers believe that building positive student-teacher relationships is
important in dealing with social, emotional, and behavioral issues, (Feuerborn & Chinn, 2012). SWPBIS is a powerful tool for building these relationships in a professional manner.

Administrators are usually the individuals tasked with identifying and implementing the behavior management system they believe is best for their school or district. As previously discussed, problem behaviors can cause classroom disruptions which hurts instruction and student achievement. Students with the worst behavior issues only make up approximately 20% of the student body; however these students often account for more than 50% of the discipline referrals, (Cohn, 2001). Providing effective supports for these students can drastically reduce these numbers. One suggested strategy is for administrators to differentiate between major and minor referrals and to example possible functions of the problem behaviors, rather than just a general office referral, (Simonsen, Sugai, & Negron, 2008).

For administrators to truly implement SWPBIS well, all staff must participate in PBIS training, (Anderson-Ketchmark & Alvarez, 2010). This helps the teachers not understand the practices, but also the philosophy of PBIS. This program cannot truly be implemented unless at least 80% of the faculty and staff support or buy into it, (Feuerborn & Chinn, 2012). This is where an administrator must begin before any other implementation steps are taken.

Finally, for SWPBIS to be at its best, parents must play a role in its implementation with support at home. Constant communication between the school and parents ensures that families understand and support the PBIS initiatives at home, (Missouri Schoolwide Positive Behavior Support, 2012). As Cohn (2001) emphasizes, strong implementation hinges on a collaborative partnership of parents, school psychologists, teachers, counselors, administrators, and the targeted students.
As the behavioral component of Response to Intervention, PBIS can reach out to all students at all levels of behavioral needs, (Cohn, 2001). Students will rise to high expectations if they are given the supports to do so; PBIS is one such support to help students do just this, (Pereira, 2011). Implementation of PBIS can “lead to both systemic as well as individualized change,” (Cohn, 2001, para. 1). Whether it is a behavioral need of the entire school, a group of students, or individualized students, the tiered practices of SWPBIS can reach them. Additionally, implementing across an entire school promotes consistency among staff members and a shared workload, (Carter, 2012).
RESEARCH METHODS

Research Design

A quantitative study was conducted to determine the impact of SWPBIS on student discipline incidents. These were measured by the number of major and minor office discipline referrals throughout each phase of SWPBIS implementation.

The independent variable is the phase of implementation of SWPBIS. The dependent variable is the major and minor office discipline referrals.

Study Group Description

Students over the last eight school years at a Midwestern middle school were the group evaluated in this study. This is a slightly rural district, but it is also a very outer suburb of a larger city, as well. The enrollment of the school ranged from 625 to 670 students during the time of this study. The free and reduced lunch rate is higher at this school than in other similar middle schools in the same geographic location, ranging from 31.4% to 47.8% during the time of the study. The demographics of this middle school are similar to other districts of the same size in the area. The most recent information from the state comprehensive data system shows that the student population is made up of 86.50% white, 4.50% Hispanic, 1.90% black, 0.60% Indian, and 0.50% Asian.

Data Collection and Instrumentation

Archived data from Schoolwide Information Service (SWIS) concerning major and minor office referrals at the middle school was used to analyze the trends in these referrals during each phase of SWPBIS implementation.
Statistical Analysis Methods

A descriptive analysis and an ANOVA were conducted to find whether there is a significant difference in ODRs during each phase of SWPBIS implementation. The source was broken into four categories: Pre-implementation, Phase 1 of implementation (Tier 1 practices only), Phase 2 of implementation (Tiers 1 & 2), and Phase 3 of implementation (Tiers 1, 2, & 3). The mean, mean D, df, F, and p-value were concluded from the ANOVA test. The Alpha level was set at 0.05 to test the null hypothesis.
FINDINGS

An analysis of variance (ANOVA) was conducted to determine whether there was a significant difference in major and minor office discipline referrals with implementation of School-Wide Positive Behavior Intervention and Support (SWPBIS) in the middle school setting. The following figures and narratives will depict the organized findings based on the statistical data collected through SWIS at the Middle School throughout their four phases of implementation.

In the data, Phase 1 refers to pre-implementation, or baseline, data. Phase 2 refers to the first phase of implementation when Tier 1 practices were implemented. Phase 3 refers to the second phase of implementation when both Tier 2 practices were implemented, in addition to Tier 1 practice. Phase 4 refers to the third phase of implementation when all three Tiers of PBIS were implemented.

An ANOVA was conducted for three categories of data. First, an analysis of Major ODR data was completed. Then, an analysis of Minor ODRs was completed. Finally, an analysis of total ODRs (combining Major and Minor ODRs) was completed.

Figure 1

Summary of Descriptive Statistics for Major ODRs

<table>
<thead>
<tr>
<th>Phase</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>1605</td>
<td>47.43</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>920</td>
<td>47.43</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>579</td>
<td>33.54</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>442</td>
<td>27.38</td>
</tr>
</tbody>
</table>
As shown in Figure 1, within the group that was studied (each phase of SWPBIS implementation), Phase 1 (pre-implementation) averaged the highest number of annual Major Office Discipline Referrals (ODRs) with a mean of 1605 ODRs (SD = 47.43). Phase 4 (implementation of PBIS Tiers 1-3) averaged the lowest number of annual Major ODRs with a mean of 442 ODRs (SD = 27.38). Phase 2 (implementation of PBIS Tier 1) recorded a mean of 920 (SD = 47.43) annual Major ODRs; Phase 3 (implementation of PBIS Tiers 1 & 2) recorded a mean of 579 (SD = 33.54) annual Major ODRs. The overall difference between the mean annual Major ODRs across the phases studied was 1162 ODRs. A One-Way ANOVA was undertaken to determine if the observed variations were significantly different.

Figure 2

![Graph showing the mean annual Major ODRs across phases of PBIS implementation.](image)

The mean annual Major ODRs has decreased during each phase of PBIS implementation. The high point for annual Major ODRs was during pre-implementation (Phase 1) with a mean of 1605. The low point for annual Major ODRs was during implementation of all three tiers of PBIS (Phase 4) with a mean of 442.
Summary of ANOVA Test of Significance Results for Major ODRs

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>F/R Lunch</td>
<td>1.09 x 10^6</td>
<td>3</td>
<td>364901</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Major ODRs</td>
<td>6.75 x 10^3</td>
<td>3</td>
<td>2249.33</td>
<td>162.23</td>
<td>.0008</td>
</tr>
</tbody>
</table>

Note: Significance = < 0.05

The Analysis of Variance procedures were performed for annual Major ODRs across each phase of PBIS implementation to determine whether significant differences existed. There was a significant difference in Major ODRs (see Figure 3) among the phases of implementation (F=162.23, p=0.0008) when the Alpha level was set at 0.05. The null hypothesis was rejected for major ODRs. A post hoc analysis was completed to determine where the significant difference could be found more specifically within the phases of PBIS implementation.

Summary Post Hoc Analysis Results for Major ODRs

<table>
<thead>
<tr>
<th>Phase</th>
<th>Phase</th>
<th>Mean D</th>
<th>Std. Error</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>685</td>
<td>67.07</td>
<td>0.002</td>
</tr>
<tr>
<td>1</td>
<td>3</td>
<td>1026</td>
<td>58.09</td>
<td>0.0004</td>
</tr>
<tr>
<td>1</td>
<td>4</td>
<td>1163</td>
<td>54.76</td>
<td>0.0002</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>341</td>
<td>58.09</td>
<td>0.009</td>
</tr>
<tr>
<td>2</td>
<td>4</td>
<td>478</td>
<td>54.76</td>
<td>0.003</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
<td>137</td>
<td>43.29</td>
<td>0.05</td>
</tr>
</tbody>
</table>

Note: Significance = < 0.05
As shown in Figure 4, the greatest mean difference was found between Phase 1 and Phase 4 with a Mean D of 1163 ($\text{Sig.} = 0.0002$). The smallest mean difference was observed between Phase 3 and 4 with a Mean D of 137 ($\text{Sig.} = 0.05$). The mean difference between Phases 1 and 2 was 685 ($\text{Sig.} = 0.002$). The mean difference between Phases 1 and 3 was 1026 ($\text{Sig.} = 0.0004$). The mean difference between Phases 2 and 3 was 341 ($\text{Sig.} = 0.009$). Finally, the mean difference between Phases 2 and 4 was 478 ($\text{Sig.} = 0.003$). With an Alpha level of 0.05, there was a significant difference recorded within each of the six pairwise comparisons. The null hypothesis was rejected for all six pairwise comparisons.

Figure 5

**Summary of Descriptive Statistics for Minor ODRs**

<table>
<thead>
<tr>
<th>Phase</th>
<th>$N$</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>1403</td>
<td>493.47</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>1443</td>
<td>493.47</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>1521.5</td>
<td>348.94</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>2099.33</td>
<td>284.91</td>
</tr>
</tbody>
</table>

As shown in Figure 1, within the group that was studied (each phase of SWPBIS implementation), Phase 4 (PBIS Tiers 1, 2, & 3) averaged the highest number of annual Minor Office Discipline Referrals (ODRs) with a mean of 2099.33 ODRs ($SD = 284.91$). Phase 1 (pre-implementation) averaged the lowest number of annual Minor ODRs with a mean of 1403 ODRs ($SD = 27.38$). Phase 2 (implementation of PBIS Tier 1) recorded a mean of 1443 ($SD = 493.47$) annual Minor ODRs; Phase 3 (implementation of PBIS Tiers 1 & 2) recorded a mean of 1521.5 ($SD = 348.94$) annual Minor ODRs. The overall difference between the mean annual Minor
Office Discipline Referrals

ODRs across the phases studied was 696.33 ODRs. A One-Way ANOVA was undertaken to determine if the observed variations were significantly different.

Figure 6

The mean annual Minor ODRs has increased during each phase of PBIS implementation. The high point for annual Minor ODRs was during pre-implementation (Phase 1) with a mean of 2099.33. The low point for annual Minor ODRs was during implementation of all three tiers of PBIS (Phase 4) with a mean of 1403.

Figure 7

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>F/R Lunch</td>
<td>$6.85 \times 10^5$</td>
<td>3</td>
<td>228206</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minor ODRs</td>
<td>$7.31 \times 10^5$</td>
<td>3</td>
<td>243516</td>
<td>0.94</td>
<td>0.52</td>
</tr>
</tbody>
</table>

Note: Significance = < 0.05

The Analysis of Variance procedures were performed for annual Minor ODRs across each phase of PBIS implementation to determine whether significant differences existed. There was no significant difference in Minor ODRs (see Figure 7) among the phases of implementation ($F=0.94$, $p=0.52$) when the Alpha level was set at 0.05. The null hypothesis was not rejected for
minor ODRs. A post hoc analysis was not completed because there was no significant difference observed in the ANOVA results.

Figure 8

**Summary of Descriptive Statistics for Total ODRs**

<table>
<thead>
<tr>
<th>Phase</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>3008</td>
<td>505.59</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>2363</td>
<td>505.59</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>2100.5</td>
<td>357.51</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>2541.33</td>
<td>291.9</td>
</tr>
</tbody>
</table>

As shown in Figure 1, within the group that was studied (each phase of SWPBIS implementation), Phase 1 (pre-implementation) averaged the highest number of annual total Office Discipline Referrals (ODRs) with a mean of 3008 ODRs (SD = 505.59). Phase 3 (implementation of PBIS Tiers 1 & 2) averaged the lowest number of annual total ODRs with a mean of 2100.5 ODRs (SD = 357.51). Phase 2 (implementation of PBIS Tier 1) recorded a mean of 2363 (SD = 505.59) annual total ODRs; Phase 4 (implementation of PBIS Tiers 1-3) recorded a mean of 2541.33 (SD = 291.9) annual total ODRs. The overall difference between the mean annual total ODRs across the phases studied was 907.5 ODRs. A One-Way ANOVA was undertaken to determine if the observed variations were significantly different.
The mean annual total ODRs has not shown a constant trend during each phase of PBIS implementation. There was a decrease from Phase 1 to Phase 2, and from Phase 2 to Phase 3. However, the total ODR annual mean increased from Phase 3 to Phase 4. The high point for annual total ODRs was during pre-implementation (Phase 1) with a mean of 3008. The low point for annual total ODRs was during implementation of tiers 1 and 2 of PBIS (Phase 3) with a mean of 2100.5.

Figure 10

**Summary of ANOVA Test of Significance Results for Total ODRs**

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>F/R Lunch</td>
<td>$5.88 \times 10^5$</td>
<td>3</td>
<td>195986</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total ODRs</td>
<td>$7.67 \times 10^5$</td>
<td>3</td>
<td>255622</td>
<td>0.77</td>
<td>0.58</td>
</tr>
</tbody>
</table>

Note: Significance = < 0.05

The Analysis of Variance procedures were performed for annual total ODRs across each phase of PBIS implementation to determine whether significant differences existed. There was no significant difference in total ODRs (see Figure 10) among the phases of implementation.
(F=0.77, p=0.58) when the Alpha level was set at 0.05. The null hypothesis was not rejected for total ODRs. A post hoc analysis was not completed because there was no significant difference observed in the ANOVA results.
CONCLUSIONS AND RECOMMENDATIONS

The outcomes of this study show that implementation of School-Wide Positive Behavior Intervention and Support (SWPBIS) significantly impacts major behavior incidents in the middle school setting, but it does not significantly impact minor behavior incidents in the same setting. The ANOVA results show that there is a significant difference in Major Office Discipline Referrals (ODRs) when PBIS is implemented at all three phases with a p-value of 0.0008. This is noticeably less than the alpha level of 0.05, so the null hypothesis for Major ODRs is rejected. There is a difference in Major Office Discipline Referrals when SWPBIS is implemented in the middle school setting.

Looking at Minor ODRs, though, the results differed. The ANOVA results show that there is not a significant difference in Minor ODRs when PBIS is implemented at all three phrases with a p-value of 0.52. This is quite a bit more than the alpha level of 0.05, so the null hypothesis for Minor ODRs cannot be rejected. There is not a difference in Minor Office Discipline Referrals when SWPBIS is implemented in the middle school setting.

The conceptual underpinning is indeed supported by these findings when focused primarily on Major behavior incidents. The proactive approach to PBIS prevented behavior issues therefore greatly reduced the number of Major ODRs during implementation. Educators should continue their proactive approach to behavior management to continue to reduce behavior incidents. This would increase time on task for students, thus improving student achievement.

After the conclusion of this study, continued studies could further the investigation of the impact of PBIS on student behavior referrals. Each year, behavior data will be available to see if the trend is changing at all. Analyzing the behavior data of other schools, grade levels, and demographics implementing PBIS would widen the lens of this study and get a more generalized
view of PBIS. Research could also take a more specific look at the discipline data. Breaking the referrals into more categories, such as aggression, disrespect, or other behavior categories, could identify even more ways in which PBIS is or is not effective. To ensure fidelity in these studies, behaviors need to be recorded with continuity across the schools in the study.

Professional development on behavior management should continue for educators in all settings – both elementary and secondary. PBIS must be implemented with fidelity to be successful, and this requires meaningful training for all staff involved. Continued improvement in this area will continue to decrease student behavior incidents and increase student performance.
REFERENCES


