STATE AND LOCAL LEVEL IMPLEMENTATION OF SCHOOLWIDE POSITIVE BEHAVIOR SUPPORT: AN EXAMINATION OF THE TEXAS BEHAVIOR SUPPORT INITIATIVE (TBSI)

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This study examined the current status of schoolwide positive behavior support efforts in Texas. The study specifically (a) examined the impact of statewide positive behavior interventions and supports (PBIS) training on the rates of discipline records, in-school suspensions, out-of-school suspensions, disciplinary alternative education placements, and expulsions of public schools in Texas; (b) investigated the overall effectiveness of schoolwide positive behavior support; and (c) determined the differences between rates of discipline records, in-school suspensions, out-of-school suspensions, disciplinary alternative education placements, and expulsions in schools participating in the Texas Behavior Support Initiative (TBSI): Schoolwide PBS Project when compared with matching schools who did not participate in the project. This study demonstrated that schools can significantly reduce problem behavior in their schools when implementing PBIS with fidelity. Creating effective systems of PBIS required training, coaching, and onsite technical assistance by trained and experienced PBIS facilitators.

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CHAPTER 1

INTRODUCTION

School administrators and teachers across the country are confronted with increasing incidents of challenging behavior and violent acts among students and are charged with making schools safer (Sugai, Sprague, Horner, & Walker, 2000). In response to the increase of antisocial and disruptive behavior by students, schools have created “get tough” and “zero tolerance” approaches to address misbehavior. However, these reactive and punitive approaches to challenging student behavior have been criticized as a short-term solution and leave out an important function of schools, teaching (Noam, Warner, & Van Dyken, 2001). An alternative response to challenging behavior that is proactive, preventative, and able to facilitate effective change in schools and individual students is the use of positive behavioral interventions and supports (PBIS; Sugai & Horner, 2002).

Recent high profile school shootings, along with increasing public pressure have forced many schools to implement disciplinary policies and procedures that resemble strategies used to punish adults in society (e.g., separation, removal) (Noguera, 2003). Most schools rely on some form of exclusion and zero tolerance policies to control the behavior of students who commit serious offenses such as bringing a weapon or drugs to schools (Kaufman et al., 2001; Skiba & Knesting, 2001). While it may be appropriate to use these traditional strategies (e.g., separation, removal), they must be reserved for the most serious offenses. Schools often react to lesser offenses with exclusionary practices in lieu of a positive, proactive approach to student misbehavior, often with unintended consequences (Skiba & Knesting, 2001).

The efficacy of exclusionary disciplinary practices has been challenged in recent years, especially concerning students who are most likely to be excluded. The literature concerning school suspension has consistently found that students who are male, African American, from low-socioeconomic backgrounds (Morrison et al., 2001; Raffaele-Mendez & Knoff, 2003; Skiba & Knesting, 2001; Skiba & Peterson, 2000; Skiba, Michael, Nardo, & Peterson, 2002; Stader, 2004) and students with disabilities (Zhang, Katsiyannis, & Herbst, 2004) are suspended at much higher rates than their counterparts. Disciplinary practices (e.g., expulsion) that punish, rather than teach, may actually alienate the student and intensify the problem behavior. Suspensions and expulsions have been linked to academic failure, higher dropout rates, increased criminal activity, and in general, a failure for the student to profit from his/her education (Morrison et al., 2001; Skiba & Peterson, 2000). School administrators and teachers confront challenging behavior daily and are concurrently faced with the increasing pressure to close the achievement gap of *all* the students.

In order to improve educational outcomes for all students, federal initiatives stress the importance of evidence-based practices. One of the most effective practices described in the literature is the use of positive behavioral supports (Lewis, Hudson, Richter, & Johnson, 2004). Positive behavioral interventions and supports (PBIS) is defined by the Office of Special Education Programs (OSEP), Technical Assistance Center on Positive Behavioral Interventions and Supports (2006) as “an application of a behaviorally based systems approach to enhance the capacity of schools, families, and communities to design effective environments that improve the fit or link between research validated practices and the environment in which teaching and learning occur

(p. 133-134)." PBIS focus on practices, outcomes, data, and systems at three levels: universal, secondary, and tertiary.

Sugai and Lewis (1999) identified four key elements of PBIS that are critical in the development of PBIS systems:

1. Behavioral science: The science of human behavior emphasizes that much of human behavior is learned, is influenced by the environment, and can be changed.
2. Practical interventions: PBIS emphasizes strategies that use assessment information (usually a functional behavioral assessment (FBA), to design interventions and environments that teach and support adaptive behavior as a replacement for problem behavior.
3. Social values: PBIS recognizes the importance of behavior change to be socially significant for the student. Effective interventions and supports are comprehensive, durable, and relevant.
4. Systems approach: A systems approach considers the many contexts in which problem behavior may occur. A systems approach focuses on prevention-based practices, team-based problem-solving, administrative support and participation, data-based decision-making, and a full continuum of behavior supports to address the range of problem behavior that occurs in schools.

School-based PBIS are directed at multiple levels of support. Universal or schoolwide supports are developed to address behavior in all settings with all students. The next level of support, secondary, addresses specialized group settings such as the classroom or for selected groups of students who require behavior supports beyond those provided at the universal level. The final level, tertiary supports, are interventions and supports targeted to those students who display chronic maladaptive behavior and require intensive, specialized behavioral intervention planning (Irvin et al., 2006; Irvin, Tobin, Sprague, Sugai, & Vincent, 2004; Putman, Luiselli, Handler, & Jefferson, 2003; Safran & Oswald, 2003; Sugai et al., 2000). Students, who display problem behavior requiring intensive supports, impede their own learning and the learning of others. In

addition, they often require a behavioral intervention plan developed from a functional behavior assessment. Schools that apply a continuum of universal and secondary positive behavioral supports improve their capacity to work with students who need intense, individual support (Horner, 2000).

A critical component of PBIS is the use of data collection and analysis to drive decision-making in planning and improving existing systems within a school (Sugai & Lewis, 1999). PBIS teams should evaluate archival data (e.g., office disciplinary referrals [ODR], suspension and expulsion records) in order to adopt and modify effective practices and to accurately describe the behavioral climate of a particular school (Safran & Oswald, 2003). According to Irvin et al. (2006) ODR data are routinely maintained by schools, readily available, and contain key information (i.e., name of student, referring teacher, time and location of infraction, and consequences). The systematic collection and analysis of routinely generated information can help schools build their capacities to educate all students, including those who display challenging behavior.

The Texas Behavior Support Initiative

The Texas Behavior Support Initiative (TBSI) was established in 2001 in response to Senate Bill 1196, a bill passed by the Texas senate that amended the Texas Education Code prohibiting school districts and open-enrollment charter schools from placing a student in seclusion and required the commissioner to adopt rules for the use of restraint and time-out. The goal of the initial TBSI training was to build capacity in Texas schools for the provision of PBIS to all students. This amendment included

training requirements concerning procedures for restraint and time-out as well as providing foundational information on PBIS. Educators in Texas received mandatory training in TBSI during the 2002-03 school years (Texas Education Agency [TEA], 2006a).

Campus core teams were responsible for training personnel on their campuses who are responsible for carrying out time-out procedures or restraints based on requirements established in students' individual education programs (IEPs) by April 1, 2003. After April 1, 2003, staff who had not been trained previously are legally obligated to receive training if they (a) are called upon to use restraint in an emergency or (b) have the responsibility of implementing a time-out for a student based on his/her IEP and/or behavioral intervention plan (BIP; Texas Education Agency, 2006a).

In 2004, TBSI extended its original training modules for the state behavior initiative. The TBSI: Schoolwide PBS (positive behavior support) Project was the first extension module of TBSI. The TBSI: Schoolwide PBS Project modules provide in-depth training for campus-level core teams, resources, and technical and data collection assistance to participating schools from education service center (ESC) staff. Participation in TBSI: Schoolwide PBS Project was voluntary; however, schools that chose to participate agreed to collect baseline and subsequent annual data for three years to be reported to TEA. Data to be reported included: ODRs, suspensions, expulsions, and disciplinary alternative education placements (DAEPs). The TBSI: Schoolwide PBS Project provided additional and site-specific training to participating schools.

The TBSI: Schoolwide PBS Project facilitated by Texas state regional services centers extended the initial TBSI training by providing: (a) a minimum of two days of team training to develop skills, (b) substitutes or stipends for an additional day of training, (c) a minimum of two days of on-site campus technical assistance, (d) materials and resources, (e) telephone and e-mail technical assistance, and (f) assistance with formative and summative evaluations (Region 12 Education Service Center, 2006).

Despite the last decade of promising research concerning the efficacy of the use of schoolwide PBIS, the use of PBIS at both the state and local levels is not extensive. For example, the Illinois PBIS Initiative has been growing steadily since its inception in 1998 from 23 schools to 520 schools in 2004-2005 (Eber, Horner, Sugai, Lewandowski, Bohanon et al., 2005). While this trend is positive, it only represents 10% of the 4982 (as July 10, 2006) public schools in Illinois. Texas currently has 61 schools participating in the 2004 TBSI: Schoolwide PBS Project that have submitted data to TEA. Of the 9140 public schools listed in the 2005-06 Texas School Directory (Texas Education Agency, 2006b), this represents a diminutive number, or 0.7% of schools that are participating in the TBSI: Schoolwide PBS Project.

The TBSI is relatively new and, therefore, the literature concerning its efficacy is significantly limited. Prior to implementing TBSI in Texas, using data based on the 1998-2002 annual reports, the state has consistently remained as one of five states with the highest percentage of students excluded across racial groups and disability categories (Zhang et al., 2004). Data has not been reported in the literature to determine if

exclusionary practices in Texas continue to rise and if the TBSI has influenced these trends.

Statement of Problem

Although PBIS is being supported as an evidence-based practice in the literature, schools in Texas continue to rely on traditional methods (e.g., suspension, expulsion) in their response to challenging behavior (Zhang et al., 2004). The IDEA requires individualized educational planning teams to consider PBIS for students with disabilities "whose behavior impedes the child's learning or that of others" and provides incentives for whole-school approaches that include the use of PBIS (IDEA, 2004). The whole-school approach of PBIS was addressed in Texas beginning in 2001 via the initial TBSI training. The impact of this training and subsequent training (i.e., TBSI: Schoolwide PBS Project*)* on the rates of discipline records, in-school suspensions, out-of-school suspensions, DAEPs, and expulsions has not been explored in the literature.

Purpose of Study

The purposes of this study are to (a) examine the impact of the initial TBSI training on the rates of discipline records (DRs), in school-suspensions, out-of-school suspensions, DAEP, and expulsions of public schools in Texas; (b) investigate the overall effectiveness of schoolwide PBIS as facilitated by the TBSI: Schoolwide PBS Project in participating schools; and (c) determine what differences, if any, there are between rates of DRs, in school-suspensions, out-of-school suspensions, DAEPs, and

expulsions between the schools participating in the TBSI: Schoolwide PBS Project with schools who are not participating.

Research Questions

The current study was guided by three research questions.

1. What is the impact of the Initial TBSI training on the rates of (a) discipline records, (b) in-school suspensions, (c) out-of-school suspensions, (d) disciplinary alternative education placements, and (e) expulsions of public schools in Texas?

2. In what ways is the TBSI: Schoolwide PBS Project in participating schools associated with changes in rates of (a) office discipline referrals, (b) in-school suspensions, (c) out-of-school suspensions, (d) disciplinary alternative education placements, and (e) expulsions?

3. What are the differences between the rates of (a) discipline records, (b) in-school suspensions, (c) out-of-school suspensions, (d) disciplinary alternative education placements, and (e) expulsions of schools participating in the TBSI: Schoolwide PBS Project training and matched schools who are not participating?

Significance

The study has practical significance for educators at state and local levels. Policymakers and practitioners may be able to use this information to (a) acquire a snapshot of the current status of PBIS efforts in Texas, (b) continue or enhance current training models of TBSI, and (c) add to the existing research-base of schoolwide PBIS. The study may serve as a foundation for follow-up studies and to help further solidify PBIS as an evidence-based practice.

Limitations

There are limitations associated with the study.

1. In that TBSI was implemented on a statewide basis, the integrity in how the TBSI training was delivered is difficult, at best, to ascertain.

2. Essential to a schoolwide approach, although each school received the same training and information, the interventions implemented at each site were unique to the school.

3. A short-term study may not produce significant effects, overall, since it may require three years to detect significant change through schoolwide efforts.
4. Comparisons between schools must be made with caution due to the unique characteristics of each school and community (e.g., location, size, local culture, social economic status, staff characteristics).

Definition of Terms

Several terms are used in this document that may be familiar to most educators, but may have different meanings in the reader's state or school district. The definitions of key terms used throughout this document are listed below.

- Disciplinary alternative education program (DAEP) – An alternative disciplinary placement used for certain offenses committed by students that is separate from other students (Walsh, Kemerer & Maniotis, 2005).
- Discipline record – A written record that is reported to TEA Public Education Information Management System (PIEMS) division for each disciplinary action that results in a removal of a student from any part of their academic program (Texas Education Agency, 2006c)
- Expulsion – A disciplinary sanction imposed by schools reserved for the most serious offenses that a student is excluded from the school's program (including AEP) and assigned to a Juvenile Justice AEP (JJAEP) or other school program (Walsh et al., 2005).
- Initial TBSI training – Required training concerning procedures for restraint and time-out as well as providing foundational information on PBIS. Educators in Texas received mandatory training in TBSI during the 2002-03 school years (Texas Education Agency [TEA], 2006a).

- In-school suspension (ISS) – A disciplinary action that involves removal of the student from the regular classroom and placement in an isolated classroom in the same school under supervision (Norlin & Gorn, 2005)
- Juvenile justice alternative education program (JJAEP) – An alternative disciplinary placement operated by the school district in the county along with the juvenile justice board of the county that serves students who have been expelled and found to have engaged in delinquent conduct (Walsh et al., 2005).
- Office discipline referral – Sugai et al. (2000) define an office discipline referral as "an event in which (a) a student engaged in a behavior problem that violated a rule/social norm in the school, (b) a problem behavior was observed by a member of the school staff, and (c) the event resulted in a consequence delivered by administrative staff who produced a permanent (written) product defining the whole event" (p. 96).
- Out-of-school suspension (OSS) – "A disciplinary sanction that requires the student to be excluded from the school building for a specified period of time" (p. 509) (Christle, Nelson, & Jolviette, 2004).
- Restraint – "The use of physical force or a mechanical device to significantly restrict the free movement of all or a portion of a student's body" (p. 5) (Texas Education Agency, 2006c).
- Seclusion – "A behavior management technique in which a student is confined in a lock box, locked closet, or locked room that:
    - "Is designed solely to seclude a person; and
    - "Contains less than 50 square feet of space (Texas Education Agency, 2006c)

- TBSI: Schoolwide PBS Project – In-depth PBIS training for campus-level core teams, and the provision of resources, technical assistance, and data collection assistance to participating schools from education service center (ESC) staff. (Texas Education Agency, 2006a).
- Texas Behavior Support Initiative – Established in 2001 in response to Senate Bill 1196 and was designed to build capacity in Texas schools for the provision of PBIS to all students (Texas Education Agency, 2006a)
- Time-out – “A behavior management technique in which, to provide a student with an opportunity to regain self-control, the student is separated from other students for a limited period in a setting, (a) that is not locked and (b) from which the exit is not physically blocked by furniture, a closed door held shut from the outside, or another inanimate object.” (Texas Education Agency, 2006c).

CHAPTER 2

REVIEW OF LITERATURE

The review of literature examines various systems-based components of positive behavioral interventions and supports (PBIS). A brief discussion concerning the limitations of traditional discipline approaches along with the evolution of PBIS from applied behavior analysis (ABA) is presented. The defining features of PBIS and the practical application of PBIS in individuals, classrooms, schools, and other settings is discussed. The review will conclude with a synopsis of current research related to the implementation of schoolwide and statewide PBIS.

PBIS evolved from the requirement of P.L. 105-17, referred to as the Individuals with Disabilities Education Act (IDEA) of 1997, and has its roots in ABA. The review of literature focuses on the PBIS literature published from 1997 to 2006 along with some works published prior to 1997 to describe the evolutionary development of PBIS. Sources utilized for this review included books, monographs, professional journals, and electronic databases available through the University of North Texas Libraries.

Limitations of Traditional Discipline Approaches

Educators are charged with ensuring the safety of all students while maintaining a level of discipline in the school that is conducive to learning and student achievement. School safety continues to concern and influence policymakers (Dwyer, Osher, & Warger, 1998; No Child Left Behind, 2001; US Surgeon General, 2001) in regards to closing the achievement gap, and making certain *all* students achieve academic proficiency (No Child Left Behind, 2001). As educators strive to provide safe

environments in which students may learn, academic instruction and assessment in schools are often overshadowed by the need to meet the behavioral and emotional needs of its students (Tyler-Wood, Cereijo, & Pemberton, 2004; Webb-Johnson, 2002, Wehby, Lane, & Falk, 2003). In addition, traditional discipline approaches in schools have primarily consisted of reactive, exclusionary practices that often affect disadvantaged and minority youth in much greater proportions than their counterparts (Monroe, 2005; Raffaele-Mendez & Knoff, 2003; Skiba, Michael, Nardo, & Peterson, 2002; Skiba, Peterson, & Williams, 1997; Zhang, Katsiyannis, & Herbst, 2004).

These types of get tough approaches do little to promote academic achievement for students who display persistent challenging behaviors (Morrison et al., 2001) As many as 90 percent of public schools have adopted zero tolerance policies (Kaufman et al., 2001) that mandate specific consequences for specific offenses, regardless of the circumstances, discipline history, and age of the person involved (Morrison et al., 2001; Stader, 2004). States generally create guidelines for districts to implement zero-tolerance policies paralleling federal policies such as the Gun-Free Schools Act of 1994 (US Department of Education, 2006) that target the most serious of offenses such as weapons and drugs. School districts often broaden their zero tolerance policies to include less serious offenses such as smoking and school disruption. While maintaining safety at school is paramount, students who are disadvantaged, minority, or have disabilities are the recipients of suspensions and expulsions for lesser offenses at much higher rates than their counterparts (Monroe, 2005; Raffaele-Mendez & Knoff, 2003; Raffaele-Mendez, Knoff, & Ferron, 2002; Skiba & Knesting, 2001).

A disciplinary action that has the intensity of removing or segregating a student from receiving instruction, (e.g., out-of-school suspension [OSS], in-school suspension [ISS], disciplinary alternative education placement [DEAP]) should match the intensity of the disruptive behavior. However, Skiba, Peterson, and Williams (1997) found little evidence of a consistent relationship between seriousness of offense and severity of consequence. Their analysis of the office discipline referrals (ODR) of 11, 001 students in 19 urban middle schools found that suspension was the most frequently (5673) used form of discipline despite only having 21 ODRs for weapons and 32 ODRs for drugs/alcohol possession. Significant differences in suspension rates were found to exist by race, gender, socioeconomic status, and disability label. African American students received suspensions as a consequence more frequently than all other students except Native Americans. Students with emotional disturbance (ED) were more likely to receive OSS and ISS as a consequence than were all other students in both general and special education. Students with learning disabilities and mild mental retardation placed in OSS outnumbered students not served in special education (Skiba et al., 2002).

Students with disabilities are being suspended at increasing rates in many states. Zhang et al. (2004) analyzed disciplinary exclusion data for all 50 states published by the US Department of Education for a four-year period, from 1998-2002 and reported the trends of disciplinary exclusions for students in four disability categories: all disabilities (AD), learning disabilities (LD), emotional disturbance (ED), and mental retardation (MR). Data from the 1999-2000 school year and 2001-2002 indicated increasing rates of suspensions among all four groups, with students with ED being

suspended the most, followed by students with LD and MR respectively. They reported significant variations related to race/ethnicity and region of the state, with African American and Hispanic students being overrepresented. States located in the western regions (i.e., AK, AZ, CA, CO, HI, ID, MT, NV, NM, OR, UT, WA, and WY) of the US were more likely to use suspensions than other regions of the country. Regional differences were also cited in the increased use of suspensions among students with disabilities from the southern region (i.e., AL, AR, DE, DC, FL, GA, KY, LA, MD, MS, NC, OK, SC, TN, TX, VA, and WV) of the country.

Empirical studies (Eitle & Eitle, 2004; Raffaele-Mendez et al., 2002) yield similar results describing the characteristics of students who receive OSS as disproportionately male, minority, and of low socioeconomic status. These studies posit that school characteristics (e.g., teaching milieu, school culture, organization, climate) help explain differences in rates of suspensions for various subgroups.

Discipline policies for schools are usually set at the district level within the framework of state and federal policy. However, the characteristics of a school are important factors in how discipline policies are interpreted and implemented. Christle, Nelson, and Jolivette (2004) studied suspension rates in Kentucky middle schools and found that schools with low suspension rates (LSR) used a variety of successful incentive programs to promote positive academic and social behavior. The schools with LSR were cleaner, brighter, and had a more relaxed decor as opposed to schools that had high suspension rates (HSR), which were more likely to resemble institutional environments. Teacher behavior in the schools with LSR was more consistent on several variables than was teacher behavior in schools with HSR. Teachers in schools

with LSR were consistent on challenging students academically, setting high expectations, and facilitating success. The schools with LSR demonstrated greater consistency than did schools with HSR in their focus on positive, proactive disciplinary measures rather than reactive, punitive strategies.

Raffaele-Mendez et al. (2002) examined the relationship between school demographic variables and out-of-school suspension rates and observed a number of trends. First at the elementary level, schools with LSR were more likely to use positive reinforcement for desired behaviors as a formal component of a schoolwide discipline plan than were schools with HSR. Next, schools with HSR focused more heavily on punishment for inappropriate behavior than did schools with LSR. Additionally, LSR schools used schoolwide social skills training to communicate acceptable behavior. Finally, parental involvement was much more evident at LSR schools than HSR schools. The variables at the middle school and high school levels that characterized the major difference between schools with LSR and HSR were staff training, parental involvement, and administrator's beliefs about how students should be treated to reduce problem behavior. Higher rates of training and parental involvement were more evident in schools with LSR than schools with HSR.

While it is important to know how many students are suspended, the demographic characteristics of HSR schools, and the types of infractions precipitate the use of suspension (Raffaele-Mendez & Knoff, 2003), it is imperative to analyze current school discipline practices at both the state and local level. By understanding the data and their implications, schools may be able to address the increase of disciplinary exclusions (Zhang et al., 2004) with a comprehensive, systematic, and sustained use of

research validated practices found in schoolwide systems of PBIS (Lewis, Sugai, & Colvin, 1998; Safran & Oswald, 2003; Scott, 2003; Sugai et al., 2000; Turnbull et al., 2002).

Since the passage of IDEA, PBIS has been used effectively in multiple contexts in schools and other settings across the country. Policy makers have recognized the success and importance of PBIS and have retained those provisions in the reauthorization of the IDEIA, 2004.

The remainder of this review is organized around the following major themes: (a) an examination of PBIS, (b) prevention-focused continuum of support, (c) proactive instructional perspective, (d) function-based intervention, (e) data-based decision-making and (f) systems perspective.

An Examination of PBIS

In examining PBIS, it is important to have a clear understanding of its definition and distinguishing features. Each of these are discussed in this section.

Definition of PBIS

Sugai et al. (2000) define PBIS as a "general term that refers to the application of positive behavioral interventions and supports to achieve socially important behavior change" (p.133). Carr et al. (2002) further refined the definition of PBIS by describing both *positive behavior* and *support*:

> Positive behavior includes all those skills that increase the likelihood of success and personal satisfaction in normative academic, work, social, recreational, community, and family settings. Support encompasses all those educational methods that can be used to teach, strengthen, and expand positive behavior

> and all those systems change methods that can be used to increase opportunities for the display of positive behavior. (pp. 4-5)

PBIS is not a new intervention package or theory; instead PBIS are considered an application of a behaviorally based systems approach to improve the ability of schools, families, and communities to design effective environments in which research-validated practices can be utilized (Sugai et al., 2000; Turnbull et al., 2002). Early research using PBIS was conducted with individuals with severe cognitive and developmental disabilities and targeted such behaviors as aggression, self-injury, and property destruction; however, with the broad goal of creating safe schools, the use of PBIS expanded to include all students (Safran & Oswald, 2003). No ideal system, strategy, methodology, or placement for all students exists; however, PBIS can provide a framework for identifying predictable problems, developing strategies for prevention, and reducing problem behavior for individuals and schools (Scott, Payne, & Jolivette, 2003; Sugai et al., 2000; Turnbull et al., 2002).

PBIS focuses on using culturally appropriate interventions that help create and sustain school environments that will ultimately help the student improve lifestyle results. Improved outcomes are accomplished by making problem behavior less effective, efficient, and relevant; by making desired behavior more functional; and by using data-based problem-solving. Data-based problem-solving and individualization of the planning process can help establish effective culturally appropriate interventions (Sugai et al., 2000).

Features of Positive Behavior Interventions and Supports

Sugai and Horner (2002) identified five key features of PBIS: (a) a prevention-

focused continuum of support, (b) proactive instructional perspective, (c) conceptually and empirically sound practices, (d) data-based decision- making, and (e) a systems perspective. These five elements along with the functional assessment process comprise the foundation of an effective PBIS system in a school or other setting (Horner, 2000).

Prevention-Focused Continuum of Support

A schoolwide PBIS system is grounded in a multi-level prevention-focused continuum that matches the intensity of the intervention to the severity of the problem (Gresham, 2004; Turnbull et al., 2002). Three levels of support represent this continuum modeled after the US Public Health Service levels of “prevention” outcomes: primary prevention, secondary prevention, and tertiary prevention (Guetzloe, 1992). According to Gresham (2004), the desired outcome of primary prevention is to prevent harm, while secondary and tertiary prevention efforts attempt to reduce and/or reverse harm. The prevention model of intervention efforts is comprised of three levels of intervention intensities and supports: universal interventions, secondary interventions, and tertiary interventions (Sugai, 2003; Sugai et al., 2000; Sugai & Lewis, 1999; Turnbull et al., 2002)

Universal interventions and supports target all students, in all settings and are delivered at a classwide, schoolwide, or district-wide level in the same manner (Gresham, 2004; O’Shaughnessy, Lane, Gresham, & Beebe-Frankenberger, 2003). These supports focus on decreasing the number of new cases of problem behavior by using the most effective behavioral and instructional practices for all students.

Schoolwide PBIS strategies typically involve redesigning the environment, establishing clear behavioral expectations, providing positive reinforcement for appropriate behavior, and a providing a continuum of consistently delivered consequences. PBIS strategies are supported and sustained through organizational changes (e.g., staff training, increased administrator support, resource allocations of both time and money), (Hieneman, Dunlap, & Kincaid, 2005).

Examples of universal interventions include providing social skills instruction, practice, and feedback concerning rules and expectations, and the use of evidence-based practices to address behavior in a positive, proactive manner (Lane & Menzies, 2003; Lewis et al., 1998). Universal interventions are usually effective for approximately 80% of students attending a typical school (OSEP Technical Assistance Center on Positive Behavioral Interventions and Supports, 2006; Sugai & Horner, 2002; Warren et al., 2003). Implementing evidence-based strategies that teach prosocial behaviors and academic skills at the universal level helps create a supportive environment for even the most challenging students (Hieneman et al., 2005; Horner, 2000; Turnbull et al., 2002; Walker et al., 1996).

Universal screening of all students for emotional and/or behavioral disorders (EBD) can be conducted as part of a comprehensive prevention and intervention effort. Universal screenings of all students can help detect students who are at-risk with emerging behavior patterns that may require secondary prevention efforts (Kauffman, 2005). Intervention efforts that target this group of students can help students learn more desirable behaviors, and reduce the long-term probability that they will adopt a delinquent lifestyle (Walker et al., 1998; Walker & Golly, 1999; Walker, Cheney, Stage,

& Blum, 2005). Screenings to identify students that take place at the point of school entry are an effective component for the prevention of school delinquency (Walker, Severson, Feil, Stiller, & Golly, 1998). Screenings can also be effective past the school entry point at the elementary and middle school levels for identifying students who need additional supports (Sprague et al., 2001).

Secondary prevention efforts are focused on students at-risk for problem behavior and for those students who have not responded to universal interventions. Students needing secondary prevention interventions comprise approximately 15% of the students in a typical school (Sugai, 2003; Sugai & Lewis, 1999; Turnbull et al., 2002; Warren et al., 2003). The goal of secondary prevention is to reduce the number of problem behaviors in a selected group by providing additional instruction and support usually in small group settings (Sugai & Horner, 2002). Examples of small group selected interventions may include social skills instruction or small group academic tutoring (Gresham, 2004) at a higher frequency, intensity, and duration or increased monitoring and feedback through a check-in/check-out program (OSEP Technical Assistance Center on Positive Behavioral Interventions and Supports, 2006).

Academic support at this level is critically important as part of a comprehensive system of PBIS (Gresham, 2004; O'Shaughnessy et al., 2003; Putman, Horner, & Algozzine, 2006). Many typical behavioral interventions such as social skills training and increased social support can help serve as academic enablers (Elliottt, Malecki, & Demaray, 2001). Lane and Menzies (2003) implemented a multi-level intervention with primary and secondary supports with 210 students attending an at-risk elementary school in Southern California. Student outcomes were assessed on a variety of

measures indicating behavior remaining stable with considerable gains in reading skills. A parallel three-tiered model to screen students for academic deficiencies in conjunction with schoolwide PBIS may help strengthen schools' efforts to meet both the behavioral and learning needs of students requiring secondary supports (Lembke & Stichter, 2006; O'Shaughnessy et al., 2003).

Individual support is for students who have failed to respond positively to universal and secondary interventions, representing approximately 5% of students in a typical school (Sugai, 2003; Sugai et al., 2000; Sugai & Horner, 2006; Turnbull et al., 2002; Warren et al., 2003). The goal of individual support is twofold: decrease the frequency of problem behavior and improve the student's overall quality of life (Warren et al., 2003). Individual supports use specially designed and individualized interventions, which may include special education, individualized education programs (IEPs) specially designed instruction (Sugai & Horner, 2002), person-centered planning (Artesani & Mallar, 1998; Kennedy et al., 2001), functional assessment, and wraparound services (Eber, Sugai, Smith, & Scott, 2002; Scott & Eber, 2003)

Tertiary systems address the student who displays complex and chronic needs and requires a comprehensive assessment, including a functional behavior assessment (FBA), and more intensive individualized interventions (Scott & Eber, 2003). Tertiary systems are most effective when used within a context of universal and secondary PBIS that have been implemented with fidelity (Horner, 2000; Turnbull et al., 2002). The success of interventions at this level increases when stakeholder involvement is intensified and a collaborative approach that includes the family is taken (Minke & Anderson, 2005; Smith-Bird & Turnbull, 2005)

Proactive Instructional Perspective

Educators hold certain behaviors as critical for students to be successful in the classroom. Oftentimes, behavioral expectations are in conflict with what parents (Beebe-Frankenberger, Lane, Bocian, Gresham, & MacMillan, 2005; Kolb & Hanley-Maxwell, 2003), other educators (e.g., Lane, Pierson, & Givner, 2003), and a student's peer-group (Walker & Sprague, 1999) deem important. Educators often address conflict by utilizing reactive, punitive strategies (Netzel & Eber, 2003). Without the benefit of reteaching or positive correction, this strategy has little impact on changing behaviors (Strout, 2005). The chances for effective behavior change increase when reactive management practices are transformed into a proactive and instructional approach to behavior support (Sugai & Horner, 2002).

A proactive instructional approach is characterized by the careful consideration of instructional practices, systems, and processes that: (a) maximize educational outcomes; (b) select and teach schoolwide and classroom wide expectations, rules, and routines; and (c) practice and reinforcement of the use of academic behavior skills across multiple settings and contexts (Sugai & Horner, 2002). Instruction of behavioral expectations and skills should be delivered in the same manner as academics such as mathematics and reading, with opportunities for practice and feedback as part of the daily routine. The amount of instructional time devoted to teaching behavioral expectations depends on the needs of the class (Sprick, Garrison, & Howard 1998). Teaching behavioral expectations and rules at the start of the new school year, the beginning of new instructional activities, and upon return from natural breaks (e.g., Christmas, spring break) in the school year is part of a universal behavior support plan.

Throughout the year, instruction will depend on identified problems and the predictable times, settings, and contexts that are assessed (Strout, 2005).

Schools that have incorporated proactive instructional strategies have been able to document effective change. Taylor-Greene and Kartub (2000) utilized the High Five Program, which incorporates a proactive instructional approach, to measure its effectiveness at a middle school in the Northwest part of the country. The High Five Program involves directly teaching and reinforcing five schoolwide rules and expectations: (a) be respectful, (b) be responsible, (c) follow directions, (d) keep hands and feet to self, and (e) be there/be ready. Prior to implementing the program, the school culture was described as negative and reactive with staff rarely engaging in proactive problem-solving with students. After completing one year of implementing the High Five program, the school observed a 47% reduction in office discipline referrals and after five years sustained a 68% reduction on office referrals from the baseline year.

Positive results were demonstrated in an elementary school that directly taught expectations for specific settings and provided feedback as part of a comprehensive system of PBIS. Lewis, Sugai, and Colvin (1998) studied the effectiveness of social skills instruction along with reinforcement in reducing problem behavior that occurred in the cafeteria, recess, and transition prior to lunch. Behavioral expectations were taught, practiced, and reviewed for each setting and combined with group contingencies that rewarded appropriate behavior. Results indicated a reduction in the rate of problem behavior in each setting. Follow-up data collected in the cafeteria (3 months), recess (2 months), and transition (1 month) indicated maintenance effects in the cafeteria and

transition at 83% and 100% respectively, while a moderate maintenance effect (50%) was noted at recess.

Similar studies examining a proactive, instructional approach targeted toward specific settings yield positive results and helped improve corollary outcomes (i.e., improved school climate and teacher confidence in addressing problem behavior via positive strategies) as opposed to punishment. Lewis, Powers, Kelk, and Newcomer (2002) used an intervention consisting of teaching rules, routines, and desired behavior along with a group contingency to reduce problem behavior displayed by elementary school students on the playground. Their results indicated a decreasing trend in the frequency of problem behavior. Secondary schools have benefited from targeting specific areas of the school with PBIS and have addressed such issues as reducing hallway noise (Kartub, Taylor-Greene, March, & Horner, 2005; Oswald, Safran, & Johanson, 2005) and teaching expected behavior in parking lots (Bohanon et al., 2006).

Conceptually and Empirically Sound Practice

PBIS are derived from social, behavioral, and biomedical science (Knoster, 2004). The roots of PBIS are deeply embedded in ABA, which was defined by Baer, Wolf, and Risley (1968) as the “process of applying sometimes tentative principles of behavior to the improvement of specific behaviors and simultaneously evaluating whether or not any changes noted are indeed attributable to the processes of application” (p.91). ABA is grounded in behavioral theory, which states that most behaviors are learned responses to environmental stimuli (Schloss & Smith, 1994).

Many of the techniques and principles of ABA serve as the foundation of PBIS (e.g., the use of socially valid interventions, stimulus-response- consequence control, other educational methods such as shaping, fading, chaining, prompting, and reinforcement contingencies). One of the largest contributions of ABA to PBIS is the FBA used to determine the relationship between behaviors and environmental events (Schloss & Smith, 1994). The development of individualized positive behavioral interventions guided by a FBA is an integral component of a comprehensive system of PBIS (Sugai et al., 2000).

Carr et al. (2002) credits ABA, along with the normalization/inclusion movement and person-centered values as sources for the emergence of PBIS and use this as the basis for their contention that PBIS is an applied science. According to Carr et al. (2002), what distinguishes PBIS from ABA and has helped create PBIS as an evolving science is the emphasis on integrating nine characteristics whose critical features, collectively, differentiates it from other approaches. These nine characteristics are integrated cohesively into one system of PBIS: (a) comprehensive lifestyle change, (b) lifespan perspective, (c) ecological validity, (d) stakeholder participation, (e) social validity, (f) systems change and multicomponent intervention, (g) emphasis on prevention, (h) flexibility in scientific practices, and (i) multiple theoretical perspectives. The distinction of PBIS from ABA is warranted by these critical features, however the roots of this approach are deeply entrenched in ABA (Dunlap, 2006).

Professionals have not universally agreed that PBIS can be categorized as an applied science. Wacker and Berg (2002) contend that while many of the studies conducted within the framework of PBIS follow the procedures of scientific

methodology, it is unclear that the outcomes specified and processes selected to obtain those outcomes can be manipulated as independent variables whose effects are to be studied. Instead of categorizing PBIS as an applied science, they take an alternate viewpoint that PBIS is a service delivery model and contend that the blending of science (ABA) and philosophy (normalization/inclusion and person-centered values) constitutes an applied science. The question of whether PBIS is considered an applied science or a service delivery model is not fully answered; however PBIS has clearly emerged as a significant policy and practice—locally, regionally, and nationally.

Two aspects of ABA that are important to the evolution of PBIS are FBAs and individualized behavior intervention plans (BIPs; Horner, 2000; Sugai & Horner, 2002; Sugai, Lewis-Palmer, & Hagen-Burke, 2000). Functional assessment is the foundation for understanding patterns of problem behavior and is the systematic method of collecting data that assesses the relationship between a behavior and the surrounding environment in order to identify information antecedents and consequences associated with the behavior (Horner, 2000; Scott & Caron, 2005; Scott & Eber, 2003; Sugai et al., 2000). The data collected from the FBA can be used to identify a wide range of self-defeating behaviors and the function(s) that the behavior(s) serves for the target student. The information obtained through a FBA can help facilitate effective changes in the environment that will increase successful outcomes for the student.

Function-Based Intervention

A comprehensive BIP is developed from data obtained through a FBA. An individualized BIP is developed at the secondary and/or tertiary level for students who

do not respond positively to universal or selected group interventions. The effectiveness of BIPs, using data obtained from FBAs data, is well documented (Gresham, 2004; Harrower, Fox, Dunlap, & Kincaid, 2000; Lewis et al., 2004; Newcomer & Lewis, 2004).

Newcomer and Lewis (2004) investigated assessment reliability and effectiveness of function-based interventions with three elementary-aged students identified as at-risk for failure due to challenging behaviors. All three participants demonstrated measurable decreases in incidents of problem behavior. Similar results have been demonstrated across diverse groups of students. Interventions planned from FBA data have shown to be effective with young children (Harrower et al., 2000), with African American students (Lo & Cartledge, 2006), and with students with autism (Turnbull et al., 2002). PBIS for individuals are most effective when supports are focused on integrated systems that include both universal and secondary prevention efforts (Scott & Eber, 2003).

The FBA is conducted by an interdisciplinary team of individuals who have direct experience with the student (e.g., teacher, counselor, family) and the expertise and behavioral competence to lead the process, collect data, and recommend strategies. Administrative involvement and involving the students is important to the successful implementation of the BIP (Horner, 2000; Scott & Eber, 2003; Sugai, Lewis-Palmer et al., 2000). BIPs should be comprehensive in structure and scope and involve the application of multiple procedures across a full spectrum of times, behaviors, and contexts (Horner, 2000; Sugai et al., 2000; Turnbull et al., 2002).

Behavior support plans are most effective when the students' needs are harmonized with the demands of the environment. The ability to identify a function

relevant to the students' challenging behavior can lead to the development of PBIS that addresses the unmet need of the student (Frey & Wilhite, 2005). Frey and Wilhite provide an illustration of common student behavior challenges and examples of the five basic human needs: survival, belonging, power, freedom, and fun. For example, when a student refuses to work, the behavior may be related to a basic human need that has not been met such as lack of sleep (survival) or a best friend is refusing to work and the student wants to maintain alliance (belonging).

The development of BIPs entails manipulating antecedents (i.e., setting events) and consequences in order to help the target student be successful. The improvement in a student's behavior is often directly related to an associated change in the environment. A comprehensive BIP typically focuses on or defines what staff or peers in a particular context will do differently to create an environment that will produce a change in the student's behavior (Horner, Sugai, Todd, & Lewis-Palmer, 2000). A functional assessment of the environment can help educators discover variables that negatively affect a student, classroom, or entire school and make necessary adjustments and help improve the overall effectiveness of behavior support plans (Overton, 2004).

Student behavior is influenced by the context in which it occurs. The physical school environment can be arranged in a manner that promotes prosocial behaviors and decreases problem behavior. Structuring the physical environment for the prevention of problem behavior is an essential component in any PBIS system (Sprick et al., 1998). An environmental analysis of the classroom can help educators identify areas of the classroom in which problem behaviors occur most often and make

adjustments (Overton, 2004). Desks, furniture, and work centers that are strategically placed in the classroom and areas that attract groups or clusters of students, such as a sink or pencil sharpener, need plenty of space to accommodate the students along with written classroom rules and expectations for that particular area.

Scott (2003) described two examples of how environmental changes in an elementary classroom helped reduce disruptive behavior. Two areas of the class were particularly troublesome; the coat rack and the sink. An assessment of the areas identified the problem as having (a) too many students in one area, (b) unclear expectations, and (c) the teacher's inability to see the area. By removing obstacles of the area, revising the classroom routines for these areas, teaching the expectations, and drawing physical lines on floor to designate wait areas, the environment became conducive to positives behavior instead of disruptive behaviors.

According to Overton (2004), the school environment encompasses a number of other components in addition to the physical environment (e.g., teacher and peer relationships, academic and behavioral expectations, curricular and educational materials). The position of the teacher during instruction is important. Students need to be seated in manner that allows for maximum visibility of the teacher to ensure the student can access instruction. In addition, teaching materials for both the teacher and student need to be readily accessible with routines and expectations in place to minimize loss of time and challenging behavior that often occurs during transitions (Strout, 2005).

Changes in the behavior of the faculty of a school can help produce a positive environment in an entire school by providing group contingencies, social skills

instruction, and by actively monitoring students (Lewis et al., 1998; Safran & Oswald, 2003). Horner et al. (2000) describe six essential elements in redesigning the school environment: (a) understanding that all students do not share the same perception of the environment or experience it the same way; (b) investing time in preventing problem behavior by structuring the environment will help improve the efficiency and effectiveness of PBIS; (c) teaching behavioral routines and expectations of each environment; (d) modifying the environment in a manner that rewards positive behavior and does not allow students' problem behavior to be inadvertently rewarded by allowing a student to avoid or escape an unpleasant stimulus or obtain access to a desired outcome (e.g., peer attention, tangible object); (e) recognizing appropriate behavior by all students, especially students who generally do not receive positive attention on a regular basis; and (f) being prepared and trained to manage crisis situations.

The effectiveness of BIPs and adaptations to the environment need to be monitored, evaluated, and revised based on data collected after the intervention plan has been implemented (Scott & Eber, 2003; Sugai et al., 2000). A critical component of a PBIS system is data-based action planning.

Data-Based Decision-Making

A critical element to the success of the PBIS approach, whether it is at the individual, classroom, or schoolwide level, is the relevant collection methods and data-analysis structures that exist within the system (Sugai & Horner, 2002). The systematic collection of data (e.g., archival records, ODRs, direct observation, interviews, surveys) can assist educators in evaluating the effectiveness of individual BIPs, universal and

selected interventions, and can provide information on the status of discipline patterns in a school (Sugai, Sprague et al., 2000).

ODRs provide a wealth of data to school officials that can help determine the status of schoolwide PBIS as well as help identify problem classrooms and individual students who present chronic or persistent misbehavior (Irvin et al., 2004; Irvin et al., 2006; Putman et al., 2003; Sugai et al., 2000). These studies help support the usefulness of ODRs to help educators evaluate PBIS systems.

Putman et al. (2003) conducted two descriptive studies in a public elementary-middle school that used ODRs to identify the types of discipline problems school personnel encounter and how ODRs are distributed among teachers, students, and grade levels. In the first study, ODRs for the entire population (*N*=592) of a public elementary school were analyzed to formulate a discipline profile of the school. This particular school had a high frequency of ODRs for disruption, harassment, defiance, inappropriate language, and fighting respectively. Schoolwide data indicated that 188 (31.8%) total students accounted for 748 ODRs, with 9 (1.5%) students accounting for 210 (28%) of all ODRs. The second study analyzed a 5th grade class (*N*=26) identified in the first study as having a high ODR rate. From the data, a classroom PBIS plan was developed that helped reduce the referral rate for that particular classroom.

Sugai et al. (2000) analyzed ODRs to improve schoolwide support and discussed how ODRs might be used as an indicator of the status and needs of schoolwide PBIS. Their results suggest that interventions (i.e., universal, selected, individual) can be based on ODR data. For example, if an elementary school had a referral per student ratio of 0.5, or a middle school had 45% of its students receiving one or more referrals,

then the development of universal systems might be warranted. Group interventions would target students who received 10 or more referrals per year, and individual interventions would be developed for the 5% of students with the most referrals.

Another method for schools to collect data and evaluate schoolwide PBIS is by using the Schoolwide Evaluation Tool (SET; Horner, Todd, Lewis-Palmer, Irvin et al., 2004). The SET contains 28-items organized into 7 subscales representing seven key features of schoolwide PBIS. The SET is a relatively new instrument; however data collected have indicated that the SET meets and exceeds basic psychometric standards for measurement instruments used in research. Information obtained from this instrument, similar to ODR data, can help guide decisions for school officials and target the various systems (i.e., universal, selected, individual) for intervention (Horner et al., 2004).

Systems Perspective

Schools are complex social systems. Central to the systems perspective of PBIS is a continuum of behavioral support in which prevention, intensity of problem behavior, resources (including human), and settings are emphasized. Sugai et al. (2000) identified four elements that characterize a PBIS systems approach: (a) a change of systems that addresses policies, procedures, existing structures, and routines; (b) environmental change through functional assessments; (c) change in stakeholder behavior (i.e., student, teacher, staff), and (d) change in “appreciation of appropriate behavior” in all stakeholders.

Systems are sustained when they have proven to be effective and are

maintained (Scott et al., 2003; Sugai et al., 2000). In order to sustain systems, PBIS efforts need to be consistently monitored and evaluated by measurable academic and behavioral outcomes by having data systems in place to allow the school to collect meaningful, accurate data. Evidence-based practices must be implemented with fidelity in order to produce maximum benefit to the student and other stakeholders. Supports for the PBIS system must be in place to support the implementers, students, and families. Support may come from training, leadership, and collaboration with other systems (Sugai & Horner, 2002).

Information for identifying the types of support needed to sustain PBIS systems in schools may be gathered by utilizing the process of a continuous systems-level assessment (CSLA; Freeman, Smith, & Tieghi-Benet, 2003). Like the SET, CSLA may assist schools in measuring effectiveness of schoolwide PBIS. The CSLA continually evaluates schools by organizing information routinely collected and adding additional measures for data-driven decision-making. The CSLA process is driven by a comprehensive needs assessment that identifies a number of variables. Some of these variables at first may seem unrelated to PBIS (e.g., other school initiatives, staff development systems, values and beliefs of staff, community resources). However, the needs assessment determines how these variables either support or impede PBIS efforts (Freeman et al., 2003). An important component in this approach is assessing the resources of the community, including students' families.

A comprehensive PBIS approach involves collaborative strategies that empower the family system to become partners and help build capacity to sustain effective change (Ballard-Krishnan et al., 2003) . Values and the unique needs and preferences

of the family need to be considered when planning behavioral interventions (Minke & Anderson, 2005; Turnbull et al., 2002). For example, Boettcher, Koegel, McNerney, and Koegel (2003) described a family-wide PBIS approach that was utilized during a period of potential crisis for a family. A PBIS plan was developed for a 7-year-old girl with autism and significant behavior problems whose mother required major surgery and required a long period of recovery. The entire family system (e.g., siblings, grandparents) and respite workers were involved in developing the plan of support. A PBIS plan that coordinated schedules and activities among the various stakeholders, along with the provision of ongoing support, was effective in preventing major behavior problems. As this example shows, the PBIS approach is not limited to use exclusively in school and can extend to other settings.

Statewide Systems of PBIS

An increasing number of states are currently engaged in large-scale statewide systems of PBIS and have reported significant decreases in the amount of ODRs in schools that have embraced PBIS on their campuses (Freeman et al., 2005). Support from the Office of Special Education and Rehabilitation (OSEP) sponsored national Center on Positive Behavioral Interventions and Supports at the University of Oregon has led to large-scale PBIS system change providing training and technical assistance states. PBIS networks have been set up in Alabama, Arizona, Colorado, Illinois, Maryland, Missouri, New York, New Hampshire, Hawaii and several other states, including Texas. Promising data from these states has helped expand PBIS efforts (Muscott et al., 2004).

As noted earlier, the Illinois PBIS initiative began in 1998 with 23 participating school and grew to serve 520 schools in 2005. Elementary schools (PK-6) that are fully implementing PBIS have shown a 46% lower rate of ODRs than schools that have partially implemented PBIS. PBIS schools in Southern Illinois have created community-based interagency partnerships to support students with intensive needs at the tertiary level with wraparound services (Eber et al., 2005) One urban school district that was part of the initiative was able to reduce suspensions by 22% in its first year (Netzel & Eber, 2003). Of The 28 schools supported by the New Hampshire PBIS initiative that have implemented PBIS, 15 have reported significant improvement, according to SET data, in its initial year (Muscott et al., 2004).

Collecting data at the state level is important in order to assess the statewide capacity for the integration of PBIS into various service delivery systems. A team composed of four individuals from the Virginia Institute for Developmental Disabilities (VIDD) assessed the state of Virginia's capacity to implement PBIS programs across several state agencies that served infants through older adults. A seven-step needs assessment drove this process. Using both qualitative and quantitative methods to determine statewide capacity to implement PBIS, a systematic set of activities was conducted including: developing guiding questions, conducting a thorough literature review, identifying key service delivery systems, interviewing key stakeholders, conducting survey research related to PBIS, developing a PBIS database, and preparing an executive summary and disseminated findings (Shannon, Daly, Malatchi, Kvafordt, & Yoder, 2001). Data helped Virginia identify the broad needs of the state to successfully implement PBIS.

Successful implementation of PBIS is dependent on the delivery of the training at both the state and local level (Dunlap & Hieneman, 2000). Dunlap and Hieneman (2000) identify five essential components necessary to provide a comprehensive inservice training in positive behavior support: (a) the training is targeted to a multidisciplinary team, (b) a case study format, (c) an engaging dynamic training process to assist participants in developing generalizable skills, (d) comprehensive in nature encompassing a topics associated with PBIS, and (e) contains elements that focus on promoting community building and collaboration to enhance PBIS systems. These essential elements can be found in both state and local training activities.

For example, Texas used the team training model to conduct the initial TBSI training during the 2002-2003 school-years and its subsequent follow-up training for participating schools beginning in 2004 (Texas Education Agency, 2006a). Multidisciplinary (i.e., administrator, general education staff, and special education staff) teams were organized to deliver the initial training. While the team training model can be utilized for large-scale training and information dissemination (e.g. statewide), the effectiveness of this type of training is insufficient without locally existing structures that enable organizations to maintain, enhance, and expand their use of effective practices and systems (Atkins, Graczyk, Frazier, & Addul-Adil, 2003). While various training models can be effective in bringing about organizational change, technical support and resources are readily available specific to implementation of systems of PBIS at the school, district, and/or state level.

The Office of Special Education Programs Center on Positive Behavior Support (2004) developed a schoolwide PBS implementation blueprint that provides a rationale

for adopting a schoolwide positive behavior support approach and the organizational processes, structures, and supports necessary for implementation of PBIS at the school, district, and/or state level. According to the blueprint, 9 major features are essential for appraising the status of PBS organizational systems and developing and evaluating PBS action plans: (a) leadership team, (b) coordination, (c) funding, (d) visibility, (e) political support, (f) training capacity, (g) coaching capacity, (h) demonstrations, and (i) evaluation. the TBSI Schoolwide PBS Project training includes these features.

Since each school has its own unique political, social, economic, and cultural characteristics, the delivery of the TBSI Schoolwide PBS Project training is designed to be more site-specific. Schools participating in the TBSI Schoolwide PBS Project have added additional stakeholders (i.e., Regional Education Service Center [ESC], parents) to the core campus team in order to learn how to implement a continuum of research-based PBIS, collect and analyze data, and train other campus personnel and families on evidence-based practices (Texas Education Agency, 2006a). In direct contrast to the "train-and-hope" model, more intense training, with ongoing supports, use of local data, district- and regional-level support, and working within a 3-5 year plan will help an organization to build durable and sustainable systems of supports (Sugai, 2003).

In some PBIS networks, such as the Michigan PBS initiative, parents not only serve as trainers, but also are involved in supervised "professional" level PBIS work. Moving from parent cooperation to parent collaboration brought extensive and complimentary personal, recreational, and professional talents to PBIS team efforts and help further involve the community (Ballard-Krishnan et al., 2003). The essential training

features identified by Dunlap and Hieneman (2000) used by PBIS teams can help facilitate the future evolution of PBIS with respect to intervention strategies and extensions to new populations.

PBIS Systems across Settings

Students with behavioral challenges can be found in many other settings besides typical schools, from preschools to correctional facilities. The process for implementing PBIS remains consistent; however the unique needs of the students and environment add additional considerations. For example, students in early childhood settings may need pictorial representations for classroom expectations and a deeper level of family involvement (Stormont, Lewis, & Beckner, 2005). Students in early childhood settings can be identified for interventions much earlier in their lives before their behavior becomes chronic which is critical in the prevention of E/BD (Conroy & Brown, 2004; Powell, Dunlap, & Fox, 2006).

Students who reside in correctional facilities need a broader and more appropriate repertoire of prosocial behavior skills to not only function in their current setting but as well as during their return to their neighborhood school and community (Houchins, Jolivette, Wessendorf, McGlynn, & Nelson, 2005). Feinstein (2003) examined the effectiveness of PBIS in a correctional facility for male juveniles. Prior to implementing PBIS, the facilities had an atmosphere of punishment and were not utilizing function-based assessments to provide behavioral interventions. In addition, any reward received by one of the boys was quickly taken away as punishment leading many of the boys to simply to give up. After PBIS strategies were implemented in this

institution, overall behavior immediately improved. Many of the students were able to sustain acceptable levels of behavior for the duration of their incarceration.

PBIS has been used in foster homes for children who suffer from a multitude of issues. Buschbacher (2002) developed a PBIS plan for the foster parents of a two and a half year-old child who suffered from neglect and abuse from his biological parents resulting in a number of behavioral challenges. After researchers involved the foster parents in developing a BIP, the negative behavior of the child decreased and positive behavior increased. The foster parents described the experience as giving the "sense that you kind of opened up the world to the child and family again." These examples demonstrate the effectiveness and extension of PBIS into developmental disability organizations and other human service agencies (Freeman et al., 2005).

Expansion of PBIS

In recent years, PBIS has expanded nationally and evenly globally to address challenging schoolwide, classroom, and individual behavior. Journals such as the *Journal of Positive Behavior Interventions***,** technical assistance centers (e.g., Beach Center, Center on Positive Behavioral Interventions and Supports), and personnel preparation programs have established PBIS as the focus of their purpose and have helped increase the capacity of schools to provide effective behavior interventions (Sugai et al., 2000). With the growth of the constituencies involved with PBIS, The Association for Positive Behavior Support (APBIS) was established and officially accepted memberships at the First International Conference on Positive Behavior

Support in March 2003. The APBIS is committed to assisting the promotion of and continuing development of the discipline (Knoster, 2004).

Summary

The use of PBIS in schools and other settings has created proactive school environments that have increased prosocial outcomes in children. PBIS provides a viable alternative to traditional reactive punitive approaches by implementing positive, data-driven interventions for individuals, classrooms, and entire schools. Strong leadership, support, and commitment to PBIS by schools will help schools reduce problem behavior and increase positive behavior (Safran & Oswald, 2003).

The literature on PBIS to date has demonstrated that schools and other agencies that use PBIS are more likely to have successful outcomes for their consumers than those who rely on traditional methods. However, extensions of PBIS and increased use of PBIS are necessary. Carr et al. (2002) identified four broad areas that need to be researched further in order for the evolution of PBIS to continue: (a) assessment practices, (b) intervention strategies, (c) training, and (d) extension to new populations. The current literature base for PBIS is vigorous and able to support any endeavors that support and sustain the evolution of PBIS.

CHAPTER 3

METHODOLOGY AND PROCEDURES

This chapter describes the methodology used in this study, including (a) sample selection, (b) data collection, and (c) data analysis.

Purpose of Study

The purposes of this study are to (a) examine the impact of the Initial Texas Behavior Support Initiative (TBSI) training on the rates of discipline records (DRs), suspension, disciplinary alternative education placement (DAEPs), and expulsions of public schools in Texas; (b) investigate the overall effectiveness of schoolwide positive behavioral interventions and supports (PBIS) program as facilitated by the TBSI: Schoolwide PBS Project in participating schools; and (c) determine what differences, if any, occur between the rates of suspension, expulsions, DAEP, and DRs between the schools participating in the TBSI: Schoolwide PBS Project with schools who are not participating.

Research Questions

Three research questions guided the study.

1. What is the impact of the Initial TBSI training on the rates of (a) discipline records, (b) in-school suspensions, (c) out-of-school suspensions, (d) disciplinary alternative education placements, and (e) expulsions of public schools in Texas?
2. In what ways is the TBSI: Schoolwide PBS Project in participating schools associated with changes in rates of (a) office discipline referrals, (b) in-school suspensions, (c) out-of-school suspensions, (d) disciplinary alternative education placements, and (e) expulsions?
3. What are the differences between the rates of (a) discipline records, (b) in-school suspensions, (c) out-of-school suspensions, (d) disciplinary alternative education

placements, and (e) expulsions of schools participating in the TBSI: Schoolwide PBS Project training and matched schools who are not participating?

Research Design

A causal-comparative research design (Gall, Gall, & Borg, 2003) was used to answer the research questions. A causal-comparative design allowed the researcher to determine whether the dependent variables (i.e., discipline patterns of a sample of schools) differ as a result of introducing the independent variable(s), (i.e., TBSI initial training efforts and TBSI Schoolwide PBS Project training). While inferences from this study will be tentative, this research design is useful in gathering initial data concerning the presumed cause and effect relationship between the variables.

Sample

This first question was answered using 50 schools identified by Texas Education Agency (TEA) as regular instructional schools. These schools were selected using random proportional stratified sampling (Gall et al., 2003) from 9031 K-12 public schools in Texas according to the 2004-2005 school directory. The sample does not include charter schools, juvenile justice alternative education programs (JJAEP), alternative instructional programs (AEP), DAEPs, and schools identified as elementary/secondary schools. These schools were selected from the 2000-2001 Texas School Directory to ensure participation for each year measured. Random proportional stratified sampling was used to represent the percentage of types of regular instructional schools in Texas, elementary (*n* = 30; 60%), junior high/middle school (*n* = 11; 22%), and high school (*n* = 9; 18%) (TEA, 2006b) in this study in order to answer the first research question.

Random proportional stratified sampling ensured that representation from each type of school was obtained and will allow the researchers to make further generalizations and inferences with the data.

The second question was answered using 60 of the 61 schools that participated in the TBSI Schoolwide PBS Project program and have reported at least two years' data on rates of suspension, expulsions, DAEPs, and office disciplinary referrals (ODRs) to the TBSI project coordinator. One school was not included in this study due to incomplete data.

The third question was answered by using 56 of the 61 schools who formally participated in the TBSI Schoolwide PBS Project and submitted data for the 2004-2005 and matched with 56 schools who are not participating in the TBSI Schoolwide PBS Project. The schools were matched using stratified purposeful sampling in regards to type (i.e., rural, suburban, and urban) and level (i.e., elementary, middle school, and high school) of school based were matched. Schools were matched by county first and then region. Five schools were not included due to incongruent matches (e.g., no other PK-2 in region).

Data Collection

The first research question was answered using discipline data from the school years of 2000-01 through 2004-05. Data were drawn from Public Education Information Management System (PIEMS) of Texas for each school included in the sample. These data were obtained by submitting a formal request to TEA under the Texas Open Records Act. Data were collected on the following variables for each school year: (a)

total number of DRs, (b) days of in-school suspensions, (c) days of out-of-school suspensions, (d) days of disciplinary alternative education program placements, and (e) number of expulsions to answer each question.

In order to answer the second research question, discipline data reported from schools participating in theTBSI: Schoolwide PBS Project were obtained from the TBSI project coordinator for the school years 2003-2004 and used as a baseline for comparison with data from 2004-2005 on the following variables: (a) total number of ODRs, (b) days of in-school suspensions, (c) days of out-of-school suspensions, (d) days of disciplinary alternative education program placements, and (e) number of expulsions.

Discipline data for the third research question were drawn from PIEMS from the 2004-2005 school years. Data were collected on the following variables for each school year: (a) total number of DRs, (b) days of in-school suspensions, (c) days of out-of-school suspensions, (d) days of disciplinary alternative education program placements, and (e) number of expulsions to answer each question.

Data Analysis

In order to answer the first two questions, a one-tailed dependent *t*-test (Gall et al., 2003) was used. This type of statistical procedure is useful in determining whether these groups have the same average value at an alpha level of 0.05. A one-tailed *t*-test of independent samples (Gall et al., 2003) was used to answer the third research question as both samples (participating and non-participating) were independent data sets.

CHAPTER 4

RESULTS AND DISCUSSION

The research was guided by three questions:

1. What is the impact of the Initial Texas Behavior Support Initiative (TBSI) training on the rates of discipline records (DRs), in school-suspensions (ISSs), out-of-school suspensions (OSSs), disciplinary alternative education placements (DAEPs), and expulsions of public schools in Texas?

2. What is the overall effectiveness of schoolwide positive behavioral interventions and supports (PBIS) program as facilitated by the TBSI: Schoolwide PBS Project in participating schools?

3. What differences, if any, are between rates of DRs, in school-suspensions, out-of-school suspensions, DAEP, and expulsions between the schools participating in the TBSI: Schoolwide PBS Project with schools who are not participating?

In the following sections, each research question is addressed independently.

Research Question 1

What is the impact of the Initial TBSI training on the rates of (a) DR, (b) ISS, (c) OSS, (d) DEAP, and (e) expulsions of public schools in Texas?

A one-tailed *t*-test of dependent samples (Gall et al., 2003) was used to answer the first research question of whether the Initial Training of TBSI had an impact on the discipline patterns of public schools in Texas except the number of expulsions. This statistical procedure was used to determine within-group variations between the discipline patterns of the baseline year (2001-2002) preceding the training with the discipline patterns of the years through 2005 following the training. An alpha level of .05 was used for all statistical tests. The results of this analysis are displayed in Table 1. Expulsions were reported by total number because the Texas Education Agency (TEA) was unable to provide campus level data since the low number of expulsions for some campuses would violate the Family Educational Rights and Privacy Act (FERPA).

Table 1

Summary of Means and One-Tailed Dependent t-*Tests of the Impact of the Initial TBSI Training from the Pre-Training Year (PTY) (2001-2002) through 2004-2005*

Variable	2001-02	2002-03	2003-04	2004-05
DR Mean	184	186	188	224
t-test DR by PTY		.361	.283	.047*
ISS Mean	293.09	269.74	309.21	290.66
t-test ISS by PTY		.243	.386	.256
OSS Mean	66.62	71.63	82.50	94.33
t-test OSS by PTY		.474	.228	.094
DEAP mean	525.2	493.21	711.29	714.54
t-test DEAP by PTY		.412	.151	.130
Total expulsions for all schools	19	18	33	22

Note: *Statistically significant in the opposite direction.

As shown in Table 1, the Initial TBSI training conducted during the 2002-03 school year has no statistically significant ($p<.05$) effects on decreasing the rates of DR, ISS, OSS, and DEAP. A statistically significant increase in DR rate was observed (0.047) in the 2004-05 school year when compared to the pre-training year (2001-02), and while not statistically significant, considerable increases in the average of OSS and DEAP, with ISS rates remain relatively stable. The total number of expulsions over the 4-year period indicated a sharp increase during 2003-04, but remained closer to the 4-year average (23) in 2004-05.

The results of the data indicate that the Initial TBSI training conducted during the 2002-03 school year had no impact on decreasing the number of DRs, ISSs, OSSs, DEAPs, or expulsions. While a statistically significant increase in DRs was observed for the 2004-05 school year, it can not be attributed to the Initial TBSI training based on the

data obtained in this study. The number of OSSs was approaching statically significance (.094) and may require future research to see if these trends continue. A number of possible explanations may account for some of the reasons that, despite this large-scale training and commitment of resources, it did not impact the disciplinary variables studied in Texas.

One possible explanation may be the fact that during relatively the same time period the Initial TBSI training was being conducted in Texas, the era of high-stakes accountability with its clear focus on academic performance via state-wide assessments hit its pinnacle with the passage of the No Child Left Behind Act (NCLB) in 2001. Texas, like the other states, had to dedicate a significant amount of resources to fulfill the requirements of this mandate or risk losing much-needed funding. Other state initiatives (e.g., Texas Reading First, Texas Math Initiative, and Student Success Initiative) and activities such as meeting the highly-qualified teacher standards, and a total revision of the Texas Statewide Assessment Program resulting from NCLB may have pushed the TBSI to a lower priority status for the time. Implementing a comprehensive system of PBIS in the context of shrinking budgets, multiple competing initiatives, and time constraints can be difficult unless a significant amount of resources are dedicated.

The possibility exists that the initial TBSI training was viewed by many educators as a special education initiative instead of a schoolwide approach. The TBSI was established in response to Senate Bill 1196 passed by the 77th Texas legislature that established education programs related to the use of confinement, restraint, seclusion, and time-out for students enrolled in special education. While the total percentage of students with disabilities in Texas during the training year (2002-03) was 11.6% (TEA,

2006d), the vast majority of students with disabilities never encounter confinement, restraint, seclusion, or time-out. Schools may have been hesitant to dedicate a long term investment of fiscal resources, personnel, and time for a system change that would affect relatively few students.

The delivery of the training may help explain the initial TBSI training having no effect on the rates of discipline variables studied. During the training year, campus core teams were responsible for training campus personnel and only provided additional training to staff who (a) had not been trained previously, (b) are called upon to use restraint in an emergency, or (c) have the responsibility of implementing a time-out for a student based on his/her individual education program (IEP) and/or behavioral intervention plan (BIP) (TEA, 2006a). This type of training fulfilled the state requirements and basically amounted to information dissemination rather than the intended outcome of building capacity in Texas schools for the provision of PBIS. As Sugai and Horner (2006) noted, schools generally approach mandates to adopt new programs with cautious optimism and following initial implementation, attention, resources, and supports are redirected toward the next challenge.

The data collected for this question indicates a training model that contains the critical structures identified by Atkins et al. (2003) that include: (a) specialized knowledge and skills, (b) guiding policies, (c) recurring fiscal and material supports, (d) competent leadership and coordination, (e) comprehensive professional development opportunities, and (f) routines for ongoing program evaluation and program improvement are necessary for effective systems change. In addition to these structures, the Office of Special Education Programs Center on PBS (2004) recommend

a 3-5 year commitment to PBIS systems level change, making the improvement of social behavior a high priority at the organizational level, and building ongoing support capacities (e.g., coaching). The TBSI: Schoolwide PBS Project established in 2004, and addressed in the second research question allowed schools to extend the initial training and gain these necessary structures and supports to implement PBIS. The results and discussion of the data from the participating school is presented in the following section.

Research Question 2

In what ways is the TBSI: Schoolwide PBS Project in participating schools associated with changes in rates of (a) ODR, (b) ISS, (c) OSS, (d) DAEP, and (e) expulsions?

A one-tailed *t*-test of dependent samples was used to answer the second research question that examined within-group variations of the discipline data of schools that participated in the TBSI Schoolwide PBS Project. Expulsion data for this question was able to be included since campus level data was able to be obtained without violating FERPA. The baseline school year of 2003-2004 was compared with the implementation year of 2004-2005. An alpha level of .05 was used for all statistical tests, and the results are presented in Table 2.

Table 2 illustrates the variation between the baseline year (2003-2004) and the implementation year (2004-2005) of schools that formally participated in the TBSI: Schoolwide PBS Project. While the rate of expulsions showed a slight decrease, the rates of ODRs, ISS, OSS, and DEAPs indicated a statistically significant ($p < .05$) decrease between the baseline and implementation years.

Table 2

Within Group Variations between Baseline and Implementation Years of Schools Participating in the TBSI Schoolwide PBS Project

Variable	One-tailed *t*-test for dependent samples	$\overline{X}$ Occurrence for years 03-04 (*n* = 60)	$\overline{X}$ Occurrence for years 04-05 (*n* = 60)
ODR	.002*	975.57	697.73
ISS	.0003*	303.65	233.90
OSS	.0005*	86.62	62.62
DEAP	.004*	15.13	10.27
Expulsions	.21	.72	.55

*Note: * p*< .05

Schools that participated in the TBSI: Schoolwide PBS Project were able to significantly decrease the mean occurrence of ODRs, ISS, OSS, and DEAPs. The results indicate that schools that formally establish system supports (e.g., funding, training, coaching, leadership) were able to establish an effective system of schoolwide PBIS and able to facilitate meaningful change in a relatively short time span of one school year. Statistical significance was not achieved in regards to expulsions, but it should be noted that expulsions are only utilized for the most serious offenses, often for incidents beyond the direct control of the school. This finding supports the current literature that contends that PBIS implemented with fidelity can result in durable decreases in problem behavior within 1-2 years (Feinstein, 2003; Horner et al., 2004; Lewis et al., 1998; Muscott et al., 2004; Netzal & Eber, 2003; Turnbull et al., 2002).

While differences in implementation and data reporting procedures vary from state to state, making direct comparisons would not be appropriate; however, similar initiatives in other states have yielded similar results. For example, according to the 2004-05 Progress report of the Illinois PBIS Network, schools that fully implemented

PBIS in their state were able to reduce the rate of ODRs by 46% and report an overall safer school climate (Eber et al., 2005). A similar number of schools (60) received training and support in the first year of implementation and reported that 78% were successfully implementing schoolwide practices at the end of the first year.

A total of 61 schools from the 9140 public schools listed in the 2005-06 Texas School Directory (TEA, 2006b) participated in the TBSI: Schoolwide PBS Project. While this number may seem small, other states have been able to expand and grow exponentially from comparable early stages. For example, the Illinois PBIS initiative began systematically training and implementing PBIS with 23 schools in 1998 (Muscott et al., 2004) and has grown to 520 school in 2005 (Eber et al., 2005). The Colorado Positive Behavior provided to 16 schools initially in 2002-03 and grew 275% to 60 schools the following year (Muscott et al., 2004). While the growth of PBIS is encouraging, achieving expanded and adapted use of an intervention in multiple schools is not guaranteed. A major obstacle to the sustainability and expansion of PBIS is the lack of knowledge and experiences many school districts and state departments of education need to build action plans that maximize the establishment and expansion of their schoolwide PBIS iniatives (Sugai & Horner, 2006).

The reported results should be considered both preliminary and promising. The challenge for these schools is to sustain a durable system of PBIS that focuses on continual improvement. The participating schools are required to report data for 3 years to TEA, which in turn through Regional Educational Service Centers (ESC) provide on-going support with materials and training. These activities are congruent with the critical elements identified by the Office of Special Education Programs Center on PBS (2004)

by having 3-5 year prevention-based action plan, ongoing support and training, and funding sources to cover activities for at least three years. Sustaining durable systems change can be affected by factors that challenge the implementation integrity and quality of outcomes such as leadership changes, staff turnover, and changing student demographics.

Research Question 3

What are the differences between the rates of (a) DR, (b) ISS, (c) OSS, (d) DAEP, and (e) expulsions of schools participating in the TBSI: Schoolwide PBS Project training and matched schools who are not participating?

The third research question of whether schools that participated in the TBSI Schoolwide PBS Project program differed from non-participating schools in their discipline patterns was answered using a one-tailed *t*-test of independent samples (Gall et al., 2003). This method is useful in evaluating the differences between two independent samples. An alpha level of .05 was used for all statistical tests and the results are presented in Table 3. Expulsions were reported by total number due to TEA unable to provide campus level data for due to the low number few numbers without violating the FERPA.

While analysis of expulsion data is important when examining schoolwide discipline trends, it should be noted that students often get expelled from school for offenses that do not occur at the school. Therefore, many other factors influence these trends such as community demographics and risk factors.

Table 3

Comparison of Schools Participating in the TBSI Schoolwide PBS Project with Matched Non-Participating Schools

Variable	Matched *t*-test (2004-05)	Mean TBSI Schools	Mean Matched Schools
DR	.436	446.61	471.38
ISS	.428	649.11	733.70
OSS	.485	190.02	197.95
DEAP	.341	672.29	649.21
Total Expulsions*	N/A	71	99

Note: * Expulsions were reported by total number because TEA was unable to provide campus level data since the low number of expulsions for some campuses would FERPA.

Table 3 illustrates the differences between schools that participated in the TBSI Schoolwide PBS Project with non-participating matched schools. While schools that participated in the TBSI Schoolwide PBS Project had a slightly lower average of discipline records, ISS, and OSS the differences were not statistically significant ($p<.05$). Schools participating in the TBSI: Schoolwide PBS Project had a greater average amount of DEAPs than nonparticipating matched schools, however, it was not statistically significant ($p>.05$). Non-participating matched school had 28% more expulsions than participating schools for the 2004-05 school year.

Statistically significant differences were not observed when comparing schools that participated in the TBSI Schoolwide PBS Project with non participating matched schools during the first year of implementation. Although schools that participated in the TBSI Schoolwide PBS Project had lower rates of DRs. ISS, OSS, and expulsions, future data collection and analysis over time will be needed to determine whether this trend will continue to statistically significant levels. While these schools were matched by

several key features (e.g., type, level, region) each school has its own syntality and unique characteristics (e.g., experiences of staff, leadership philosophy, strength of academic programs) and making direct comparisons should be done with caution. A more prudent approach for assessing the TBSI Schoolwide PBS Project may be to examine intra-school changes rather than inter-school comparisons.

It is a logical assumption that the schools that chose to participate in the TBSI Schoolwide PBS Project had high rates of disciplinary sanctions and were committed to reducing the rate of problem behavior. An encouraging observation from the data is that these schools were at least able to reduce the amount of disciplinary sanctions to a comparable level of their matched schools. However, data from this question raise several new questions for future research. For example, what is it about these schools (participating and non-participating) that account of much higher rates of discipline sanctions when compared with the rest of the state of Texas during this time frame? What regional differences exist between schools in Texas in regards to the discipline variables studied? What common variables exist between schools that adopt a schoolwide PBIS approach versus schools that rely on traditional methods?

CHAPTER 5

SUMMARY, IMPLICATIONS, and RECOMMENDATIONS

The research study employed a causal-comparative research design to answer the three research questions. The causal-comparative design allowed the researcher to determine if the dependent variables (i.e., discipline patterns of a sample of schools) differ as a result of introducing the independent variable(s), (i.e., Texas Behavior Support Initiative (TBSI) initial training efforts and TBSI Schoolwide Positive Behavior Support (PBS) project training). Information from this research add to the current knowledge base of positive behavioral interventions and supports (PBIS), facilitate further research, and allow practitioners and policymakers to guide decision-making and develop action plans related to student discipline. This chapter includes (a) summary, (b) implications, (c) limitations and (d) recommendations.

Summary

The purposes of this study were to (a) examine the impact of the Initial TBSI training on the rates of discipline record (DR), in school-suspension (ISS), out-of-school suspension (OSS), disciplinary alternative education placement (DAEP), and expulsions of public schools in Texas; (b) investigate the overall effectiveness of schoolwide PBIS as facilitated by the TBSI: Schoolwide PBS Project in participating schools; and (c) determine what differences, if any, there are between rates of DR,ISS, OSS, DAEP, and expulsions between the schools participating in the TBSI: Schoolwide PBS Project with matching schools who did not participate in the project.

The impact of the Initial TBSI training was answered using 50 regular instructional schools using random proportional stratified sampling. Discipline data were collected and analyzed from the school years of 2000-01 through 2004-05 to see what affect this large-scale training had on the several discipline indicators. An analysis of the data indicated that the Initial TBSI training did not decrease the rates of DRs, ISS, OSS, DEAPs, and expulsions. While this large-scale training may have met state requirements in response to the Senate Bill 1196 and disseminated information on a large-scale concerning the use of PBIS, it did not result in decreasing the rates of the discipline indicators studied. Possible explanations include, lack of participant "buy-in," the training delivery method, and competing initiatives (e.g., NCLB, Reading First).

The overall effectiveness of schoolwide PBIS as facilitated by the TBSI: Schoolwide PBS Project was answered using 60 participating schools that reported at least two years of complete data on the following data points: office disciplinary referrals (ODRs), ISS, OSS, DEAPs, and expulsions. Statistically significant decreases in the number of ODRs, ISS, OSS, and DEAPs were observed with the rate of expulsions showing a slight decrease. These data suggest that when training in PBIS is intensified and implemented with fidelity then meaningful organizational change can occur in a relatively short period of time. The challenge for participating schools is to sustain durable PBIS over time and continue to implement evidence-based practices.

The third question was answered by using 56 schools that formally participated in the TBSI Schoolwide PBS Project and submitted data for the 2004-2005 and matched with 56 schools who are not participating in the TBSI Schoolwide PBS Project. The schools were matched using stratified purposeful sampling in regards to type (i.e., rural,

suburban, and urban) and level (i.e., elementary, middle school, and high school) of school based were matched. While the data from the schools that participated in the TBSI Schoolwide PBS Project has lower averages of DRs, ISS, OSS, DEAPs, and expulsions, they were not at a statistically significant lower rate. Possible explanations for this include having a higher rates discipline problems than typically found in the state to begin with and individual differences between the schools that were unable to be controlled (e.g., school leadership, district policies, staff characteristics).

Implications

The results of this study are meaningful and relevant, not only as an addition to the current literature base concerning the PBIS, but at a practitioner and policymaking level. First, this study presents the current status of large-scale PBIS efforts in Texas. The information in this study provides a baseline for school, district, and state policymakers to evaluate what organizational structures, resources, and supports are in place and to determine specific action plans that need to occur. As successful implementation of PBIS requires self-evaluation (Netzel & Eber, 2003; Sugai, Sprague et al., 2000), school districts and school administrators will be able to use the information gleaned in this study and compare it to their own data to ascertain their unique organizational needs and invest in reform efforts.

This study has demonstrated that schools can significantly reduce problem behavior in their schools when implementing PBIS with fidelity. If these initial results of the TBSI Schoolwide PBS Project answered in the second research question are able to sustain themselves over time, then policymakers would be wise to invest in adopting

and implementing PBIS in their school. A comprehensive of PBIS has also been shown to serve as the foundation for other schoolwide systems of support (Sugai, Sprague et al., 2000) and has been identified as a promising practice that increases educators' use of research-validated practices (Lewis et al., 2004). In this era of high-stakes accountability and NCLB, making PBIS a priority will not only help reduce discipline problems in a school but be able to increase academic achievement (Putman et al., 2006).

An important implication of this study is the readiness on the part of school administrators and staff to adopt research-validated practices such as PBIS and implement them with fidelity. This involves the development of a PBIS leadership team whether it is at the local or state level with representation from an appropriate range of stakeholders. In order for a systems change to occur, a shared philosophy has to be not only with the leadership team, but with individuals who will involve in the direct implementation of school initiatives (Netzel & Eber, 2003). An organization must have a common mission, purpose, and goal and a shared responsibility for all students. While the Texas Behavior Support Initiative (TBSI) was formed as the result of a legislative change affecting primarily students receiving special education services, efforts need to be made for educators to understand the PBIS is for *all* students; this task may be accomplished through intense training efforts and ongoing support.

The findings of this study confirm that in order for effective organizational change in schools to occur, the delivery of training must include several critical components. The key components (e.g., training campus leadership PBIS teams, materials, on site-assistance, coaching, data collection) included in the TBSI: Schoolwide PBS Project

support the recommendations the Office of Special Education Programs Center on PBS (2004) which are contained in the *School-wide Positive Behavior Support Implementers' Blueprint and Self-Assessment* and well supported the PBIS literature (Dunlap & Hieneman, 2000; Freeman et al., 2005; Muscott et al., 2004; Netzel & Eber, 2003; Sugai & Horner, 2006; Warren et al., 2003). In order to expand PBIS efforts, these critical features must be addressed by PBIS leadership teams at the local, state, or building level.

Recommendations

The research support for PBIS continues to demonstrate the efficacy of its use and solidify PBIS as an evidence-based practice that is effective in reducing problem behavior in schools and other organizations that work with youth and children. While PBIS is conceptually sound, future research is needed especially in the area of intervention adoption, expansion, and sustainability. The present study raises questions that policymakers, practioners, and researchers may consider in further validation and refinement of PBIS.

Educators interested in the adopting and implementation a comprehensive system of PBIS within their organization need to attend to several keys issues in order to achieve buy-in from vital stakeholders. For example, prior to presenting a system of PBIS to staff, an action plan will need to contain several critical components: (a) a strong PBIS leadership in place, (b) a collective vision shared by all staff, (c) a strong sense of shared responsibility for *all* students by *all* staff, (d) local demonstrations of PBIS schools that have successfully adopted and implemented a system of PBIS to

showcase, and (e) sufficient support and materials. Creating effective systems of PBIS will require training, coaching, and on-site technical assistance by trained and experiences PBIS facilitators.

While the evidence for the efficacy and effectiveness for PBIS is well documented, future research should be directed toward (a) factors that influence the adoption of evidence-based practices, (b) how to establish and sustain durable systems of PBIS, and (c) the integration of PBIS with additional types of intervention efforts. The IDEIA 2004 provides incentives for whole-school approaches, including PBIS that may be integrated in a comprehensive manner with early reading programs and early identification efforts. In addition to these incentives, the IDEIA 2004 allows states to use the response-to-intervention (RtI) model to identify students for additional academic support and NCLB emphasizes early reading intervention. Additional research should be directed toward the integration of these services within a comprehensive system of PBIS.

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