POSITIVE SUPPORT STRATEGIES FOR STUDENTS WITH BEHAVIORAL DISORDERS IN GENERAL EDUCATION SETTINGS

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Although it has been argued that students with behavioral disorders benefit most from placement in general education classrooms, careful and systematic support is required to insure that their placement is successful. In this article, we review supports and interventions provided at multiple levels that together are known as "positive behavior support" (PBS). The levels include school-wide PBS, which involves the full student body; classroom-based PBS, focusing on the individual class as the unit of analysis; and individualized PBS, addressing the individualized needs of specific students. When relatively intense and chronic behavior problems exist, individualized PBS involves the use of functional behavioral assessments and proactive, educative interventions. In this article, we describe each of these levels with reference to the empirical literature and with an emphasis on practical applications. © 2005 Wiley Periodicals, Inc.

Special education law requires that education of students with disabilities be appropriate, maximally effective, and delivered to the greatest extent possible within the general education environment and curriculum (IDEA, 1997; Pub. L. No. 105,17). There has been a growing trend toward the inclusion of all students, including those with emotional and behavioral disorders (EBD; Mastropieri & Scruggs, 2004; McLesky, Henry, & Hodges, 1999). In fact, the recent President's Commission on Excellence in Special Education (July 2002) urged in one of its three recommendations to "Consider children with disabilities as general education children first" (Executive Summary, p. 8).

There has been considerable conflict regarding the appropriateness and efficacy of inclusion of students with EBD (Kauffman, Lloyd, Baker, & Riedel, 1995; Muscott, Morgan, & Meadows, 1996; Walker & Bullis, 1990); however, potential benefits have been widely acknowledged. Specifically, students participating in mainstream settings may be more likely to develop and maintain enhanced social skills and relationships with their peers (Fisher & Meyer, 2002; Muscott, 1997; Panacek & Dunlap, 2003; Snell, 1990). Integrated placements are important for the opportunities they provide for typical activities with same-aged peers (Zionts, 1997). General education settings (in contrast to segregated programs) may provide a better context for developing appropriate, generalizable skills that enable EBD students to function competently in the home, school, and community (Dunlap, 1993).

In addition to these social benefits, inclusive environments may offer educational advantages for students with disabilities. Although the results are mixed, some studies have demonstrated that with appropriate support and adaptations, students with disabilities may perform as well, if not better, in general education (Gibbs, Alfred, & Ingram, 1999; Rea, McLaughlin, & Walther-Thomas, 2002). General education teachers may hold students to higher standards for performance and behavior. In contrast, special education placements are often associated with separate curricula and standards that tend to exaggerate behavioral and academic distinctions and create barriers to reintegration (Weigle, 1997).

Although the advantages of inclusive participation in general education settings have been addressed in the literature, there are indisputable challenges associated with including and adequately

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supporting students with EBD (Bullock & Gable, 1994; Cartledge & Johnson, 1996; Kauffman et al., 1995; Muscott et al., 1996). Some students exhibit serious disruptive and destructive behaviors that present risks of injury and unacceptable interference with the learning environment, and others exhibit serious mental health concerns (e.g., depression, severe withdrawal) that call for intensive care and intervention (Shriner & Yell, 1996). Delivering individualized supports needed to address these students' behavior problems and foster their emotional well-being can be very challenging in the context of a classroom of more than 20 children.

Furthermore, barriers to effective programming in general education settings often include a lack of resources (e.g., special education consultation, paraprofessional support, specialized assessments and planning) and a lack of appropriate training for general education personnel (Cheney & Barringer, 1995; MacMillan, Gresham, & Forness, 1996; Walker & Bullis, 1990). When considered in the context of the increasing demands on general education teachers for academic accountability, it is understandable that there are concerns about retaining students with behavioral disorders in general education rather than simply moving the students to alternative (i.e., special education) classrooms.

In addition to challenges within classrooms, there also are systemic barriers to including students with behavioral disorders in general education settings (Muscott et al., 1996). Zero tolerance and other reactive, punitive stances have been widely adopted in education even though there is little evidence of their efficacy (Skiba & Peterson, 2000). Schools that embrace such perspectives may not offer positive host environments for students who have behavioral challenges. Therefore, including students with behavioral disorders requires not only individualized supports but also systemic changes designed to accommodate the needs of diverse learners at classroom and school levels (Nelson, 2000; Safran & Oswald, 2003).

Positive behavior support (PBS) is an assessment-based approach for supporting students with behavior problems that provides an empirically validated set of strategies for preventing problems and promoting prosocial behavior (Carr et al., 2002; Repp & Horner, 1999; Sugai et al., 2000). PBS is well suited to helping students with behavioral disorders adapt their behavior to general education classrooms so that emotional and intellectual growth can occur. PBS procedures are derived largely from the discipline of applied behavior analysis (e.g., Koegel, Koegel, & Dunlap, 1996); however, the approach is somewhat broader in that it explicitly incorporates person-centered values and strategies adapted from systems theory (Carr et al., 2002).

PBS emerged in the mid-1980s as a positive, instructional approach that offered an alternative to punishment for the very serious behavior problems of individuals with severe disabilities. PBS was defined initially as a "nonaversive" alternative to the use of painful, humiliating, and stigmatizing consequences (e.g., contingent water sprays or electric shock) commonly employed to suppress problem behavior with this population (Horner et al., 1990; Repp & Singh, 1990). While advocates protested the use of aversive consequences, researchers joined the PBS movement by developing research-based intervention procedures that illuminated the relationship between behavior problems and events in the environment.

The newly developed techniques of functional analysis and functional assessment contributed significantly to understanding and addressing problem behavior (Foster-Johnson & Dunlap, 1993; Iwata, Dorsey, Slifer, Bauman, & Richman, 1982/1994; O'Neill, Horner, Albin, Storey, & Sprague, 1997). The purpose of functional (behavioral) assessments (FBA) is to identify environmental events that influence behavior problems. Many studies have clearly demonstrated that FBA information could lead to very effective and nonaversive interventions for even the most severe problems (see Bambara & Kern, 2005; Carr et al., 1999; Lucyshyn, Dunlap, & Albin, 2002). For instance, "functional communication training," an instructional strategy that is based on functional analysis (Carr & Durand, 1985), reduced behavior problems (e.g., self-injury). This method

involved teaching conventional communication responses (e.g., "Help." "May I have a break?" "Pay attention to me.") selected to serve the same function (or purpose) as the behavior problem.

While PBS began as an approach focusing on individuals with developmental disabilities, it was quickly applied with and adapted for other populations. A number of studies conducted in the early 1990s demonstrated the effectiveness of functional analysis (Dunlap et al., 1993) and PBS procedures with students described as having EBS (e.g., Clarke et al., 1995; Kern et al., 1994; Lane, Umbreit, & Beebe-Frankenberger, 1999). Other studies extended the use of PBS to individuals without identified disabilities (e.g., Lewis, Powers, Kelk, & Newcomer, 2002; Umbreit, Lane, & Dejud, 2004) and to other contexts, including general education settings (e.g., Radford & Ervin, 2002; Scott, 2001; Todd, Horner, & Sugai, 1999). The expansion and growing acceptance of PBS is illustrated in language in the IDEA reauthorization (Skiba, Bear, & Browning Wright, 2004) encouraging the use of FBA and positive supports and strategies for students with disabilities experiencing behavioral challenges.

Over the past decade, the PBS approach has not only been applied with many diverse populations but also has been developed to meet the needs of whole classrooms and whole schools (Sugai & Horner, 2002). The expansion of PBS has brought an increased appreciation for systems variables (Lewis & Sugai, 1999; Scott, 2003) and for essential roles occupied by multiple disciplines in school contexts. As PBS has expanded to other populations and more integrated educational environments, and come to be supported by special education policy, the approach is increasingly being adopted, implemented, and integrated with a greater range of disciplines including mental health, school psychology, and general education (e.g., Clark & Hieneman, 1999; Crone & Horner, 2003; Horner, Sugai, & Horner, 2000; Scott & Eber, 2003).

This article offers a description of PBS in schools, with a particular emphasis on its implications for supporting students with behavioral disorders in general education settings. We first provide a brief overview of PBS and its distinguishing features. We then describe three levels of implementation—school-wide, classroom, and individual student—and the role each plays in supporting students with behavioral disorders and examples of their implementation. The article includes a discussion of strategies along a continuum of formality that are intended for individual students who require more intensive supports.

Features of PBS

PBS is an approach for supporting students with behavioral challenges that employs a process of: (a) goal identification, (b) information gathering, (c) pattern analysis, (d) support plan design and implementation, and (e) monitoring and evaluation of outcomes (Hieneman et al., 1999). PBS is defined by several key features, including identifying and engaging participants in a collaborative, stakeholder driven process; determining and manipulating variables associated with student behavior; implementing multicomponent interventions that focus on prevention, teaching, and effective management of behavior; and measuring behavior change and broader outcomes of intervention (Carr et al., 2002; Horner et al., 1990; Sugai et al., 2000).

Identifying and Engaging Participants

PBS is guided by a team of individuals representing all the environments, programs, or disciplines that may be involved or significantly affected by the process. In education, this typically means that teams consist of student(s), teacher(s), parents, administrators, and related service providers as well as others (e.g., school psychologists, who commonly have expertise in consultation, problem solving, and assessment) who have essential roles with the focus student(s) and/or programs. Team members should be knowledgeable of the student(s) and the circumstances surrounding the behavior, and be familiar with and have access to or control over services,

personnel, and resources. PBS teams are characterized by open, honest, and respectful communication, shared goals and responsibility, a willingness to address conflicts and utilize consensus-based decision making, and a long-term commitment to problem solving and support (Hieneman & Dunlap, 1999; Todd, Horner, Sugai, & Sprague, 1999).

Determining Variables Associated with Behavior

PBS is grounded on the assumption that effective behavioral support is based on understanding, often obtained through a process of FBA (Knoster, 2000; O'Neill et al., 1997). That is, to intervene effectively, we must identify exactly what variables, conditions, or events may be contributing to student behavior. Identifying these variables allows practitioners to select intervention strategies based on the contexts and functions of student behavior (e.g., escape from academic demands, obtaining peer attention), which may produce better outcomes (Ervin, Radford, & Bertch, 2001; Olympia, Heathfield, & Jensen, 2002; Reid & Nelson, 2002; Sugai, Horner, & Sprague, 1999). PBS involves engaging in a process of information gathering to identify (a) circumstances (when, where, with whom) associated with occurrences and nonoccurrences of problem behavior, including both immediate (antecedents) and more distal (setting event) variables; and (b) outcomes of behavior (i.e., what student(s) get or avoid through their behavior, including both planned and incidental consequences).

To obtain this information, PBS teams may use existing records (e.g., disciplinary records, incident reports, academic records), but the emphasis is on gathering additional data to clarify the events associated with behavior. The most common methods for collecting data and identifying patterns include (a) interviewing or surveying teachers, parents, and other relevant persons and (b) conducting observations across activities, people, and times of day. Data should be collected through multiple sources and continue until consistent patterns are identified.

Selecting and Implementing PBS Strategies

PBS strategies are based on patterns identified during the FBA process (i.e., circumstances associated with and consequences maintaining problem behavior). Information regarding the antecedents, setting events, and consequences surrounding the problem behavior(s) is used to determine the strategies likely to lead to successful outcomes. Interventions are multicomponent in nature (Dunlap, Hieneman, Kincaid, & Duchnowski, 2001; Lewis & Sugai, 1999; O'Neill et al., 1997; Sugai et al., 2000), and include strategies to (a) prevent problems by modifying circumstances (e.g., environment, curriculum) that set the stage for problem behavior and/or adding cues to prompt positive behavior, (b) teach skills to replace the problem behavior (e.g., prosocial skills, communication, tolerance of unpleasant circumstances, self-management), and (c) provide consequences to reward positive behavior, withhold outcomes that may be inadvertently encouraging problem behavior, or otherwise deter problem behavior.

Strategies also commonly include broader systems changes directed at improving overall service delivery (e.g., policies, procedures, incentives for staff to promote sustained use of procedures) and/or the quality of life of the students, educators, and families (Carr et al., 2002).

The particular strategies included within an overall PBS plan are selected on the basis of issues pertaining to "contextual fit," such as the available resources, existing policies and procedures, schedules and routines, and preferences of those involved (Albin, Lucyshyn, Horner, & Flannery, 1996; Hieneman & Dunlap, 2000). To implement a PBS plan, team members engage in action planning to identify the concrete objectives, persons responsible, and timelines for implementation. Through the action-planning process, PBS teams often determine and address training needs; reallocate staff, time, and resources as needed; and consider other ways to restructure systems to promote sustained improvements in student behavior.

Measuring Changes in Behavior and Lifestyle/Systems Outcomes

PBS embraces data-based decision making for establishing and evaluating interventions, meaning that data on variables contributing to behavior drive intervention and that data are used to assess outcomes and adjust approaches as needed (Carr et al., 2002; Scott, 2003). The use of data in selecting and implementing interventions provides for documentation of the severity of the problem behaviors as well as a resource for goal setting, evaluation, and problem solving (Uptah & Tilly, 2002). Objective measures that capture both changes in behaviors of concern (e.g., decreases in disruptive behavior, increases in prosocial competencies or specific skills to replace problem behavior) and improvements in broader systems issues (e.g., academic performance, participation in activities, quality of relationships, general satisfaction, reductions in crisis management) are emphasized (Kincaid, Knoster, Harrower, Shannon, & Bustamante, 2002). How these data are collected varies across circumstances, but may include frequency of specific target behaviors (e.g., number of discipline referrals), use of scales or checklists, time-sampling procedures, satisfaction measures, and/or assessments of broader issues (e.g., quality of life, systems change).

PBS at the School, Classroom and Student Levels

PBS may be applied at three levels in schools to effectively support and integrate all students, including those with behavioral disorders (Lewis & Sugai, 1999; Sugai et al., 2000; Weigle, 1997). The levels represent a hierarchy of prevention strategies that together serve to make the occurrence of problems less probable (McNamara, 2002). When applied throughout a school, the strategies reduce the need for intensive, individualized supports. School-wide PBS systems establish a foundation for promoting positive behavior for all students, creating a supportive context to effectively integrate students with behavioral challenges. Classroom-based PBS systems enhance the overall functioning of classrooms, increasing engagement and minimizing disruptive behavior. PBS for individual students facilitates problem solving when particular students do not respond to other systems. The sections that follow describe the role of each of these levels of PBS in including students with behavior disorders and provide a brief description and example of each level. Table 1 summarizes the features of PBS at each of these three levels.

PBS for Entire Schools

School-wide PBS systems are developed to directly address the behavioral needs while indirectly addressing the academic needs of the majority of the student population. The goals of school-wide PBS systems are to define, teach, and support appropriate behaviors to establish a safe school climate that supports all students to learn and to exhibit positive behaviors within a school (Lewis & Sugai, 1999). School-wide PBS systems lay a foundation on which additional classroom and individual student support strategies will be most effective and reduce the necessity for more individualized, intensive, or crisis supports.

School-wide PBS facilitates the inclusion of students with behavioral disorders in three ways. First, it establishes a proactive, solution-oriented philosophy for addressing student behavior. Recent evaluations of school-wide PBS have demonstrated reductions in office referrals and improvements in other indicators (Lewis, Sugai, & Colvin, 1998; McCurdy, Mannella, & Eldridge, 2003; Metzler, Biglan, Rusby, & Sprague, 2001; Scott, 2001; Sugai, Sprague, Horner, & Walker, 2000). Second, school-wide PBS reduces the strain on the system so that school-based teams have more time, energy, and resources to address the needs of individual students when they arise. Finally, school-wide PBS produces continuity in expectations and approaches across classrooms and throughout the school, which makes it easier for students with behavioral challenges (and all students) to comprehend and respond adaptively across settings in the school.

Table 1
Summary of Features of PBS at Each Level of Implementation

Question	Individual	Classroom	Schoolwide
Who should be involved in the process and how?	Must include student, parents, teacher, and other direct support providers, but may include friends, extended family, administration, specialists, and community members	Must include teacher, administration, and paraprofessionals, but may include related service providers, specialists, student/parent representatives and other teachers	Must include administration, grade-level and discipline specific representatives, but parents, community members, and students are recommended participants.
How do we identify the variables impacting student behavior?	Identification of contexts (setting, events, antecedents) and functions (maintaining variables) of individual student behavior (e.g., obtained via functional behavioral assessment)	Inventory of classroom features and management (including disciplinary procedures) and identification of problematic routines that impact the behavior and academic performance of students in the classroom(s)	Multilevel site analysis (incorporate classroom, individual students), surveys, observations, patterns in discipline referrals, and organizational features that impact all of the students in a school
How do we identify and implement effective strategies?	• Modifying the circumstances associated with the problem behaviors (e.g., difficult tasks) • Teaching replacement behaviors (e.g., asking for breaks) • Providing functional consequences for behavior (e.g., earning free time) • Addressing lifestyle supports (e.g., peer buddy; medical evaluation)	• Modifying classroom management structure (e.g., rules, routines, arrangement of physical environment) • Modifying instructional methods to engage participation and address social-personal skills • Implementing rewards and in-class discipline methods (e.g., time-out)	• Redesigning the school environment (e.g., increased supervision) • Establishing, teaching and rewarding adherence to schoolwide expectations • Implementing a continuum of consequences for infractions • Addressing staff incentives and organizational changes (e.g., revised policies and procedures)
What systems will be used to measure desired outcomes?	Increases/decreases in specific target behaviors, including development of skills to replace problem behaviors, and quality of life changes (e.g., improved relationships, participation in integrated activities)	Increases in academic engagement (e.g., assignment completion, grades) reductions in disruptive behavior and enhanced classroom functioning (e.g., fewer referrals, time-outs, more rewards/points earned)	Improvements in overall social and academic environment (e.g., grades, attendance, school climate); fewer discipline referrals and crisis procedures as well as diminished need for individual plans

School-wide PBS is directed by a school-based team comprised of administrators, general and special education teachers, grade-level and discipline-specific representatives, and others as needed (e.g., parents, students, community members). PBS teams gather and analyze school data (e.g., office discipline referrals, achievement measures, absences, satisfaction surveys, special education referrals), evaluate current intervention strategies, and plan continued efforts based on the information obtained and a consensus of the faculty. School-wide PBS strategies typically include environmental redesign, establishment of behavioral expectations, rewards for appropriate student behavior, and a consistent continuum of consequences for misbehavior. Plans also include organizational changes such as staff training, resource reallocation, and accountability systems to support the sustained use of PBS strategies. To illustrate, the following case study is provided.

> Able Middle School embraces PBS as a philosophy and as an approach to address the behavioral needs of their students. At this school, PBS efforts are guided by a team that includes the principal, assistant principal responsible for discipline, teachers from each department with equal representation across grade levels, the school psychologist, a guidance counselor, the PTA president, and peer counselors. The team meets monthly to review data from a system they have employed to track discipline referrals, ongoing surveys of staff and students, grades and attendance records, and intervention-team referrals. Using these data, they monitor their ongoing efforts and make changes as needed.
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> Over the past few years, the team has established systems for supporting student behavior and evaluating performance on their goals. They have instituted changes in staff supervision, lunch schedules, and transitions between classes. They have identified behavioral expectations associated with their two overriding themes of "Responsibility and Respect," and defined how expectations translate into behavior across campus (e.g., in the library, hallways, cafeteria). And they have developed clear guidelines for student discipline that specify what types of infractions are addressed within classrooms and referred to the administration as well as modified their code of student conduct to create more consistency in consequences. The PBS team has provided training for faculty and auxiliary staff (bus drivers, office staff) to help encourage and reward students for meeting behavioral expectations and consistently implement other intervention strategies.
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> The PBS team also uses data to identify patterns in discipline referrals and to prompt problem solving. For instance, the team used discipline-referral data to identify that aggressive behaviors were occurring at the bus area between 7:30 to 8:00 a.m. After discussing these concerns with staff supervising the area and observing during this period, the PBS team decided to increase supervision and post reminders for students to leave the bus area upon arriving to school. This proactive approach reduced the need for disciplinary actions and created a climate in which positive behavior among students (and faculty) is expected and encouraged. The PBS team, and especially the administration, is now able to handle problems efficiently and respond to the needs of individual students and classrooms.

PBS for Classrooms

Classroom-based PBS systems are developed to create educational environments that engage students in academic work and minimize disruptive behavior. Classroom-based PBS is a logical extension of school-wide PBS and should be designed to readily integrate individualized student interventions. Although classroom PBS applications have not been systematically evaluated to date, components of effective classroom intervention have been articulated for some time (Colvin & Lazar, 1997; Jackson & Panyan, 2002; Darch & Kame'enui, 2004; Sprick, Garrison, & Howard, 1998).

Classroom-based PBS may be essential to integrating students with behavioral disorders. Structured, supportive contexts created by classroom-based PBS may, in some ways, resemble special education programs in that the environment and teacher responses are engineered to facilitate appropriate behavior. Such features may benefit students with behavioral disorders. In addition, classroom-based PBS promotes positive peer behavior, including prosocial competencies, which in turn provides a role model for students who have problems with behavioral adaptation.

PBS in classrooms is orchestrated by the teacher with input from administrators, support staff and related service providers involved in the classroom, and students and their parents. The teacher establishes a structure that is conducive to learning and limits incidents of disruptive behavior. Features of effective classrooms typically include well-designed physical environments, clearly articulated rules and routines, appropriate and effective instruction, rewards for positive behavior, consistent consequences to deter problem behavior, and teaching of prosocial competencies that allow students to function effectively in the classroom. Teachers in PBS classrooms use records of student behavior and academic performance to evaluate the effectiveness of the system and to problem solve when particular routines or areas are challenging. To illustrate:

> Mrs. Brown is a teacher at Able Middle School. She has worked closely with her administration, department, other teachers, students, and students' families to design a classroom-based PBS system that supports desirable student behavior. Using the school rules, reward system, and disciplinary procedures as a foundation, she has established clear, consistent expectations for her students, defining what it means to be responsible and respectful in her classroom. Specifically, her classroom rules are: (a) Have materials needed for class; (b) Complete assignments on time; (c) Follow teacher instructions; (d) Speak nicely to everyone; and (e) Respect other people's belongings and personal space. The rules are posted in the classroom, reviewed regularly, and provide the foundation for the classroom reward system.

> Mrs. Brown has arranged her classroom so that interruptions are reduced, materials are readily accessible, and the seating arrangement is conducive to learning. She reminds her students frequently of the classroom expectations, provides instruction (including role playing) as needed, and rewards students with privileges for adhering to those expectations. For example, students are allowed to choose their work partners, run errands for the teacher, obtain homework passes, and participate in monthly "game days" for adhering to the rules. When students do misbehave (i.e., violate the rules) in her classroom, Mrs. Brown uses a consistent hierarchy of consequences—warning, time-out, loss of privileges—with referrals to administration only for the most severe offenses (e.g., fighting).

> Mrs. Brown records student misbehavior that requires in-class intervention and retains copies of discipline referrals. She reviews this data, plus her grade book, at least weekly to identify any problem routines or other areas of concern. Based on this review, Mrs. Brown periodically makes adjustments to her curriculum (e.g., reduces difficulty, incorporates student preference), instructional practices (e.g., presentation, pacing, task variation), classroom arrangement, or other issues that may be affecting student behavior. Due to the positive overall structure of the classroom and Mrs. Brown's proactive approach to discipline, even the most challenging students are generally productive and well behaved. When individual students do have difficulties, Mrs. Brown is capable of addressing them without disrupting the classroom milieu.

Individual PBS Interventions

PBS for individual students provides a problem-solving process for addressing the needs of students who do not respond to school-wide and classroom-based PBS and require more assistance. Through this approach, educators may address specific target behaviors and skill deficits and develop individualized support plans that fit within the particular environments in which a student participates (Knoster, 2000; Scott & Nelson, 1999). By using individual PBS, it may be possible to retain a student with behavioral disorders who might not otherwise succeed in integrated settings rather than removing them to more restrictive educational placements such as self-contained special education programs or alternative educational programs.

PBS for individual students is conducted by support teams consisting of the student (as appropriate), his or her family, regular and special education teachers, and anyone else involved in supporting the student on an ongoing basis (e.g., a behavior analyst, school psychologist). The team identifies specific behaviors of concern and broader goals they would like the student to

achieve as a result of intervention (e.g., improved peer relationships). Based on their understanding of the student's needs and the educational environments in which they are participating (and in some cases, determined based on a FBA—see next section), the teams design individualized support strategies. These strategies include adjustments to the student's surroundings to prevent problems, pinpointing and teaching appropriate academic and social skills, and modifications to disciplinary procedures to promote the student's integration and success. The PBS team monitors the student's progress and makes changes as needed. To illustrate:

> Michael is a student in Mrs. Brown's class at Able Middle School. He has been identified as having a behavioral disorder and requires some additional supports to function effectively in general education settings. When Michael first entered Mrs. Brown's classroom, Mrs. Brown met with Michael, his parents, the special education teacher, and the school psychologist. Mrs. Brown described her classroom and PBS system. Based on their knowledge of Michael, his needs and goals, previous assessments and interventions, and the structure of Mrs. Brown's classroom, the team designed some strategies for him.
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> First, given that Michael was new to the classroom, the counselor and Michael's parents both agreed to go over the classroom rules with Michael periodically, discussing and role playing appropriate behaviors. The team also identified a classmate who agreed to serve as a peer buddy to coach Michael about the classroom routines while he was getting oriented. To minimize academic frustration that might lead to problem behavior, Mrs. Brown and the special education teacher identified some minor instructional modifications (e.g., breaking up longer assignments, offering help periodically during independent work) for Michael. The team also determined that it would be beneficial for Michael to be seated close to the door and be able to use a "cool-off pass" to get a drink of water when anxious, before he begins to escalate.
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> A self-monitoring system was designed so that Michael could track his own behavior throughout the school day. Specific target behaviors associated with respect and responsibility were defined for Michael, and he agreed to rate himself in those areas. Michael's team communicates as needed via e-mail and meet briefly every 9 weeks to assess his progress not only on these behavioral goals but also with regard to larger issues such as friendship development and satisfaction. Because of the individualized attention and support, Michael is successful in Mrs. Brown's classroom and other areas of the school.

Assessment-Based Interventions

PBS offers a creative problem-solving process that may be applied at multiple levels and across contexts. When used correctly and consistently, there is considerable evidence that PBS can be effective (Reid & Nelson, 2002); however, implementation of the approach within integrated educational settings can be a complex endeavor, and supporting students with pervasive, longstanding behavior problems may require a more intensive and extensive effort than is common in general education settings.

When informal approaches do not produce the desired results, more systematic and comprehensive assessment and intervention processes are warranted. A student with a behavioral disorder who has more complex or challenging behaviors may require interventions based on a careful FBA. FBA involves systematic information gathering to identify the specific variables affecting a student's behavior (Sugai et al., 1999). Using the FBA process, support teams may be able to design effective strategies and retain the student in general education settings (Fox, Conroy, & Heckaman, 1998; Jolivette, Barton-Arwood, & Scott, 2000; Stichter, Sasso, & Jolivette, 2004).

FBA Process and Tools

FBA may best be conceptualized as a problem-solving process that begins with clear definitions of the target behaviors and culminates in the implementation of effective interventions. The objectives of this process are to (a) clearly define the problem behavior(s); (b) identify events,

times, and situations that predict when behaviors will and will not occur; (c) determine consequences that maintain the problem behavior; (d) generate hypotheses or summary statements that define these relations; and (e) gather direct observation data (O'Neill et al., 1997).

To achieve these objectives, information is collected through a variety of tools and procedures. In addition to reviewing existing records, teams conduct structured interviews with people who know the student well (e.g., parents, teachers, friends) and observe the student across activities and times of day. Interview protocols range from informal tools such as interview guides and rating scales to more extensive formats (e.g., Functional Analysis Interview, O'Neill et al., 1997). Observations result in the sampling of behavior patterns, with the two most common methods of data collection being ABC (antecedent-behavior-consequence) and scatterplot recordings (Foster-Johnson & Dunlap, 1993; Nelson, Roberts, & Smith, 1998; O'Neill et al., 1997).

The data collected are subject to critical review and analysis to generate summary statements (or hypotheses) that describe the perceived relationships between the student's behavior and aspects of their environment (e.g., "Mary engages in disruptive behavior such as talking and leaving her seat to avoid difficult academic tasks." "Stuart argues with the teacher to gain peer attention.") These hypotheses may be evaluated by manipulating the conditions associated with the student's behavior (e.g., modifying the curriculum) and documenting changes in behavior that occur as a result of these manipulations.

Well-supported hypotheses serve as the foundation for intervention (Radford & Ervin, 2002; Todd, Horner, & Sugai, 1999; Umbreit et al., 2004). The methods selected respond explicitly to patterns identified via the FBA and are multicomponent in nature. Assessment-based strategies involve:

- making changes to the student's educational environment to prevent problems, i.e., minimizing antecedents and/or setting events for behavior (e.g., increasing or decreasing the difficulty of academic assignments, modifying the pace of instruction, providing reminders of behavioral expectations);
- targeting and teaching skills to replace the student's problem behavior or to help them better adapt to the demands of the educational context (e.g., teaching a student to ask for breaks when frustrated; prompting and encouraging conversational and problem-solving skills with peers); and/or
- modifying contingencies to increase the reinforcement the student gets for positive behavior and withhold or reduce reinforcement for problem behavior (e.g., providing praise and attention for discussing concerns in an appropriate fashion; requiring a student to remain at his desk until he has completed a specified number of problems or asked appropriately for a break).

Interventions are put in place and monitored through data-based systems to insure their effectiveness. In fact, the FBA is seen as incomplete until interventions have achieved significant beneficial changes in student behavior (e.g., higher rates of work completion, reductions in disruptive or aggressive behavior, improvements in peer relationships). The key features of this process are highlighted in Figure 1.

The literature is rich in detailed case examples of FBA conducted in general and special education classrooms to support students with behavioral disorders (e.g., Dunlap, Kern-Dunlap, Clarke, & Robbins, 1991; Kern et al., 1994; Stichter et al., 2004). In addition, the applied research literature contains a wealth of intervention components that can be selected for use in an individualized assessment-based support plan. The components that have been demonstrated in the empirical literature include a range of instructional strategies, antecedent manipulations, self-

FEATURES	BENCHMARKS OF QUALITY	NOTES
Goals of Intervention/ Team Process *IEP/intervention team* *Goals of intervention* *Target behaviors* *Baseline estimates* *Consensus decision-* *making*	IEP/intervention team is involved in the assessment and intervention process; this team includes key stakeholders from all relevant settings (e.g., student, teachers, parents, others involved in direct support) Broad goals of intervention are determined (e.g., improved peer relationships, greater participation in integrated activities) Specific behaviors of concern are defined in observable terms (what the student says or does that is problematic) Baseline estimates of behaviors of concern are established; these reflect objective measures (e.g., frequency, duration, intensity) Team achieves consensus regarding the target behaviors and goals of intervention	
FBA: Gathering Information (data) *Records review* *Interviews* *Observations*	Pertinent records have been reviewed (e.g., academic records, discipline referrals, child study notes, anecdotals, evaluations, interventions) Functional assessment interviews have been conducted with more than one person (e.g., student, parent, teacher, related service provider) who interact with the student within different settings and activities Direct observations have been conducted across relevant circumstances (e.g., multiple settings, over time) and by more than one observer Other assessments (curricular, ecological, etc.) are conducted, as needed, to determine broader variables affecting student behavior Tools used produce objective information regarding events preceding and following behavior, as well as ecological and motivational variables that may be affecting the student s behavior Information is collected until patterns are evident	
FBA: Hypotheses (summary statements) *Pattern analysis* *Summary statements* *(hypotheses)*	Patterns are identified from the information collected that include: 1) circumstances in which the behaviors of concern are most and least likely (e.g.., where, when, with whom) and 2) specific functions the behavior appears to serve for the student (i.e., what they get or avoid) Broader variables (e.g., curriculum, activity patterns) that may be affecting the student's behavior are identified Patterns are summarized into written summary statements or hypotheses; these statements are clear, concise, and accurate (i.e., based on data) Team consensus is achieved regarding patterns addressed in the summary statements	

FIGURE 1.   Functional Behavioral Assessment and Positive Interventions Benchmarks of Effective Practice. (*Figure continues on next page.*)

management techniques, peer support, and curricular modifications (see Clarke, Dunlap, & Stichter, 2002; Conroy & Stichter, 2003; Dunlap & Childs, 1996; Dunlap & Kern, 1996). When guided by the results of an FBA, the options available to provide effective support are numerous, and creative teams should be able to select the components that will be feasible as well as effective in supporting the student with behavioral challenges to prosper within the general education setting.

SUMMARY AND CONCLUSIONS

Trends in educational service delivery are favoring integration and support for all students, including students with behavioral disorders, within general education settings. Supporting students with behavior disorders requires provision of not only individualized strategies but also broader classroom and school-wide systems. These systems create a structure for addressing behavioral needs proactively and effectively in the various school settings in which students participate. PBS offers a framework for addressing student behavior at each of these three levels, both informally

Behavioral Intervention Plans
 	
Hypothesis-based intervention
Intervention plan components:
      environmental modifications
      replacement skills
      managing consequences
Crisis management
IEP/other support
	Intervention strategies are clearly linked to the functional assessment information (hypotheses/summary statements)
	IEP/intervention team designs a behavioral intervention plan that includes:
	      descriptions of the behaviors of concern, goals of intervention, and patterns identified through the functional assessment
	      modifications to the social or physical environment that may prevent problem behavior and/or increase the likelihood of alternative appropriate behaviors
	      specific behaviors (skills) to be taught and/or reinforced that will: a) achieve the same function as the problem behavior, and b) allow the student to cope more effectively with their circumstances
	      strategies for managing consequences so that reinforcement is: a) maximized for positive behavior, and b) minimized for problem behavior
	Goals of intervention and specific replacement skills are incorporated into the student's overall educational plan (e.g., IEP)
	If necessary to insure safety and rapid deescalation of the student's behavior, crisis management procedures and criteria for their use are determined
	Behavioral intervention plan facilitates achievement of broad goals identified by the team, and promotes the durability of behavior change
	Everyone working with the student on a regular basis is familiar with the behavioral intervention plan and agrees to implement its strategies	

Implementation, Monitoring, and Evaluation
 	
Training & resources
Action planning
Monitoring:
      implementation
      outcomes
Team communication
Plan modification
	Training and resources needed to insure implementation of the behavioral intervention plan are made available to the team
	An action plan for implementation is developed, including specific objectives/activities, persons responsible, and time lines
	Plan implementation is monitored (e.g., through reports and observations) to insure that strategies are used consistently across intervention settings
	Objective information is collected to evaluate the effectiveness of the behavioral intervention plan; this information includes:
	      decreases in problem behavior
	      increases in replacement skills and/or alternative behaviors
	      achievement of broader goals
	      durability of behavior change
	Team communicates consistently (based on time lines determined by the team) to review student progress and make necessary adjustments to the behavioral intervention plan	

FIGURE 1.   *Continued*

and when a more systematic, comprehensive response is warranted for students with the most significant behavioral-support needs.

Applications of PBS with students with behavioral disorder in general education settings are beginning to emerge and offer great promise. As PBS and other approaches are increasingly implemented to facilitate the inclusion of students with behavioral disorders, certain issues are and will continue to be on the forefront of consideration (Cheney & Muscott, 1996; Lewis, Chard, & Nelson, 1994). First, it is important to make certain that PBS is adequately suited to the full range of populations and issues for which it may be used. For example, students who have internalizing behaviors (e.g., withdrawal) may require alternative approaches and the involvement of additional support providers.

Second, the PBS process is in many ways similar to some existing procedures within schools and utilized by other disciplines (e.g., individualized education plan (IEP) process, intervention teams, disciplinary methods). To be maximally effective, PBS must offer an effective and efficient

alternative to current methods and be embedded within the systems that are in place for addressing student behavior. Fully integrating these processes may require the flexibility and creativity of professionals from a wide range of roles and disciplines (e.g., behavior analysis, school psychology, mental health).

Third, the overriding philosophies and structures of schools may need to be reassessed to adequately incorporate the proactive and responsive features of PBS and address the diversity of student needs. It may be necessary to reallocate resources and establish training and incentive systems to support sustained implementation of PBS for students with behavioral challenges (Elias, Zins, Graczyk, & Weissberg, 2003; Knoster & Kincaid, 2005).

Finally, the fidelity with which the PBS process is implemented will certainly influences its effectiveness. Since PBS incorporates multiple steps or components (see Figure 1) and different measures depending on the circumstances and level at which it is applied, integrity of the process may be a key issue in achieving the desired outcomes for students, classrooms, and schools. Insuring adequate personnel training and ongoing commitment to its assessment, planning, and implementation practices are essential. With conscientious attention to these and other issues, PBS can provide a proactive problem-solving process to effectively address the needs of all students, including—if not especially—those with behavioral disorders.

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