

Journal of Positive Behavior Interventions

<http://pbi.sagepub.com>

Functional Assessment and Wraparound as Systemic School Processes: Primary, Secondary, and Tertiary Systems Examples

Terrance M. Scott and Lucille Eber

Journal of Positive Behavior Interventions 2003; 5; 131

DOI: 10.1177/10983007030050030201

The online version of this article can be found at:
<http://pbi.sagepub.com/cgi/content/abstract/5/3/131>

Published by:

Hammill Institute on Disabilities



and



<http://www.sagepublications.com>

Additional services and information for *Journal of Positive Behavior Interventions* can be found at:

Email Alerts: <http://pbi.sagepub.com/cgi/alerts>

Subscriptions: <http://pbi.sagepub.com/subscriptions>

Reprints: <http://www.sagepub.com/journalsReprints.nav>

Permissions: <http://www.sagepub.com/journalsPermissions.nav>

Functional Assessment and Wraparound as Systemic School Processes:

Primary, Secondary, and Tertiary Systems Examples



Terrance M. Scott
University of Florida

Lucille Eber

Illinois EBD/PBS Network, Riverside, IL

Abstract: This article proposes a framework for expanding the traditional presentation of wraparound and FBA to (a) view wraparound and FBA as concepts that are inextricably linked at the core of each level of the proactive systemic process of PBS and (b) understand how wraparound and FBA are critical features of prevention as well as intervention for creating safer schools for all students.

Well-publicized recent incidents of violence have focused national attention on student behavior in public school settings. School safety, violence prevention, and management of dangerous students now garner a major spotlight in the popular press and, consequently, in the minds of the general population (Felson, 1996). However, while the most violent and publicized public school incidents have largely defied adequate prediction and prevention (American Psychological Association, 1993), models such as positive behavior support (PBS), functional behavior assessment (FBA), and wraparound have demonstrated success in decreasing problem behaviors and facilitating student success in the home, school, and community (e.g., Burns & Goldman, 1999; Robins, Collins, Witt, & Campbell, 2003; Malloy, Cheney, & Cormier, 1998; Scott, 2001; Ziglar, Taussig, & Black, 1992). Although PBS originated in the developmental disabilities field and wraparound in mental health and child welfare, both are considered to be value-based processes that require systems change to create more desirable choices and effective interventions for individuals. Functional behavior assessment is a critical component of PBS (Carr et al., 2002), as evidenced in the Individuals with Disabilities Education Act Amendments of 1997, which require an FBA under specific conditions. Historically, PBS, wraparound, and FBA have largely been conceived of as separate and distinct, although they share a common focus on individuals rather than systems. However, on closer examination of each, it is evident that PBS, especially when conceptualized through a systems framework, actually embraces the ideals and processes of both

FBA and wraparound. Further, FBA and wraparound share a set of common assumptions, features, and outcomes that link them to PBS when applied around individuals or systems. Building on the discussions in the literature that have begun to link these concepts (Carr et al., 2002; Clark & Heinemann, 1999), we submit that FBA and wraparound are necessary and related pieces of positive behavior support systems. Further, both FBA and wraparound are key components in the process of building strong, positive social behaviors across life domains and preventing the emergence of the social disruptions that poison homes, schools, and communities while inhibiting individual success.

The purpose of this article is to propose a framework for expanding the traditional conceptual and practical definitions of wraparound and FBA and to provide examples of FBA and wraparound across PBS systems. First, we provide a discussion proposing that the concepts and practices of both wraparound and FBA are linked at the core of each level of a proactive and systemic process of PBS. Second, we present case examples to promote an understanding of how wraparound and FBA are critical features of both prevention and intervention. We are hopeful that a broader understanding of how FBA and wraparound may be integrated more fully into PBS systems can be useful to field-based leaders, researchers, and those who train teachers and other systems-based practitioners to (a) promote more consistent use of effective practices; (b) improve connections and partnerships among schools, families, communities, and mental health and other human service providers;

and thereby (c) strengthen efforts to systemically create safer and more effective systems and systems integration. We begin by defining PBS, FBA, and wraparound as individual concepts and then move to an analysis of how FBA and wraparound are linked throughout PBS as applied systemically across schools to promote prosocial behavior and learning of all students.

Positive Behavior Support

In a seminal article, Carr and his colleagues (2002) described PBS as the “evolution of an applied science” that incorporates a value-based focus on quality of life with the science of applied behavior analysis. This definition of PBS focuses on increasing an individual’s choices and success in normative settings and minimizing or preventing problem behaviors that interfere with or limit quality inclusion across natural life settings. Further, they identified the key features of PBS as being (a) definition and measurement of comprehensive lifestyle outcomes, (b) conceptual foundation in behavioral science, (c) reliance on empirically validated and practical interventions, and (d) systems change to support the use of effective practice (Carr et al., 2002).

Sugai and colleagues (Sugai, Horner, et al., 2000; Sugai, Sprague, Horner, & Walker, 2000) have recently expanded the PBS framework to include a systems approach involving multiple levels of support. This expanded conceptual-

ization of PBS has been used to assist schools in promoting and encouraging prosocial behavior across all students. By defining a multileveled system of prevention and support, each more focused and intensive than the previous, PBS can be applied around typically developing students as well as those at risk for or exhibiting challenging behaviors. Each level of systems-based PBS implementation involves positive and proactive approaches for dealing with challenging behavior, identifying the predictors of failure, and providing of a full range of supports to increase the probability of socially important behavior change (Sugai, Horner, et al., 2000). As prevention is implemented at each level, the number of persons requiring further and more intense intervention decreases while the range of system and stakeholder involvement increases to better serve those persons who require more intensive intervention.

Primary prevention is implemented at the school-wide level across all students and involves key stakeholders (school personnel, students, families, community members) to develop agreed upon school-wide expectations and strategies to facilitate success for all students. Although PBS historically has been largely thought of as being focused on individuals, school-wide implementation clearly involves key features of PBS across both school-wide and individualized levels (see Table 1). When effectively implemented, primary prevention systems prevent failure and facilitate success across 80% to 90% of persons

Table 1. Key Features of Positive Behavior Support (PBS) Across Intervention Levels

Key feature of PBS	School-wide PBS process (primary)	Individual PBS process (secondary and tertiary)
Definition & measurement of lifestyle outcomes	School-wide consensus regarding expectations and the steps necessary to maximize success across all students. Monitor behavior across the school to evaluate system.	Collaborative team consensus regarding individualized expectations and the steps necessary to maximize small group or individual student success. Monitor individual or small group behavior to evaluate plan.
Foundation in behavioral science	Collect and analyze school-wide data to determine predictable relationships between the environment and behavior. Develop functional and appropriate instruction, facilitation, and consequences across all students.	Collect and analyze student data to determine predictable relationships between the environment and behavior. Develop functional and appropriate instruction, facilitation, and consequences for small groups and individual students.
Reliance on validated and practical interventions	Use explicit instruction and develop instructional routines and physical arrangements/placements that predict school-wide student success four times more often than failure. Team designs strategies unique to their school that are practical and realistic for all teachers and the maximum number of students.	Use explicit instruction and develop instructional routines and physical arrangements/placements that predict individual and small group student success four times more often than failure. Collaborative team designs strategies unique to individual student needs but that are practical and realistic for involved teachers and students.
System change to support effective practices	School uses data to make policy and procedural decisions. Proactive procedures are expected, monitored, reinforced across all school stakeholders for all students in the school.	Collaborative team uses data to make policy and procedural decisions. Proactive procedures are expected, monitored, reinforced across all involved stakeholders for an individual or small group of students.

(e.g., Scott, 2001; Sugai, Sprague, et al., 2000). The remaining 5% to 15% who continue to demonstrate problems are then targeted by more intensive and individualized secondary and tertiary systems and necessitate involvement of a wider range of stakeholders.

Secondary systems are implemented with those individuals for whom primary systems have not proven successful in facilitating desired behavioral outcomes. At this level, a school-based problem-solving team assesses needs and designs interventions with small groups (Hawken & Horner, 2002) or individuals who have been identified by system-wide data review (e.g., school records, community police reports, family reports) or stakeholder referral. The secondary intervention team shares information and tasks associated with completing assessment, resulting in the development of an individualized or small group behavior intervention plan. The team is composed of teachers, parents, the student (as appropriate), and others who have regularly interacted with the student. This array of persons and perspectives helps ensure that the plan is person-centered and based on realistic data and outcomes that are likely to be owned by those who interact the most with the student. Recognizing that individuals identified at the secondary level will be relatively large in number and will likely require multiple assessment and intervention processes prior to success, the team must engage in assessment and intervention practices that balance logic and efficiency. When effectively implemented, interventions at the secondary level are sufficient to maintain success in the majority of these identified persons yet simple and realistic enough to be accomplished within inclusive settings. However, regardless of how well primary and secondary interventions are created and implemented, a small number (1%–7%; Sugai, Sprague, et al., 2000) of persons will continue to demonstrate problem behaviors and failure.

Tertiary systems are reserved for students with complex and chronic needs for whom both primary and secondary interventions have been insufficient to facilitate success. Tertiary interventions continue to focus on integrated systems, collaboration, and the development of proactive, practical interventions linked to needs identified by the key stakeholders (i.e., student, family, teacher). The process at this level requires extremely direct, formalized, and time-consuming assessment and intervention procedures necessitating the widest range of perspectives from among the widest range of systems and stakeholders.

Sometimes it may be difficult to define specifically when an intervention moves from the secondary to the tertiary level, and the difference may seem more semantic than functional. To clarify the distinction, secondary systems involve the development of a fixed problem-solving team with invited additional stakeholders who conduct valid assessment and the intervention process while balancing simplicity and efficiency. Thus, secondary interventions may make extensive use of more indirect assessment

methods and may focus interventions on small groups with common needs or individuals who may require a single intervention. In contrast, tertiary systems involve the development of a comprehensive and unique team for each person, with more direct and complex assessment procedures necessarily involving stakeholders from across the entire range of relevant systems in the target individual's life. The development of an individualized team of representative stakeholders is crucial to completing a comprehensive assessment (e.g., social, medical, psychological) and creating plans that support the individual across the range of life domains necessary to facilitate success (e.g., safety, physical, basic needs; Eber & Nelson, 1997).

Sugai, Horner, et al. (2000) recognized the foundations of PBS as featuring behavioral science, practical interventions, lifestyle outcomes, and systems perspectives. Regardless of the level of intervention, number of students, or nature of behavior, effective PBS applied school-wide is a process of creating sustainable and team-based systems of prevention. In keeping with the practical interventions and systems change features of PBS, all process and strategy decisions are made to fit the unique systems in which they will be applied (Sugai & Horner, 1994, 1999). Because no two systems have identical age ranges, cultures, numbers, histories, or expertise, no two systems operate under identical intervention programs. Rather, all levels of school-wide application of PBS involve an assessment and intervention framework from which individualized programs are developed for the system as a whole and for those individuals in need of additional support. In this way, systems retain control of the practicality of action, assuring that collaboratively selected procedures are realistic enough to be completed. Table 2 presents examples of how systems collaborate across levels of PBS intervention.

Table 2. Examples of Systems Collaboration Across Positive Behavior Support (PBS) Levels

PBS level	Systems collaboration
Primary (80%–90%)	Stakeholders representing all systems design cross-system prevention strategies
Secondary (5%–15%)	Problem-solving team of school staff, including identified relevant intervention specialists from a wide range of systems, share tasks associated with simple assessment, analysis, and the design of intervention support plans for small groups and individual students. Includes family and other stakeholders for individual students
Tertiary (1%–7%)	Stakeholders from the full range of systems establish an individualized team to share tasks associated with comprehensive and intense assessment, analysis, and the design of highly individualized support plans involving the full range of systems

In summary, school-wide application of PBS is characterized by sustainable team-based systems of prevention that are facilitated through a process of collaboration, data collection, effective instruction, a balancing of logic and reality, and contextual specificity. We believe that FBA and wraparound are the vehicles that connect these processes to PBS. In the next section, we define FBA and wraparound by describing how each incorporates and facilitates the key processes outlined above.

Functional Assessment and Wraparound: Conceptual Definitions

In their traditional conceptualizations, FBA is likely most familiar as defined at the secondary level and wraparound at the tertiary level. Traditionally, however, neither process has been discussed as playing a role at the primary level. When properly defined, the key features of both FBA and wraparound will be more clearly identifiable across all three PBS levels.

FUNCTIONAL ASSESSMENT

As an assessment tool, FBA is supported by a long history of research across a range of settings and methodological variations (e.g., Carr & Durand, 1985; Cooper & Harding, 1993; Dunlap & Kern, 1993; Frea, Koegel, & Koegel, 1993; Touchette, MacDonald, & Langer, 1985). As a process, FBA is founded on the principle that what can be predicted can be prevented (Scott & Nelson, 1999). Functional behavior assessment has been defined as “a process for gathering information that can be used to maximize the effectiveness and efficiency of behavioral support” (O’Neill et al., 1997, p. 3). An FBA process begins with the gathering of information regarding the behavior of concern and the environmental events that both precede and follow it. This information is gathered across a range of stakeholders and may involve some combination of collaborative conversation, interview, questionnaire, and direct observation procedures—with the complexity being directly related to the unique needs of the individual (Scott et al., in press). Through a collaborative process, stakeholders in the system determine whether sufficient information exists to formulate a hypothesis as to the purpose or function of a problem behavior and the conditions under which it is likely to occur. This focus on the predictable relationships between behavior and its surrounding environment is the defining concept of FBA and is best determined via a range of systems and stakeholder perceptions.

The outcomes of a completed FBA include an operational definition of behavior, identified antecedent predictors, identified maintaining consequences, and a hypothesis statement regarding the function of behavior (Liaupsin, Scott, & Nelson, 2000; O’Neill et al., 1997). However, the only purpose for conducting an FBA is to use

that information to develop an effective behavior intervention plan (Heckaman, Conroy, Fox, & Chait, 2000; Jolivet, Scott, & Nelson, 2000). FBA is a dynamic process that continues until all goals are successfully met. As long as behavior intervention plans are ineffective, the FBA continues with increasing intensity and involvement among a widening range of systems and stakeholders. Thus, through a process of collaborative analysis of data to develop logical and realistic instruction for individuals, FBA incorporates each of the key PBS processes. The commonality across levels is a focus on prediction as a means of developing prevention (Kennedy et al., 2001). While these processes are likely familiar at the secondary and tertiary levels, there also are some shared principles at the primary level. For example, PBS at the primary level involves a collaborative discussion wherein all system stakeholders are invited to participate. Voicing perceptions garnered from their own experience, this range of stakeholders conduct a collaborative analysis of predictable problems across the school (who, what, when, where?), consider the reasons for these problems (why?), and develop agreeable (logical and realistic) instructional solutions that are directly tied to the identified contexts and shared across all stakeholders. The concept of FBA at the primary level of a systems application of PBS represents a departure from more traditional definitions. FBA has traditionally focused on assessment and intervention for individuals as the first step in an intervention process. From a systems perspective, principles of FBA also are applied to the larger environmental context and across groups of individuals. We might say that PBS at the primary level sees the larger system as an individual unit of analysis. When the system becomes the unit of analysis, the intervention process focuses on the stakeholders’ ability to accurately predict and prevent problems at the systems level. Effective intervention at the primary level reduces the number of individuals requiring intervention at the secondary level just as effective intervention at the secondary level reduces the number of students requiring intervention at the tertiary level.

WRAPAROUND

Wraparound is a philosophy of care that includes a defined planning process involving the child and family and results in a unique set of individualized supports, services, and interventions to achieve a positive set of outcomes (Burns & Goldman, 1999). The wraparound planning process has been described as a tool for implementing the “system of care” concept in mental health (Burns & Goldman, 1999). A system of care is a community-based approach to providing comprehensive, integrated services through multiple professionals and agencies, in collaboration with families (Stroul & Freidman, 1986). Wraparound incorporates and operationalizes core values of a system of care model by maintaining a child-centered approach focusing

on family, community, and cultural competence (VanDenBerg, 1998). Wraparound-based programs and initiatives that developed during the 1970s and 1980s were initially for those youth deemed too difficult (if not impossible) to serve in their home schools and communities (Kendziora, Bruns, Osher, Pacchiano, & Mejia, 2001; VanDenBerg, 1998). The wraparound approach is reported as being part of various programs serving children with emotional and behavioral needs in various service sectors across 88% of states and territories (Faw, 1998).

In examining the evidence base for wraparound as a promising practice for youth with significant and emotional challenges, Burns, Schoenwald, Burchard, Faw, and Santos (2000) operationalized wraparound's core values and the 10 essential elements that have been widely recognized in the field. These elements include a strengths-needs assessment, a child/family team with a collective vision and related goals that reflect the voice and culture of the youth and family, and measurable outcomes that are monitored on a regular basis. Also documented is the importance of system structures to lead and manage wraparound implementation across service sectors, define target populations, and ensure flexibility across disciplines (Goldman & Faw, 1998; VanDenBerg & Grealish, 1996). A summary of how these essential elements of wraparound apply to PBS is presented in Table 3.

Through qualitative cross-site analysis of wraparound implementation, Kendziora et al. (2001) provided illustrations of how the 10 essential elements are evident in wraparound plans with specific youth and families. For example "families as full and active partners" includes "voice and choice" where families are asked their preferences for services and supports and service providers routinely ask families, "How can we assist you?" (p. 134). VanDenBerg (1998) noted the similarity between wraparound and person-centered planning, a process that emerged in the developmental disabilities field and that shares common elements such as use of voice and choice, flexibility and informality, and a clear process that results in an action plan monitored by a team of persons who know the student well (Flannery et al., 2000).

Wraparound has been successfully used to improve social/behavioral and school functioning of youth and to prevent more restrictive living and school placements for students with significant emotional and behavioral disorders (EBD) in mental health, juvenile justice, child welfare, and special education (Burns et al., 2000; Eber, Osuch, Reditt, 1996; Robins et al., 2003). However, wraparound also has been applied as early intervention for students identified as at risk for EBD (Eber & Nelson, 1997), which includes the 5% to 15% of students for whom school-wide interventions have not been effective. Whether as prevention, early intervention, or for persons with the most intensive needs, wraparound involves assessing needs and developing strength-based strategies that are shared across

Table 3. Examples of Essential Elements of Wraparound in School-Wide Positive Behavior Support (PBS) Levels

Wraparound elements	School-wide examples
Community-based	Instruction and reinforcement of behaviors occurs in natural settings such as hallways, lunchrooms, classrooms, buses, playground.
Individualized, strength-based, needs-driven	Each school's action plan for school-wide PBS is unique, based on needs identified through the school-wide data.
Culturally competent	Each school-wide PBS system should include families as well as other community representatives to ensure cultural fit.
Families as full and active partners	Parents (as well as teachers and other school personnel) should be active participants in school-wide PBS planning.
Team process	A school-wide PBS planning team, including school personnel, families, and community representatives, guides PBS.
Flexibility	School-wide PBS teams must be flexible and have adequate resources to ensure real needs are addressed in a timely manner.
Balance of resources	School-wide PBS teams include a balance of teachers, support staff (i.e., custodian, bus aides, lunchroom monitors), families, and community representatives.
Unconditional commitment	If strategies aren't working, the school-wide PBS team changes the plan to identify new actions likely to achieve desired outcomes.
Collaborative process, results in plan	The school-wide PBS strategies and actions result in ongoing collaboration of the team.
Measurable outcomes monitored	School-wide actions, including data-collection strategies to ensure progress toward outcomes, are monitored and data are shared regularly with all stakeholders.

a range of stakeholders (school, community, and family). The perspectives and voice of the individual, the family, and others who have the most direct contact with the individual are considered vital in the design of supports, services, and interventions. In this manner, the wraparound process involves the larger environment in developing plans that are collaborative across systems rather than top-down and that are calculated to facilitate success in the natural environment. The concept of wraparound is similarly involved at the primary level in that everyone invested in an intervention outcome is included in the design of the intervention elements. As illustrated in Table 3, the ele-

ments of wraparound are integrated throughout the continuum of PBS. At each level, the range of stakeholders and perspectives are involved in a proactive process of developing interventions that are outcome-based and owned by those responsible for implementation.

Commonalities with person-centered planning and group action planning processes create a nice fit for wraparound within a PBS model (Kennedy et al., 2001). Further, these features support the same function-based approach to assessment and intervention as FBA (Kennedy et al., 2001). From a process standpoint, wraparound and FBA may even be seen to be names for distinct features within the same process. However, wraparound is distinct from FBA in that an effective wraparound plan increases the utility of an FBA process. That is, FBA can be done in the absence of a person-centered collaborative wraparound process, but it is unlikely that such will provide the degree of information and collaborative analysis necessary to create an effective intervention plan.

Functional Assessment and Wraparound Within PBS Systems

Prevention and systemic support are big ideas that reach across the continuum of PBS applied school-wide. However, primary systems are different from secondary and tertiary systems due to the unique focus on the school as a whole rather than on identified small groups or individual students. Still, principles and processes associated with collaborative data analysis, stakeholder choice, teaming to determine most practical outcomes, and positive prevention common to FBA and wraparound are involved across all three levels. To illustrate this, we begin with school-wide systems and describe the most universal applications of FBA and wraparound procedures. Moving from school-wide through to the most intensive tertiary concepts, case examples illustrate how FBA and wraparound focus on the need for consistent yet increasingly complex systems and procedures to ensure success in natural school and family settings.

PRIMARY (SCHOOL-WIDE) SYSTEMS

At the primary level, assessment, decision making, and strategy implementation are undertaken universally, across all adults involved with the school (e.g., teachers, classified personnel, specialists, parents; Scott & Hunter, 2001). The school begins by determining, teaching, and encouraging positive behaviors across all students and school contexts. Next, the school assesses the success of this instruction by determining when and where problem behaviors are most predictable. The assumption underlying the concept of functional assessment at this phase is that, like individuals, school problems are predictable and thus preventable. Analysis of a school's most predictable "hot spots" can be

accomplished by either looking at school data or inviting stakeholders to provide their perceptions. In either case, schools are using identification of past problems and their contexts to develop prevention plans. The wraparound approach, while different in form at this level, is illustrated by a focus on collaboration among a range of stakeholders. The underlying foundation for wraparound at all levels is the belief that the system is most effective when working collaboratively and consistently and when decisions are made by those most closely involved with the students. Community factors that affect school problems may need to be addressed as well (Turnbull, 2001).

Elements of wraparound at the school-wide level involve moving away from an "expert" or top-down model to a process involving all stakeholders (school personnel, associated service providers, and parents) in creating a positive, proactive behavior system. Stakeholders identify the unique strengths and weaknesses of the larger system and incorporate voice from the system in the development of plans. This begins with a process for involving these stakeholders in brainstorming the positive behaviors desired of all students as well as predictable student failures in the school. This process is characterized by collaboration, equal voice, and avoidance of blame, focusing on strategies that facilitate student success. Using information gained from this collaborative process, functional assessment at the school-wide level involves a systematic analysis of the environment to determine why specific contexts and conditions are predictive of problem behavior. Having identified the conditions under which problem behaviors are likely to occur and the likely reasons for those behaviors (a feature of FBA), stakeholders then discuss and come to consensus on a set of strategies aimed at preventing the identified problems (a feature of wraparound planning). These strategies likely will include some combination of clarifying, as well as teaching and rearranging student expectations (e.g., boundaries, procedures), routines (e.g., transition timing, self management), or physical arrangements (e.g., supervising, spreading, grouping students). The voices of students, parents, teachers, noncertified staff (e.g., custodians, hall monitors, lunchroom assistants), and community representatives provide social validity to the assessment process and create a higher likelihood that the strategies developed will be consistently implemented and sustained. Thus, at the school-wide level, the person-centered concept of voice and ownership (Eber, 1999; Goldman & Faw, 1998; Kendziora et al., 2001) is combined with the FBA concept of systematic, data-based decision making.

For example, Wonder Elementary School held a staff meeting to which parents and other persons having involvement with the school were invited to engage in a collaborative discussion of student goals and expectations. An initial brainstorming session began with a clarification of the desired behavior of all students within that unique

community/culture. Next, the group determined how they would communicate those expectations to the students, provide effective instruction, and encourage such positive behavior. After implementing and monitoring school-wide performance, the group identified several times, locations, and behaviors during school hours that were thought to be particularly predictive of student problems. The hallway outside the cafeteria at lunchtime was identified as one time and location predictive of problem behavior. Via direct observations and analyses of existing data, explanations were developed as to why this particular time and location tended to predict problem behavior. Direct observation revealed an extremely crowded hallway, with many students lined up waiting to enter while students leaving the cafeteria were forced to shove their way through the crowd to exit. An analysis of existing school data revealed that the majority of problems emanating from the cafeteria hallway involved altercations of pushing and shoving. It was concluded that overcrowding caused pushing and shoving that often escalated into more serious problem behaviors. As a group, the Wonder Elementary School stakeholders collaboratively discussed several possible prevention strategies before gaining consensus that opening a second, exit only, doorway was the most logical and realistic adaptation of the existing context. They determined procedures for teaching this new physical arrangement to the students and modeled expected student behavior in this setting.

Additionally, a review of classroom-based discipline data by the Wonder Elementary group suggested that student-to-student conflict resulted in the highest number of classroom disruptions and that more than 50% of students had experienced one or more office discipline referrals in a year for this problem. Teacher reports suggested that even more students than were referred had been involved in such conflicts. The stakeholder team generated and agreed upon strategies for (a) teaching student-specific skills for avoiding or managing conflict, (b) providing instruction in conflict resolution skills at the beginning of the year, (c) providing systematic practice opportunities at school, and (d) creating opportunities for additional instruction and practice through community-based youth activities at churches and community centers.

This example presents a combination of wraparound and functional assessment components that involve each of the key process variables of PBS. Just as functional assessment cannot occur without regard to the larger environment, wraparound planning must involve a range of stakeholders with knowledge of both strengths and needs across the system in order to provide a maximally efficient and contextually relevant plan.

In summary, Wonder Elementary School used school-wide office referral data and stakeholder perspectives to perform a collaborative assessment and analysis of the school. They then collaboratively brainstormed, agreed

upon, and implemented school-wide changes that were logically calculated to facilitate student success. In the future, the number of referrals from the lunch hallway and for student conflicts greatly decreased, validating the assessment and intervention processes.

SECONDARY SYSTEMS

At the secondary level of PBS, assessment, decision making, and strategy implementation are undertaken for small groups or individual students who require more than the school-wide procedures to ensure their success (typically 5%–15% of students). This requires that each school's PBS continuum include a structure for efficiently planning interventions for these students very early in a pattern of problem behaviors. Typically, schools create a team (frequently called Student Support Team or Teacher Assistance Team) composed of persons familiar with academic and behavioral assessment and intervention and who are trained in an efficient function-based problem-solving process. This typically is the level at which the traditional FBA process is initiated and where elements of wraparound can be more clearly observed, especially with individual students.

At this level, sheer numbers of identified students at risk (10%–15%) render use of the full array of FBA and wraparound procedures costly, time-consuming, and unwieldy. Thus, FBA and wraparound are necessarily more simplistic here than at the tertiary level. Small group interventions are used when students with the same behaviors seem to have common functions for their behavior (Hawken & Horner, 2002). Simple and efficient procedures are used to determine function of behavior for small groups or individual students. Elements of wraparound that can be used at this level include (a) strengths-based intervention design; (b) supports and services for other life domains such as physical or mental health; and (c) asking for family/student preference in determining outcomes, strategies, or reinforcers included in the support plan. Peers, extended family, and other relevant natural support providers can be tapped to contribute perspectives and opinions that help determine the function of problem behavior and to plan and implement intervention. A distinguishing factor at the secondary level is that the school-based problem-solving team is a static group that meets regularly to address referrals emanating from the school-wide data system or individual teacher referral. This team invites family and other selected people to join in the problem-solving process for individual students as deemed relevant and necessary on an individual basis. This structure and function is different from the tertiary level where the complexity of needs and issues necessitates that each student have his or her own uniquely constructed team that combines family, school, other relevant agency per-

sonnel, natural support providers, and others connected with the student's strengths and needs.

Although simpler in form, FBA is just as important at this level as it will be at the tertiary level. The intended outcome remains focused on predicting the relationship between behavior and its surrounding environment for purposes of developing an effective intervention. Efficient FBA procedures are those that require the least effort to gain sufficient information for the development of an effective intervention (Scott et al., in press). To maintain efficiency, the FBA process begins with simple and informal procedures such as conversations, interviews, checklists, and questionnaires targeted at the range of persons who regularly interact with the student, as well as the student him- or herself. Per the wraparound approach, the perspectives of those who have the most direct responsibility for the student and are most familiar with his or her strengths and needs can be useful sources of information for prioritizing needs (Burns et al., 2000; Eber, Sugai, Smith, & Scott, 2002; Kendziora et al., 2001). Therefore, targeted respondents may extend beyond school personnel to include family members, friends, coaches, clinicians, and other service providers. The whole of this information is analyzed to determine whether specific contexts and conditions are predictive of either appropriate or problem behavior, and what function (i.e., needs) those behaviors serve. When this level of assessment is sufficient to identify clear behavioral patterns and functions, interventions are designed to be effective in helping the student to meet his or her needs via an appropriate behavior (see Note). Those responsible for implementation (teacher, family, student) must feel sufficient ownership of and confidence with the intervention. If the student's needs appear too complex for the generic problem-solving team or if multiple perspectives and players overly complicate the process, the problem-solving team should refer the student and family to the tertiary level for the full wraparound process, including the development of a team unique to this student/family.

As with more formal methods, assessment is complete only when behavioral patterns and functions are identified and used to create effective interventions. When clear behavioral patterns or functions are not clear from this level of assessment or when interventions based on these data are not sufficiently successful, more formal and direct assessment procedures at the tertiary level are indicated. More time-consuming (and thus seemingly inefficient) formal and direct FBA procedures can yield information that is more reliable and comparable (O'Neill et al., 1997) and ultimately result in more effective (and therefore efficient) interventions when less intensive methods have failed to facilitate success.

Interventions at the secondary level may affect the school-wide plan by involving simple alterations to existing expectations, routines, or arrangements that, although

not necessary for most students, provide added support for those whose success is more tenuous. For instance, an assessment indicated that a student had been identified for five office referrals, each occurring before school, in the gym, and involving out of boundary infractions. As part of the problem-solving team's assessment of the environment it was determined that this particular time, place, and behavior was also the most predictable context for problems across all students. The team returned findings to the school-wide committee, which determined that the morning wait in the gym was in need of extra supervision, more clearly defined routines, and the addition of structured activities. Even if the student in question has more problems than the typical student, further analysis and a functional rearranging of this environment may result in improved outcomes for the school as a whole, as well as the identified student. However, many other interventions at the secondary level will be specifically related to an individual student's unique needs. Such interventions may include direct instruction, self-management, contingency contracting, and other such methodologies aimed at teaching positive behavior in the context of self-sufficiency.

Again, however, because of the sheer numbers of students identified at this level, efficiency becomes a major issue to which we must attend. The combination of FBA and wraparound elements in the assessment and intervention processes at the targeted level can contribute to efficiency and effectiveness. For instance, input and perspective from key persons within the student's environment can strengthen the assessment process, and a focus on the student's strengths can be used to develop new skills to replace problem behaviors. For example, Janet was identified by the counselor due to multiple behavior referrals for exhibiting continued problem behaviors across the school but specifically in the classroom during work times. This behavior continued despite the new physical arrangements and routines established and implemented as part of the school-wide system, which greatly decreased problems for the vast majority of students in the class. Although Janet was behind her peers in academic areas, she did not qualify for special education services, and her teacher, Mr. Burns, and her parents did not assume this to be related to any disability. The counselor contacted Janet's parents and Mr. Burns, who all decided to refer Janet to the school's Student Support Team.

To discuss Janet's case, the team sends meeting invitations and a simple behavior questionnaire to all of Janet's teachers, her volleyball coach, her parents, and a special education teacher who occasionally consulted with her teacher. All met and discussed Janet's specific strengths and weaknesses, helping to determine the function of behavior and develop appropriate and effective interventions. Next, information from the questionnaires was summarized, and the team discussed patterns of behavior and potential

functions. Analysis of the information presented led the team to determine that Janet's difficulties seemed most likely to occur during academic times and that the function appeared to be escape from academic tasks requiring 20 minutes or more of concentrated seatwork. The volleyball coach and her father provided good evidence of Janet's strengths in more physical realms and when interacting with team members whom she considered to be friends. They discussed ways for Janet to complete her work with some alternative physical arrangements and formats and with peers she viewed as friends. The team agreed to teach Janet acceptable alternatives to sitting at her desk, including using a table at the back of the room where she could move around more without distracting others and standing and working rather than sitting in a chair. Potential peer partners for specific activities were also discussed. The teachers agreed to consider modifications to some assignments, and the special education teacher, serving as a resource to the team, agreed to assist teachers with these curricular redesigns. Finally, Janet was taught to monitor and record her own behavior and to set goals for increasing the amount of time that she could spend engaging in difficult academic tasks. Over time, Janet's behavior referrals decreased dramatically, and her teachers reported much higher rates of engaged behavior during class.

In summary, elements of wraparound were combined with FBA as Janet's support plan was developed and implemented. First, the counselor identified a record of problem referrals that emanated from a range of school settings and across a range of personnel—demonstrating the use of school-wide data in assessing individual students. Next, the Student Support Team brought in select teachers and other personnel who they believed might add valuable information to assessment and intervention design. Elements of wraparound that were applied include family voice, use of strengths, flexibility (alternative physical arrangements), and use of natural support persons (volleyball coach) on the team. In terms of FBA, the team used existing information from participants and simple interview questionnaires to develop an analysis of the function of Janet's behavior. This information was then used to collaboratively develop a set of logical and realistic intervention practices that incorporated contexts across Janet's school day. This process whereby a Student Support Team of fixed membership selectively invites others to join the problem-solving process is a hallmark of the secondary intervention level. At the tertiary level, an individual student team will be a uniquely constructed group representing multiple life domains with a higher number of members connected to the student's unique strengths and needs. The student and family will have major role in the design of the team, which also will include professionals with expertise in areas of need identified collaboratively by the family and school.

TERTIARY SYSTEMS

For students with the most intense needs, strategies and procedures implemented at the school-wide and targeted levels have been insufficient to facilitate success. We can assume that these students have more complex needs and that in order to be successful, schools will need to partner with the student, family, and community in different ways. We also can assume that as behavior problems have intensified and interventions have been ineffective, relationships between key players often will be strained. Differing perspectives about issues, needs, and best interventions sometimes interfere with effective problem solving (Jolivet, Barton-Arwood, & Scott, 2001). Blame and lack of trust between different stakeholders (i.e., family, school, student) is not uncommon. All these factors can interfere with FBA and the design of effective behavior and academic interventions. This is the level at which formal wraparound planning typically has been introduced and is therefore most familiar.

Application of the wraparound process with these students starts with hearing the perspectives of key players (i.e., student, family, teacher, community agency) and engaging them in a collaborative team process. Assessment, prioritization of needs, and strength-based strategy implementation across the student's life domains occur within this team context. Natural support persons such as extended family members and friends are critical to the process and help ensure the focus on strengths. Team members are prompted that the focus is not to place blame but to generate solutions. The participation of family, friends, and support staff in the process of determining needs, obtaining information regarding specific routines, and controlling variables related to problem behavior make a plan of support both more likely to be implemented and more likely to be successful (Burns et al., 2000).

At this level, FBA operates on the assumption that students with the most chronic and complex behavior require the most comprehensive assessment. Thus, the intensity and quantity of interviews and observations increase. A wider range of additional perspectives and expertise is needed to complete an assessment that will result in a successful plan. Similarly, the intensity of an intervention plan is defined by the range and complexity of needs and life domains involved. In addition, intensity is defined by not addressing current or potential problems and the effect that may have in restricting an individual's typical school placement or routine or in creating an obvious intrusion into the student's life. In general, more complex and intense student needs tend to necessitate more focused team development and more intensive assessment and intervention procedures. This typically includes very focused and strategic team development and additional planning time.

Careful attention to similarities and differences in perspectives of student, family, teachers, and other key players is crucial because consensus and consistency are key factors for effective change at this level. Obviously, these procedures will be more time-consuming and challenging and will require more personnel expertise and time commitments. These issues create the need for a full wraparound planning process with persons representing the uniqueness of the student and family and a range of life domains.

The wraparound planning process is used to build team commitment and consensus about needs by ensuring that all relevant perspectives and information affect the design of the plan. Similar to the self-determination concept in person-centered planning (Wehmeyer, 1999), wraparound focuses on student and family voice, choice, and ownership (Kendziora et al., 2001) that may require changing the surrounding environment to foster lasting change (Burns et al., 2000). The needs of key adults (i.e., family, teachers) are addressed, as well as the needs of the student. In a cohesive team context, effective interventions are more likely to emerge. Examining past efforts and gathering perspectives about what has and has not worked in the past are critical features of the process. This typically is done through individual conversations with the student and family and those who have a current or past role with the student. Student and family voices are heard without judgment or blame as they need to be assured that their needs and perspectives will be addressed through the wraparound team process. FBA is directly linked with the wraparound process at this level. For example, an intensive FBA process typically uses information from previous interventions as a first step in planning more intensive and formalized assessment. Information about previous behavior change efforts can be obtained during initial conversations and at wraparound team meetings. Skilled team facilitators can gather important behavioral data while engaging key players in a team process. During these initial conversations and at team meetings, it may be determined that more comprehensive behavioral assessment is needed. More intensive assessment procedures typically include plotting behavior by time (i.e., scatterplots), direct observing with scripting, and systematically arranging environmental variables to observe the differential effects on behavior (Scott et al., in press). With all FBA methods, assessment is complete only when behavioral patterns and functions are identified and used to create effective interventions. Key people (student, family, teacher) having trust and ownership in their team and investment in the problem-solving process create a context for efficient and effective FBA that can result in successful interventions.

The development of a comprehensive wraparound team often requires that professionals step back and take the time to build (or rebuild) trust and engage the family, student, teacher, and others in identifying and prioritizing needs before designing interventions (Kendziora et al.,

2001). Although detailed FBA procedures are well defined and exemplified in the professional literature (e.g., Lewis & Sugai, 1996; Meyer, 1999; Umbreit, 1995), they are time-consuming and sometimes their complex nature renders them unrealistic for use in public school settings for all but those students with the most intense needs (Conroy, Fox, Crain, Jenkins, & Belcher, 1996). These most intensive procedures yield plans that address specific and unique needs, involve natural support persons as well as professionals and may be implemented in the school, community, or across a range of possible placement options (Kennedy et al., 2001; Turnbull & Turnbull, 1996). The wraparound process involves collaboration among the school, family, and all relevant community agencies and systems to develop an intervention plan to meet the intensive and individualized needs of the student. Supports for the family and teachers may be needed as well (Eber & Nelson, 1997). The comprehensive plan may need to address family support, access to community networks, learning strategies, improved academic outcomes, and effective behavioral interventions. Even though schools may have asked for help from the family or specific community agents in the past, wraparound planning brings all parties together in a uniquely collaborative process, allowing all to share perspectives, process all relevant information, collectively design interventions and anticipate and address specific safety needs (Kendziora et al., 2001). Systems of PBS encourage schools to establish and nurture these collaborative links as part of their regular operating procedure, as opposed to calling only in a time of crisis.

For example, Danny is a first grader who came to the attention of the school's Student Support Team early in kindergarten due to aggressive behavior in the classroom that had resulted in several office referrals. He would disrupt classroom activities, which often escalated into hitting and pushing other children. Danny was referred to the school's problem-solving team (known as the Student Support Team), which inquired as to whether Danny's behavior was different from other children in the classroom and whether expected behavior had been sufficiently taught, encouraged, and consistently consequated. Being comfortable that sufficient classroom-wide procedures were in place, the team gathered interview and anecdotal data regarding Danny's typical behaviors in the classroom. Collaboratively, the team used the data they gathered to hypothesize that the function of Danny's behavior was to gain attention from both peers and adults. As a first step in developing an effective plan for Danny, the team based their interventions on meeting his need for attention by planning for individualized prompting and reinforcement of positive attention-seeking behavior. The team also collaborated across the school to plan and provide more attention and support through a special education teacher who included him in her class of 15 special learners for half a day. In addition, observing that the afternoons were es-

pecially difficult for Danny, the team collaborated with the administration and family to shorten his school day. However, despite these initial efforts and effective collaborative practices, the behavior still did not improve, and consultation from outside the school was sought as a first step in the tertiary system.

As part of a more comprehensive assessment effort, a medical examination was scheduled. After consulting with a medical doctor, the team, in collaboration with Danny's parents, who are both disabled (his mother came to a school meeting with a portable oxygen machine), agreed to place him on medication. However, his parents and his teacher continued to report little or no improvement. At the same time, communication between home and school seemed to be deteriorating as adult frustration increased.

Recognizing the need for an even more complex and collaborative approach, the principal assigned the school social worker to begin facilitation of a wraparound team. The process began with individual conversations with the family and teacher to gain an understanding of their perspectives while gathering additional information about the context and conditions surrounding the problem behavior. During the conversations, Danny's mom expressed frustration with the escalating behavior, the early dismissal strategy, and her feeling that it was not her job to manage his school behavior. More serious behavior, including attempts to hurt himself and others and small animal torture, was shared by his mother. Although she clearly wanted help, Danny's mother expressed serious concern with the notion of respite that had been mentioned at the mental health center when his medication was prescribed. Danny's teacher expressed extreme frustration in getting help with a plan for managing his behavior and reported that his current behavior plan did not seem to be working. She also expressed her growing concerns about the safety of other students.

Following these conversations, a wraparound team was convened involving Danny's parents, his teacher, the social worker, a clinician from the mental health center who was experienced with young children with aggressive behavior, and the school psychologist. In addition, Danny's aunt, an older cousin, and the pastor from his church joined the team. The priorities of the first meeting were defined as (a) achieving consensus on needs, (b) committing to work as a team to make positive change for Danny, and (c) developing strategies to address the highest priority needs. Current and past attempts to help and support Danny were recognized, as were his individual strengths. The church and extended family connections, along with the parent's willingness to seek assistance for Danny beyond the school, were seen as strengths. There was consensus about two priority needs: (a) the families' need for in-home support and (b) the school's need to safely manage Danny's behavior. The pastor and Danny's aunt agreed to work out a schedule for in-home support with Danny's

mother, using extended family and congregation members with whom she was familiar and comfortable having in her home. The clinician from mental health described the expected effects of the current medication and time frames for measuring its effectiveness. Team members agreed that although the medication might be helpful in helping him remain calm and focused, more information was needed regarding how his behavior was affected by the environment (i.e., FBA) to determine the most effective behavior change strategies. The school psychologist was scheduled to complete observations and interviews over the next 2 days to more specifically pinpoint the settings and conditions related to the problem behavior, and a meeting to complete the FBA was scheduled for the next week. The team agreed that using consistent reinforcement strategies and common language with Danny about expected behaviors at home and school would be important aspects of the interventions determined by the FBA process. Because his family shared that he really looked up to his older cousin, the team agreed to have the cousin involved in the behavior support plan. The social worker agreed to facilitate a clear communication plan among the teacher, the cousin, and the mom. An interim safety plan to manage the effects of behavior at home and in school was devised as the team recognized that development and implementation of a behavior support plan would take about a week. The teacher reported relief that action was being taken in a calm and systematic manner. Danny's mother stated that this was the first time she did not feel personally blamed or expected to "fix" Danny's behavior for the school.

In summary, this example demonstrates how tertiary systems are built on the assessment and intervention outcomes undertaken at the primary and secondary levels. The notion of a continuum is captured when considering that the assessment and intervention processes described at the tertiary level in this example are simply more complex and intense versions of the same processes applied at the secondary level. Thus, both FBA and wraparound involve collaboration and a focus on predictable patterns of behavior, although the method of obtaining information and developing interventions became complex and time-consuming only after less complex methods had proven unsuccessful. Further, as interventions become more complex, more individuals are involved with fewer students. These are the students that require the most complex and intensive intervention plans to facilitate success. In this sense, FBA and wraparound in the context of PBS might be thought of as a screening and treatment system that creates a triage model for distribution of support services and personnel.

Conclusions

Beneath much of the work to date on early intervention and prevention lies a presumption: To the extent that we

can predict student failure, we also have the information necessary to prevent student failure. Unwinding the complex array of home, community, personal, and school factors associated with any individual student presents a formidable challenge. However, PBS meets these challenges via collaborative efforts involving a variety of stakeholders and applied across a continuum, depending on the assessed need of individuals. In this manner, resources are used in the most efficient manner to provide the level of intervention necessary to facilitate success across all students.

While school-wide application of PBS likely will not involve the same expectations, curricula, strategies, or even stakeholders in any two schools, common features and procedures cut across all levels and all PBS models. Principles of wraparound and FBA are both present and linked at every level of PBS, providing consistent collaboration and analyses across settings, time, and individuals. While each process traditionally has been conceived of in narrow and often divergent terms, the underlying concepts are closely related. By definition, FBA is used to determine the ways in which the environment predicts and maintains behavior, analyzing the relationships between behavior and the endless array of persons, contexts, and conditions. Similarly, wraparound uses a variety of perspectives to develop plans that are inclusive of all a student's life domains, recognizing individuality in both strengths and needs. The specific practices change in response to the intensity of the problem and the uniqueness of the individuals involved, but the underlying concepts remain constant. To most succinctly define the relationship, FBA is best conducted according to a collaborative effort among interested parties. Thus, systems of PBS rely upon FBA and wraparound to provide the consistency of best practice across levels.

In the future, research must better address the necessary and sufficient procedures for both FBA and wraparound under a variety of student, behavior, and PBS continuum circumstances. Although the concepts and philosophy underlying this process are sound, the intricacies and subtleties prescribing specific procedures are, at this writing, still more intuitively logical than empirically validated. Systems of PBS must be systematically manipulated and studied with the goal of creating a prescriptive model to guide implementation.

ABOUT THE AUTHORS

Terrance M. Scott, PhD, is an assistant professor in the Department of Special Education at the University of Florida. His current interests include positive behavior support, functional assessment, and effective intervention strategies for students with challenging behavior. **Lucille Eber**, EdD, is currently the statewide coordinator of the Illinois Emotional and Behavioral Disabilities (EBD) and Positive Behavior Interventions and Supports (PBIS) Network. Areas of interest and expertise include program development, evaluation,

training, and technical assistance on systemic application of wraparound and PBIS in schools. Address: Terrance M. Scott, Dept. of Special Education, G315 Norman Hall, Gainesville, FL 32611-7050; e-mail: tscott@coe.ufl.edu

NOTE

Whether the data collected are sufficient to determine the predictability or function of behavior is a matter of some complexity and beyond the scope of this article. Readers are directed to O'Neill et al. (1997) for a more detailed description of FBA procedures and decision making.

AUTHORS' NOTES

1. This article was supported, in part, by the OSEP Center on Positive Behavioral Interventions and Supports, which is supported by a grant from the Office of Special Education Programs, with additional funding from the Safe and Drug Free Schools Program, U.S. Department of Education (No. H326S980003). Opinions expressed herein are those of the authors and do not necessarily reflect the position of the U.S. Department of Education, and such endorsement should not be inferred.
2. The authors wish to express their appreciation to Dr. Rob Horner, who provided feedback on an earlier version of this article.

REFERENCES

- American Psychological Association. (1993). *Violence and youth: Psychology's response*. Washington, DC: Author.
- Burns, B. J., & Goldman, S. K. (1999). Promising practices in wraparound for children with serious emotional disturbance and their families: Systems of care. In B. J. Burns & S. K. Goldman (Eds.), *Promising practices in children's mental health, 1998 Series: Vol. IV*. Washington, DC: American Institute for Research, Center for Effective Collaboration and Practice.
- Burns, B. J., Schoenwald, S. K., Burchard, J. D., Faw, L., & Santos, A. B. (2000). Comprehensive community-based interventions for youth with severe emotional disorders: Multisystemic therapy and the wraparound process. *Journal of Child and Family Studies, 9*, 283-314.
- Carr, E. G., Dunlap, G., Horner, R. H., Koegel, R. L., Turnbull, A. P., Sailor, W., et al. (2002). Positive behavior support: Evolution of an applied science. *Journal of Positive Behavior Interventions, 4*, 4-16.
- Carr, E. G., & Durand, V. M. (1985). Reducing behavior problems through functional communication training. *Journal of Applied Behavior Analysis, 18*, 111-126.
- Clark, H. B., & Heinemann, M. (1999). Comparing the wraparound process to positive behavior support: What can we learn? *Journal of Positive Behavior Interventions, 1*, 183-186.
- Conroy, M., Fox, J., Crain, L., Jenkins, A., & Belcher, K. (1996). Evaluating the social and ecological validity of analog assessment procedures for challenging behaviors in young children. *Education and Treatment of Children, 19*, 233-256.
- Cooper, L. J., & Harding, J. (1993). Extending functional analysis procedures to outpatient and classroom settings for children with mild disabilities. In J. Reichle & D. P. Wacker (Eds.), *Communicative alternatives to challenging behavior: Integrating functional assessments and intervention strategies* (pp. 41-62). Baltimore: Brookes.
- Dunlap, G., & Kern, L. (1993). Assessment and intervention for children within the instructional curriculum. In J. Reichle & D. Wacker (Eds.),

- Communicative approaches to the management of challenging behavior* (pp. 177–203). Baltimore: Brookes.
- Eber, L. (1999). Family voice, teacher voice: finding common ground through the wraparound process. *Claiming Children*. Alexandria, VA: The Federation of Families for Children's Mental Health.
- Eber, L., & Nelson, C. M. (1997). Integrating services for students with emotional and behavioral needs through school-based wraparound planning. *American Journal of Orthopsychiatry*, 67, 385–395.
- Eber, L., Osuch, R., & Redditt, C. A. (1996). School-based applications of the wraparound process: Early results on service provision and student outcomes. *Journal of Child and Family Studies*, 5, 83–99.
- Eber, L., Sugai, G., Smith, C., & Scott, T. M. (2002). Wraparound and positive behavioral interventions and supports in the schools. *Journal of Emotional and Behavioral Disorders*, 10, 171–180.
- Faw, L. (1998). The state wraparound survey. In B. J. Burn & S. K. Goldman (Eds.), *Promising practices in wraparound for children with serious emotional disturbance and their families. Systems of care: Promising practices in children's mental health, 1998 Series: Vol. IV* (pp. 61–65). Washington, DC: American Institute for Research, Center for Effective Collaboration and Practice.
- Felson, R. B. (1996). Mass media effects on violent behavior. *Annual Review of Sociology*, 22, 103–128.
- Flannery, K. B., Newton, S., Horner, R. H., Slovic, R., Blumberg, R., & Ard, W. R. (2000). The impact of person centered planning on the content and organization of individual supports. *Career Development for Exceptional Individuals*, 23, 123–137.
- Frea, W. D., Koegel, L. K., & Koegel, R. L. (1993). *Understanding why problem behaviors occur: A guide for assisting parents in assessing causes of behavior and designing treatment plans*. Santa Barbara: University of California.
- Goldman, S., & Faw, L. (1998). Three wraparound models as promising approaches: LaGrange, IL. In B. J. Burn & S. K. Goldman (Eds.), *Systems of care, promising practices in children's mental health: Promising practices in wraparound for children with serious emotional disturbance and their families* (pp. 34–60). Washington, DC: American Institute for Research, Center for Effective Collaboration and Practice.
- Hawken, L. S., & Horner, R. H. (2002). *Evaluation of a targeted group intervention within a school-wide system of behavior support*. Manuscript submitted for publication.
- Heckaman, K., Conroy, M., Fox, J., & Chait, A. (2000). Functional assessment-based intervention research on students with or at risk for emotional and behavioral disorders in school settings. *Behavioral Disorders*, 25, 196–210.
- Jolivette, K., Barton-Arwood, S., & Scott, T. M. (2001). Functional behavior assessment as a collaborative process among professionals. *Education and Treatment of Children*, 24, 298–313.
- Jolivette, K., Scott, T. M., & Nelson, C. M. (2000). The link between functional behavior assessments (FBAs) and behavioral intervention plans (BIPs). *ERIC Digest, E592, EDO-00-1*.
- Kendziora, K., Bruns, E., Osher, D., Pacchiano, D., & Mejia, B. (2001). *Systems of care promising practices in children's mental health, 2001 series, Volume 1*. Washington, DC: American Institute for Research, Center for Effective Collaboration and Practice.
- Kennedy, C. H., Long, T., Jolivette, K., Cox, J., Tang, J., & Thompson, T. (2001). Facilitating general education participation for students with behavior problems by linking positive behavior supports and person-centered planning. *Journal of Emotional and Behavioral Disorders*, 9, 161–171.
- Lewis, T. J., & Sugai, G. (1996). Functional assessment of problem behavior: A pilot investigation of the comparative and interactive effects of teacher and peer social attention on students in general education settings. *School Psychology Quarterly*, 11, 1–19.
- Liaupsin, C. J., Scott, T. M., & Nelson, C. M. (2000). *Functional behavioral assessment: An interactive training manual* (2nd ed.). Longmont, CO: Sopris West.
- Malloy, J., Cheney, D., & Cormier, G. (1998). Interagency collaboration and the transition to adulthood for students with emotional or behavioral disabilities. *Education and Treatment of Children*, 1, 303–320.
- Meyer, K. A. (1999). Functional analysis and treatment of problem behavior exhibited by elementary school children. *Journal of Applied Behavior Analysis*, 32, 229–232.
- O'Neill, R. E., Horner, R. W., Albin, R. W., Sprague, J. R., Storey, K., & Newton, J. S. (1997). *Functional assessment and program development for problem behavior: A practical handbook* (2nd ed.). Pacific Grove, CA: Brooks/Cole.
- Robbins, V., Collins, K., Witt, T., & Campbell, J. (2003). Building bridges of support in Eastern Kentucky: Promoting partnerships among families, educators, and mental health professionals. In C. Newman, C. Liberton, K. Kutash, & R. Friedman (Eds.), *The 14th annual research conference proceedings, A system of care for children's mental health: Expanding the research base*. Tampa, FL: University of South Florida, The Louis de la Parte Florida Mental Health Institute, Research and Training Center for Children's Mental Health.
- Scott, T. M. (2001). A school-wide example of positive behavioral support. *Journal of Positive Behavior Interventions*, 3, 88–94.
- Scott, T. M., Bucalos, A., Nelson, C. M., Liaupsin, C., Jolivette, K., & Deshea, L. (in press). Using functional assessment in general education settings: Making a case for effectiveness and efficiency. *Behavior Disorders*.
- Scott, T. M., & Hunter, J. (2001). Initiating school-wide support systems: An administrator's guide to the process. *Beyond Behavior*, 11, 13–15.
- Scott, T. M., & Nelson, C. M. (1999). Using functional assessment with challenging behaviors: Practical school applications. *Journal of Positive Behavior Interventions*, 1, 242–251.
- Stroul, B. A., & Freidman, R. (1986). *A system of care for severely emotionally disturbed children and youth*. Washington, DC: Child and Adolescent Service System Program Technical Assistance Center.
- Sugai, G., & Horner, R. H. (1994). Including students with severe behavior problems in general education settings: Assumptions, challenges, and solutions. In J. Marr, G. Sugai, & G. Tindal (Eds.), *The Oregon conference monograph: Vol. 6* (pp. 102–120). Eugene: University of Oregon.
- Sugai, G., & Horner, R. H. (1999). Discipline and behavioral support: Practices, pitfalls, & promises. *Effective School Practices*, 17, 10–22.
- Sugai, G., Horner, R. H., Dunlap, G., Hieneman, M., Lewis, T. J., Nelson, C. M., et al. (2000). Applying positive behavior support and functional assessment in schools. *Journal of Positive Behavior Interventions*, 2, 131–143.
- Sugai, G., Sprague, J. R., Horner, R. H., & Walker, H. M. (2000). Preventing school violence: The use of office referrals to assess and monitor school-wide discipline interventions. *Journal of Emotional and Behavioral Disorders*, 8, 94–101.
- Touchette, P. E., MacDonald, R. E., & Langer, S. N. (1985). A scatter plot for identifying stimulus control of problem behavior. *Journal of Applied Behavior Analysis*, 18, 343–351.
- Turnbull, A. (2001, May). *Meeting the challenges of poverty in urban schools: Phase 2 of school-wide PBS*. A presentation at Building Comprehensive School-Wide Behavioral Supports, National Rehabilitation Research & Training Center, Indianapolis, IN.
- Turnbull, A., & Turnbull, H. R. (1996). Group action planning as a strategy for providing comprehensive family support. In L. K. Koegel, R. L. Koegel, & G. Dunlap (Eds.), *Positive behavioral support: Including people with difficult behavior in the community* (pp. 99–114). Baltimore: Brookes.
- Umbreit, J. (1995). Functional assessment and intervention in a regular classroom setting for the disruptive behavior of a student with attention deficit hyperactivity disorder. *Behavioral Disorders*, 20, 267–278.
- VanDenBerg, J. (1998). History of the wraparound process. In B. J. Burn & S. K. Goldman (Eds.), *Promising practices in wraparound for children with serious emotional disturbance and their families: Vol. IV* (pp. 1–8). Washington, DC: American Institute for Research, Center for Effective Collaboration and Practice.
- VanDenBerg, J., & Grealish, M. (1996). Individualized services and supports through the wraparound process: Philosophy and procedures. *Journal of Child and Family Studies*, 5, 7–21.
- Wehmeyer, M. L. (1999). A functional model of self-determination: Describing development and implementing instruction. *Focus on Autism and Other Developmental Disabilities*, 14, 53–61.
- Ziglar, E., Taussig, C., & Black, K. (1992). Early childhood intervention: A promising preventative for juvenile delinquency. *American Psychologist*, 47, 997–1006.