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Effects of a Universal Positive Behavior Intervention on School-wide Behavior

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EFFECT OF A UNIVERSAL POSITIVE BEHAVIOR INTERVENTION ON SCHOOL-WIDE BEHAVIOR

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ABSTRACT

EFFECT OF A UNIVERSAL POSITIVE BEHAVIOR INTERVENTION ON SCHOOL-WIDE BEHAVIOR

Kelly Renae Tanner

This study examines the effects of a positive behavior intervention on the behavior of students in a single elementary school located in a rural area of West Virgina. A Single Group Pretest-Treatment-Posttest Design was utilized with the frequency of Office Discipline Referrals (ODR's) as the dependent variable. Data were analyzed using the Chi Square statistic. Results showed no significant difference in pre-treatment and post-treatment conditions.

Chapter 1:

Review of the Literature

The importance of behavior in student and school success is evident in the research literature (Adelman & Taylor, 2006), and, in the educational arena, effective classroom management of student behavior has been and continues to be a primary focus (National Association of School Psychologists, 2008; Sugai & Horner, 2006) In fact, all schools who receive federal funding are required to have appropriate discipline policies in place that effectively address behavior concerns (No Child Left Behind Act of 2001). Throughout the history of public education, schools have tended to rely on a reactive disciplinary approach, which emphasizes obedience to rules and is based on maintaining control and order through the delivery of consequences (Bear, 2008). However, current research (Hawken, Vincent, Claudia, & Schumann, 2008; McKintosh, Chard, Boland, & Horner, 2006; Simonsen, Sugai, & Negron, 2008) supports the use of an alternative approach known as Positive Behavior Support (PBS). The following is a review of the literature concerning the importance of improving behavior and the main approaches for doing so.

The Impact of Behavior on Student Learning

Efforts to improve student learning must focus on more than simply the academic component. Recent data suggest that an increasing number of students either have or are at risk for problems in not only the learning domain, but the social and emotional domains as well (Greenberg et al., 2003). Skill deficits in such domains are concerning

because certain social and emotional skills are necessary for meeting behavioral expectations (Whitted, 2011) that are known to affect student learning.

Student misbehavior is described in the literature as a "barrier to learning" (Adelman & Taylor, 2006, p.167). One way it acts as a barrier is by interfering with the amount of time students are academically engaged in instruction, and research has shown that academically engaged time is a strong predictor of achievement (Gettinger & Ball, 2008). A student who is exhibiting disruptive behavior is likely not actively engaged in the lesson. Furthermore, the time that a teacher spends reprimanding or correcting inappropriate behaviors is time that could have been used for instructional purposes. Those students who misbehave and are sent from the classroom miss out on valuable instructional time. In addition, the behavior may distract other students. As quoted in *Best Practices of School Psychology V*, "Behavioral engagement, or disengagement in terms of poor attendance, disciplinary problems, and a lack of interest/participation at school, are among the most common concerns expressed by educators and parents" (Christenson et al., 2008, p. 1105).

In addition to affecting academically engaged time, improving student behavior is important because of the long-term effects of behavior on individual students. Research has shown that students who frequently display problem behaviors at an early age often show a pattern of maladaptive behavior and are at-risk for a host of negative outcomes. For example, researchers studying preschoolers with aggressive behavior found that those students who did not receive intervention services for their behavior by the third grade were likely to display aggressive behaviors throughout childhood and adolescence (Coie & Dodge, 1998). Other research following students across the first six years of school

showed that students who frequently exhibited problem behaviors in the earliest years of school were more likely to have ongoing difficulty with achievement, peer acceptance, and social competence than those children who did not exhibit externalizing behavior (Henriccson & Rydell, 2006). In one longitudinal study that followed students from Kindergarten to 5th grade, those students with greater numbers of Office Discipline Referrals (ODR's) in earlier grades continued to have greater numbers in the upper grades (Horner, Chard, Boland, & Good, 2006). In sum, there is ample research attesting to the importance of behavior to student outcomes, and as such, the manner in which schools deal with student behavior is critical. The following sections highlight two prevailing approaches.

The Reactive Disciplinary Approach to Behavior

This approach is characterized by the delivery of consequences in response to inappropriate behavior (Sugai & Horner, 2002). Throughout history, the intent has been to *control* student behavior with an emphasis on obedience to rules and authority. Although research does show that clear expectations and consequences are characteristics of safe and effective schools (Bear, 2008), it seems there has been an overreliance on punitive practices. In fact, research suggests that the use of punishment is "the most common method of correction used in the schools" (Bear, 2008, p.1411). [It should be noted that the term "punishment" is often used loosely and, for the purpose of this discussion, is defined by Bear as "the use of an unpleasant consequence to decrease the likelihood that the behavior of concern will occur in the future" (p.1411).]

Punishment has both pros and cons. The main benefit of punishment is that it is often effective in immediately stopping undesired behaviors (Bear, 2008; Martin & Pear,

2007). In addition, the threat of punishment may deter some students from misbehaving, and even the most effective classroom managers use mild forms of punishment (e.g. warnings, verbal reprimands, response cost) (Bear, 2008). Presently, there is little research indicating the use of punishment should be completely eliminated (Bear, 2008). However, research does reveal limitations of using punishment as the sole behavior modification technique. The benefits of punishment are often short-term because punishment alone does not address the cause of the behavior or teach the student an appropriate replacement behavior (Martin & Pear, 2007). In addition, the use of punishment has been assocated with negative side-effects including the development of aggressive behaviors or emotional reactions (Martin & Pear, 2007). Furthermore, by temporarily stopping one behavior, one might create a situation that is even more detrimental as punishment tends to have a negative influence on the overall environment (Bear, 2008).

A Shift toward Positive Behavior Support

Unlike the previously discussed approach based on responding to misbehavior with negative consequences, Positive Behavior Support (PBS) is a proactive approach to student behavior that emphasizes addressing student behavior *before* problems occur (Morrissey, Bohanon, & Fenning, 2010; Simonsen et al, 2008). PBS is based on helping students acquire important social skills necessary for appropriate interactions, teaching students appropriate behaviors, and delivering positive reinforcement when those behaviors are displayed. When inappropriate behavior does occur, measures are taken (e.g. make modification to the environment, teach the student a replacement behavior, etc.) so as to prevent future reoccurrence of the behavior (Sugai, Horner, & McIntosh,

2008). The PBS approach recognizes that students need varying amounts of support and relies on practices and interventions that are evidence-based to provide such support (Hawken et al., 2008; McKintosh et al., 2006; Simonsen et al., 2008).

PBS is not a new concept. The "technologies, practices, theoretical underpinnings, and empirical supports" of PBS date as far back as the 1950s (Greenberg et al., 2003; Sugai et al., 2008, p.767). However, our knowledge regarding what works did not necessarily result in the effective use of such practices in schools. Thus, in recent years, there has been an increased emphasis on the application of the principles of PBS at a school-wide level (Sugai et al., 2008). In 1997, the Office of Special Education Programs in the U.S. Department of Education established the Center on Positive Behavioral Interventions and Supports (PBIS) to provide schools assistance in "identifying, adapting, and sustaining effective school-wide disciplinary practices" (U.S. Department of Education, Office of Special Education Programs, 2011, para.1). The term PBIS appears in the 1997 re-authorization of the Individuals with Disabilities Education Act (IDEA) and is used interchangably with the term School-wide Positive Behavior Supports (SWPBS).

The PBIS (or SWPBS) framework includes the following components: (1) the development of a leadership team to guide efforts (2) an emphasis on the use of data to guide decision making (3) a process for monitoring student behavior (4) screening of the entire student population on a regular basis and (5) effective, on-going, professional development. SWPBS has been termed a promising approach (Sugai & Horner, 2006), as it is conceptually sound with key components that are supported by research. In preliminary studies examining various characteristics of schools both before and after

implementation, SWPBS has been associated with positive outcomes including a decrease in discipline referrals, an increased amount of time spent on instruction, higher achievement scores, and a more positive school climate (Luiselli, Putnam, Handler, & Feinberg, 2005; Simonsen et al., 2008). However, researchers maintain that further empirical research is needed in order to validate the use of SWPBS in schools.

As of November 2008, approximately 8,000 schools reported participation in SWPBS implementation, and researchers expected the number to increase in the future because of alignment between the SWPBS approach and federal educational legislation (Spaulding, Horner, May, & Vincent, 2008). This legislation includes The No Child Left Behind Act of 2001 (NCLB) and Individuals with Disabilities Education Improvement Act of 2004 (IDEA 2004) that emphasize accountability, data-based decision making, scientifically based research, and early intervention/prevention. Schools must rely on practices that are supported by sound research and are responsible for implementing practices that benefit all students. In addition, schools are responsible for collecting data to monitor the effects of interventions and using such data to guide decision making. As mentioned briefly above, one of the fundamental principles of SWPBS is the provision of varying levels of support based on student needs. In the educational arena, this has come to be known as "The Three-Tiered Model."

This model of service delivery is well supported by research findings (Hawken et al., 2008). In The Three-Tiered Model, all students receive Tier 1, or universal, support. Tier 2 consists of additional services in a small group format for those students identified as needing more support, and Tier 3 involves more intense intervention in the form of

individualized support such as that obtained through Functional Behavior Assessments and Behavior Support Plans.

Initiatives at the Universal Level

School-wide discipline programs fall in the Tier I, or universal, category, (Hawken et al., 2008), and, as discussed by Simonsen et al. (2008), school-wide improvement efforts require preparation. It is necessary to clearly define the goals of the initiative in measurable terms, utilizing past data to identify areas that need improvement. It is also important to clearly define expectations/routines for each setting and ensure that the staff is prepared with strategies for praising good behavior and responding to inappropriate behavior. It is recommended that a team be set up consisting of members who have the potential to assist in obtaining 80% staff buy-in and play a primary role in training and coaching staff (Simonsen et al., 2008).

In terms of actual implementation, The Office of Special Education Programs (OSEP) lists the following five steps as essential to effective universal prevention efforts: (1) Establish and define school-wide expectations (2) Teach expectations to all students (3) Praise appropriate behavior (4) Have clear consequences for non-desired behavior and be consistent in applying them (5) Evaluate the fidelity and effectiveness of efforts using data (McKevitt & Braaksma, 2008).

The Principal's 200 Club. "The Principal's 200 Club" is an example of a universal intervention that, consistent with the recommendations above, emphasizes the establishment and teaching of expectations, known as "All-School Rules" (Jenson, Evans, Morgan, & Rhode, 2006). Positive reinforcement is a key component of the

intervention, which is based on a dynamic feedback system intended to "catch" students who are abiding by the rules. Each day, the administrator distributes a total of 15 tickets to different teachers to administer at their own discretion when an appropriate behavior is observed. Not only do students receive tangible, immediate reinforcement, but at the end of the day, those students who have a ticket receive verbal recognition via the intercom and report to the principal's office where they each draw a numbered disk and place it on the corresponding space on "The 200 Club Chart" (p.23). This chart is publicly displayed for all students to see. A group incentive exists; once a row is filled, each student who helped fill up that particular row receives a reward. The reward, known as the "Mystery Motivator," is secretly written on a piece of paper and placed in an envelope in a main area of the school. Students are also reinforced with a positive phone call home to a parent or guardian and the opportunity to sign "The 200 Club Celebrity Book" that is displayed for guests to see (Jenson et al., 2006).

The importance of being "evidence-based." While The Principal's 200 Club may be considered *research-based*, as the practices are based on principles supported in research, the authors do not accompany the intervention manual with sufficient examples of effectiveness studies that would indicate the intervention is *evidence-based*. To be considered evidence-based, an intervention needs to have demonstrated positive effects in outcome studies using rigorous research methods. Distinguishing evidence-based programs from those that are not based on evidence can be difficult, but there has been a movement by various researchers and agencies toward reviewing programs and making the information readily available to the public (Ervin & Schaughency, 2008). It should be noted that there are two reasons why programs/interventions may not be included on

lists of evidence-based programs. One is that a given program may have been proven ineffective, or, alternatively, it simply may not have been empirically evaluated (Ervin & Schaughency, 2008).

Despite the recent emphasis on evidence-based programs, the practice of selecting and/or using non-evidence-based interventions is common in schools. This disparity is reflected in the following quotation that appears on The National Association of School Psychologists (NASP) website: "One of the major tenets of NCLB is the implementation of scientifically based interventions to improve student performance. The traditional models used by most schools today lack such scientifically based evidence" (Canter, 2004, para.8). Utilizing data to guide decision making is important, not only in regard to program selection, but, as will be discussed in the following section, in evaluating the effectiveness of efforts (McKevitt & Braaksma, 2008).

Office Discipline Referral Data. One type of data used frequently in schools is the Office Discipline Referral (ODR) measure (Irvin et al., 2006). ODR's are defined as "standardized records of events of problem behavior that occur in schools," (McIntosh, Frank, & Spaulding, 2010, p 381). Research suggests that the previously discussed approach, Positive Behavior Support, results in decreases in ODR's (Luiselli et al., 2005). In one large-scale study, data from 18,598 students were analyzed, and results indicated that behavior initiatives that focused on preventing problem behavior were followed by decreased rates of ODR's (Sprague, Sugai, Horner, & Walker, 1999).

ODR's appear frequently as an outcome measure in research studies (Luiselli et al., 2005; Marchant et al., 2009; Sprague et al, 2001; Sprague et al., 1999) because ODR

data are considered to be an indicator of student behavior. To test this assumption, Irvin Tobin, Sprague, Sugai, and Vincent (2004) examined the validity of ODR's by using Messick's approach to review the existing literature base. This included reviews of research on prevention and school-wide discipline efforts, assessments of interventions, and program evaluations. The researchers found evidence of correlational relationships between ODR's and various student behaviors (e.g. aggression, drug use, defiance, behavior disorders, and juvenile delinquency) that one would expect to be related if ODR's were truly representative of problem behavior. Correlations were also found between ODR's and factors relating to climate, including student attitudes, classroom orderliness, school safety, and crime/victimization rates. Furthermore, there was evidence of correlations between staff's perception of program effectiveness and ODR's, indicating social validity. The researchers concluded that there is indeed empirical support for the use of ODR data as (1) an indicator of school climate (2) a measure of universal intervention effectiveness and (3) a source of data to use in determining behavior support needs (Irvin et al., 2004).

Researchers and educators have proposed that ODR's should be utilized as a primary source of data when making school-wide decisions about interventions, adding that ODR's are simple and can aid in "assessment, monitoring, and planning" (Sprague et al., 1999, p.3). Furthermore, McIntosh et al. (2010) found support for using ODR data to make decisions about behavior needs for individual students. The researchers examined the number of early ODR's of 990,908 students and used ODR cutpoints to classify students into one of three categories (zero to one ODR , 2-5 ODR's, and 5 or more ODR's). The researchers found signficantly different rates of later ODR's for students

based on the number of early referrals the student had received, suggesting that ODR's are stable over time. The implications are that early ODR data can be used to identify those students who may need additional support.

Need for the Present Study

Administrators in a single rural elementary school decided to implement a universal positive behavior intervention in response to the results of a comprehensive needs assessment, performed by an outside consultant, which revealed a weakness in the area of Positive/Preventive Behavior Management. Administrators chose "The Principal's 200 Club," an intervention explained in *The Tough Kid Principal's Briefcase: A Practical Guide to Schoolwide Behavior Management and Legal Issues* (Jenson et al., 2006). As previously discussed, although this program may be based on research, there is not sufficient evidence indicating it is evidence based. Thus, the purpose of this study is to examine the effectiveness of the intervention in improving student behavior.

Chapter 2:

Method

Purpose of the Study

The purpose of this study is to determine whether a universal positive behavior support intervention was effective in improving student behavior in a single elementary school. The main research question is as follows: Is there a significant difference in the total number of Office Discipline Referrals (ODR's) after the intervention compared to the total number of ODR's before the intervention?

Population Description

The elementary school utilized in this study is located in a rural community and has a predominately White/Caucasian population with a majority of students classified as Low Socioeconomic Status. (See Table 1 for demographics). There are approximately 500 total students from Pre-School to 5th grade. In this study, there were 345 students in the pre-treatment group and 367 in the post-treatment condition. Some grades were deliberately excluded prior to data analysis, and this decision is discussed in more detail in the following section.

Research Design

This study is a form of quasi-experimental research, using cluster samples (i.e. pre-existing groups). It relies on the Single-Group Pretest- Treatment-Posttest Design. Conditions were not manipulated by the investigator, and the "treatment" refers to "The

Principal's 200 Club," a positive behavior initiative that was implemented independent of this study.

School administrators explained the initiative as follows: Before the school year in which the intervention was to be implemented, all teachers were trained on the specifics of implementation as well as on general positive behavior management techniques. During the first week of school, all students participated in training regarding the rules, expectations, and benefits of the Principal's 200 Club. The intervention was then begun at the start of the 2009-2010 schoolyear.

All students in the school participated in the intervention, but, for the purpose of this study, the data for those in 5th grade during the pre-treatment condition were excluded because those students would be moving to the middle school and would not be present during the treatment condition. Similarly, data for those who entered Kindergarten during the post-treatment condition were excluded because no pre-treatment data were available. It should also be noted that no data were available for those who were enrolled in Pre-school because Pre-school operates on its own discipline system independent of the other grades. Thus, this study compared the total number of ODR's obtained by students in Kindergarten through 4th grades during the 2008-2009 school year (i.e. pre-treatment condition) to the total ODR's obtained by students in 1st through 5th grades during the 2009-2010 school year (i.e. post-treatment condition). See Table 2 for a grade-by-grade breakdown of the population.

Data Collection

Because this study utilizes already existing, unidentifiable data, approval from the International Review Board (IRB) was not required. Permission to conduct the study was obtained from the Superintendent of the district as well as from the elementary Vice-Principal who was in charge of school discipline. Data were obtained from the West Virginia Education Information System or WVEIS (West Virginia Department of Education, 1990). WVEIS is a database created as a means of ensuring that the collection and reporting of important data are standardized throughout the state of West Virginia. All county Board of Education offices and schools in the state utilize WVEIS to report information such as school-wide attendance, test scores, demographics, and discipline rates. Access to the database is not open to the public, and only authorized users within a county may access the data. The Superintendent granted permission to access the total number of Office Discipline Referrals obtained for the 2008-2009 and 2009-2010 school years as well as demographic information.

Chapter 3:

Results

During the pre-intervention (2008-2009) school year, there was a total of 677 Office Discipline Referrals (ODR's). During the post-intervention (2009-2010) school year, there was a total of 750 ODR's. These data were examined using the Chi Square test of independence. The Chi Square statistic is useful for analyzing frequency counts to see if there is a statistically significant difference between the obtained values. A Chi Square was run on the ODR data (See Table 3), and the results did not show a statistically significant difference in the number of discipline referrals obtained during pre-intervention and post-intervention schoolyears, x^2 (1, *N= 367)* = 3.73, p>0.05.

Chapter 4:

Discussion

The purpose of this study was to examine the impact of a school-wide positive behavior intervention on student behavior. The intervention is based on research; however it is not evidence based. A quasi-experimental study was conducted in a single elementary school to determine if implementation had a significant impact on Office Discipline Referral (ODR) data. Results indicated no statistically significant difference, suggesting that the intervention did not considerably impact overall student behavior. Possible reasons for this finding, as well as implications, and suggestions for future research will now be discussed.

Selection of the Intervention

One possible reason that behavior did not improve is that the intervention itself was inappropriate and/or insufficient for the stated goal. As discussed previously, there is not sufficient empirical evidence to indicate that the chosen intervention was evidence based. With that said, it is also important to note that the authors of the guide from which the intervention was obtained did not advocate for the use of the intervention as a stand-alone program. The authors emphasized that the Principal's 200 Club intervention should be only one component of a comprehensive system of positive behavior supports (Jenson et al., 2006). As stated by McKevitt and Braaksma a universal program is "necessary, but not sufficient" for success in the long term because it will not reach the 15 to 20% of students who need more intensive support (2008, p. 39).

This issue of program selection has implications for school administrators who may wish to re-examine the decision-making process to ensure that informed decisions are made in regard to intervention selection and additional factors related to improvement efforts. In fact, research shows that forming a leadership team is an important component of PBS efforts, in part because collaborative decision making is generally more effective than decisions made by any single individual (McKevitt & Braaksma, 2008).

Factors Related to Implementation

Another possible reason that the intervention may not have been successful involves implementation fidelity. Fidelity refers to whether the administrators and teachers accurately and consistently followed the steps of the intervention. There are multiple factors that may serve as barriers to implementation efforts including lack of knowledge, lack of skills, and lack of confidence. Although a training session was conducted to provide information (i.e. intervention steps as well as appropriate strategies for responding to inappropriate behaviors), there was no follow-up to see if staff applied those positive behavior management techniques. Perhaps teachers continued to use strategies that reinforce negative behaviors, not realizing the impact of these strategies (i.e. lack of knowledge). Perhaps teachers were aware of positive reinforcement techniques but did not use them effectively (i.e. lack of skill). Perhaps some teachers put forth only minimal effort because of the fear of trying something new (i.e. lack of confidence).

The aforementioned possibilities highlight the need for continuous monitoring of implementation efforts and effective, on-going professional development, which is a

known component of PBS success (McKevitt & Braaksma, 2008). In addition, efforts should be made to involve all stakeholders as involvement from such individuals, including the principal, teachers, and parents is an essential component of successful change (Gutkin & Reynolds, 2009).

Resistance to Change

PBS interventions are based on the assumption that typical methods of handling discipline are ineffective (McKevitt & Braaksma, 2008). Thus, understanding barriers to implementation involves understanding the change process. Resistance to change is a normal part of that process (Ervin & Schaughency, 2008). As such, it is important for administrators to be proactive in taking measures to reduce the likelihood of resistance and increase the chances of program success. Before introducing a school-wide program, it is recommendend that administrators work to obtain staff buy-in, or commitment, from at least 80% of the staff (Simonsen et al., 2008).

Considering that the mandated intervention was based on an approach to discipline that challenged long-held beliefs prevalent in the school, it is possible that many of the teachers did not adopt the new mindset. Buy-in was not obtained before introducing the intervention. Furthermore, no changes were made to the school's previous discipline policy, which includes reactive and exclusionary consequences. Research shows that overuse of such practices may negatively impact teacher/student relationships and hinder implementation efforts (Sugai & Horner, 2006).

Limitations and Future Directions

In this study, improvement in behavior was operationally defined as a decrease in ODR's. Although research consistently supports the use of ODR's as a valid indicator of student behavior, (Irvin et al., 2006; Irvin et al., 2004), some studies (Marchant et al, 2009; Walker, Cheney, Stage, & Blum, 2005) suggest that using ODR's to identify those students in need of behavioral support may result in underidentification of those students who have internalizing problems (e.g. anxiety, depression). Thus, the fact that there was no change in ODR's does not necessarily mean the intervention had zero impact. It is possible that the intervention *did* have a positive impact on certain factors that may not be reflected in ODR data.

Future research could address this issue by including a second source of objective data that measures internalizing problems (e.g. screener for internalizing and externalizing problems). Furthermore, of particular interest, might be the intervention's impact on school culture as research shows positive behavior initatives are associated with improved culture (Hawken et al., 2008). Bear (2008) emphasizes the importance of assessing students' perceptions, thoughts, and attitudes, and recommends that qualitative measures (e.g. focus groups and surveys) be used in program evaluations. Future studies should consider using a combination of these data sources as it would likely provide the most comprehensive picture of behavior (Marchant et al., 2009).

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Table 1

Population Demographics

	2008-2009 (*N*=508)		2009-2010 (*N=518)*	
Measure	*n*	*%*	*n*	*%*
Male	249	49.02	259	50.00
Female	259	50.98	259	50.00
White	508	100.00	516	99.61
Low SES	384	75.59	376	72.59
Special Education	87	17.13	86	16.60
Grade-				
Pre-K	79	15.55	71	13.71
K	77	15.16	80	15.44
1	69	13.58	81	15.64
2	64	12.60	69	13.32
3	60	11.81	68	13.13
4	75	14.76	65	12.55
5	84	16.54	84	16.22

Table 2

Participant Population by Grade

Pre-Intervention (*N*=345)		Post-Intervention (*N=367)*	
Grade	*n*	Grade	*n*
K	77	1st	81
1st	69	2nd	69
2nd	64	3rd	68
3rd	60	4th	65
4th	75	5th	84

Table 3

Chi Square Results

Pre- ODR's	Post- ODR's	*x*2	*p*
677	750	3.73	$p>0.05$

Note. ODR = Office Discipline Referral.