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Using Systematic Screening Data to Assess Risk and Identify Students for Targeted Supports: Illustrations Across the K–12 Continuum

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Abstract

In this article the authors provide practitioners and researchers with three illustrations of how to use systematic screening tools within the context of three-tiered models of support to (a) measure the overall level of risk present in a school over time and (b) identify students who may require more targeted supports in the form of secondary and tertiary prevention efforts. Specifically, the authors explore data-driven approaches to interpreting systematic screening data collected as part of regular school practices at the high, middle, and elementary school levels. In each illustration they describe the student population, the procedures used by each school to construct the three-tiered model, the primary prevention plan developed, the systematic screening tool incorporated into regular school practices, and the data analysis plan. Furthermore, the authors offer findings of treatment outcome studies that demonstrate how student risk shifts over time following program implementation. They also include hypothetical and actual illustrations of how to use data from a variety of screening tools to identify students for secondary and tertiary prevention efforts.

Keywords

systematic screenings, three-tiered model of prevention, emotional or behavioral disorders

During the past 10 years, many school systems have embraced three-tiered models of prevention to provide graduated supports that increase in intensity and focus to meet the multiple needs of an increasingly diverse student population (Lane, 2007). These models contain three levels of prevention: (a) primary preventions designed to prevent harm from occurring, (b) secondary preventions to reverse harm by supporting students who do not respond to primary efforts, and (c) tertiary preventions to reduce harm by supporting students exposed to multiple risk factors who may have not responded to primary or secondary efforts (Severson & Walker, 2002; Sugai & Horner, 2002). Response to intervention (RtI) and positive behavior support (PBS) are two such examples, with some schools and research teams now supporting integrated models incorporating features from both RtI and PBS paradigms (Lane, Kalberg, & Menzies, 2009; Sugai, 2008).

These multilevel models offer benefits for the entire student body by providing a data-based approach to identifying and supporting students based on individual needs. We feel that such models offer strong benefits for students with or at risk for emotional or behavior disorders (EBDs) by

providing a system that both prevents the development of behaviors that may lead to EBDs and offers more focused supports for students with EBDs (Lane, 2007). This is critical given that these students tend to experience less success both in (e.g., retained in grade, course failure, impaired relationships) and out (e.g., unemployment, need for mental health services) of the school setting relative to the general education population as well as students with high-incidence disabilities (e.g., specific learning disabilities; Bullis & Yovanoff, 2006; Carter, Lane, Pierson, & Glaeser, 2006; Lane, Carter, Pierson, & Glaeser, 2006; Wagner, Newman, Cameto, Levine, & Garza, 2006; Walker, Ramsey, & Gresham, 2004).

Although three-tiered models have great potential, one current limitation of the PBS model is how to accurately and systematically identify students whose behavioral

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performance suggests that secondary (e.g., social skills and anger management groups) and tertiary (e.g., functional assessment-based interventions) supports are warranted. Although RtI models utilize curriculum-based measures (e.g., *AIMSweb* and *Dynamic Indicators of Basic Early Literacy Skills* [DIBELS]; Kaminski & Good, 1996), parallel instruments do not yet exist to monitor behavioral performance. This is unfortunate as the primary tool for monitoring behavioral performance—office discipline referral (ODR) data—suffers from poor reliability if the system used to collect these data is not implemented with strong procedural fidelity.

One potential solution to this problem is to incorporate systematic screening tools to monitor the level of risk evident in a given school as well as to identify students whose behavior patterns suggest nonresponsiveness to the primary prevention plan (Lane, Kalberg, Bruhn, Mahoney, & Driscoll, 2008). Fortunately, a number of instruments are now available for such purposes: the *Systematic Screening for Behavior Disorders* (SSBD; Walker & Severson, 1992), the *Student Risk Screening Scale* (SRSS; Drummond, 1994), the *Strengths and Difficulties Questionnaire* (SDQ; Goodman, 1997), and the *Behavioral and Emotional Rating Scale* (BERS; Epstein & Sharma, 1998). Although a detailed review of each screener is beyond the scope of this article, these instruments have strong psychometric properties (e.g., internal consistency, test-retest stability, convergent validity, and predictive validity). Consequently, practitioners, especially at the elementary level, can be confident in using these systematic screenings as part of regular school practices within three-tiered models of prevention to identify students who may warrant additional, more focused prevention efforts.

Purpose

The intent of this article is to provide practitioners and researchers with practical illustrations of how to use three of these screening tools when implementing a three-tiered model. Specifically, we explore data-driven approaches to interpreting systematic screening data collected as part of regular school practices at the high school (Phi High School; PHS), middle school (Beta Middle School; BMS), and elementary school (Sigma Elementary School; SES) levels to (a) measure the overall level of risk present in a school over time and (b) identify students who may require more targeted supports in the form of secondary and tertiary prevention efforts.

In each of the illustrations, we describe the student population, the procedures used by each school to construct the three-tiered model, the primary prevention plan developed, the systematic screening tool incorporated into regular school practices, and the data analysis plan. We provide examples

from research findings that demonstrate how student risk shifted over time following program implementation. Also included are hypothetical and actual illustrations of how to use data from various screening tools to identify students for secondary and tertiary prevention efforts.

An Illustration at the High School Level: Using the SRSS

The first illustration is from PHS, which was located in a rural area of middle Tennessee. Participants were 359 (53.26%) males and 315 (46.74%) females. The school employed 45 teachers who taught students in 9th through 12th grades, the majority of whom were Caucasian ($n = 638$, 94.66%). PHS had an economic disadvantage percentage of 17.2%, which exceeded the district mean (see Table 1). Furthermore, 126 students (18.69%) received special education services at PHS.

Procedures for Designing, Implementing, and Evaluating the Primary Plan

PHS identified an administrator, a general educator, a special educator, a counselor, and a parent to participate in a year-long training in schoolwide positive behavior support (SW-PBS). This took place before the 1st year of program implementation. The program was part of a federally funded project examining PBS at the high school level during the 2003 to 2004 academic year. The training series consisted of five sessions: two full-day and three 2-hr sessions held after school. During this time the team designed a three-tiered model of prevention, heavily focusing on the SW-PBS plan (for a detailed description of the primary plan, see Lane, Wehby, Robertson, & Rogers, 2007). In brief, the SW-PBS plan included three components: five clearly stated behavioral expectations, procedures for teaching the expectations, and procedures for reinforcing expectations. In addition, PHS incorporated a districtwide program, Character Under Construction, into its SW-PBS plan. This was a district-developed social skills program to teach all students in the county one new character trait (e.g., courage) each month of the school year. These behavioral expectations and character traits were taught using a range of procedures (e.g., assemblies, announcements, posters, modeling). PBS tickets paired with verbal praise were distributed to students by adults (faculty, staff, and volunteers) in the building contingent on the student demonstrating one of the behavioral expectations. Students put these tickets in secure boxes located throughout the school to enter weekly and monthly drawings to win prizes (e.g., prom package, sporting event tickets, preferred parking passes, food certificate, homework pass, and yearbook discount).

Table 1. School Characteristics

Data Source	Variable and Level	School					
		Phi High		Beta Middle		Sigma Elementary	
		<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Schools	Locale	Urban fringe		Rural, inside CBSA		Suburban, large	
	Economically disadvantaged		17.2		30.8		27.6
Teachers	Employed	45		38		37	
Students	Enrollment	674		500		482	
	Special education	126	18.69	103	20.60	37	7.68
	Gender						
	Male	359	53.26	260	52.00	263	54.56
	Female	315	46.74	240	48.00	219	45.44
	Ethnicity						
	Caucasian	638	94.66	488	97.60	346	72.08
	AA	7	1.04	4	0.80	112	23.33
	Hispanic	10	1.48	7	1.40	4	0.83
	Asian	0	0.00	1	0.20	18	3.75
	Grade level						
	Kindergarten					98	20.33
	First					95	19.71
	Second					107	22.20
	Third					87	18.05
	Fourth					95	19.71
	Six			29.80	149		
	Seventh			34.40	172		
	Eighth			35.80	179		
	Ninth	171	25.37				
	Tenth	197	29.23				
	Eleventh	166	24.63				
	Twelfth	140	20.77				

Note: CBSA = Core Based Statistical Area; AA = African American.

The assessment plan designed by the PBS team included a range of measures (e.g., ODRs, attendance, treatment integrity, social validity, etc.) including two behavior screening tools administered by the PBS team: the SRSS (2004–2005 and 2005–2006 academic years) and the SDQ (2005–2006 academic year). Both systematic screening tools were completed at three time points: approximately 6 weeks into the school year (fall), before winter break (winter), and 6 weeks prior to the end of the academic year (spring). Students were rated by two teachers with the goal of obtaining more than one teacher's views on students' behavior. The PBS team felt this was necessary because high school teachers often spend just one instructional period with each student, providing limited opportunities for student–teacher interactions. Therefore, the PBS team decided to have second-period and fifth-period teachers rate their students on the SRSS during the 2004–2005 (second period $n = 32$, fifth period $n = 36$) and 2005–2006 (second period $n = 30$, fifth period $n = 34$) academic years. These two periods were selected as the PBS

team thought they provided two different perspectives: (a) one from teachers who taught a course that yielded a grade (hereafter referred to as instructional rater) and (b) one from teachers who spent time with students in a less structured, noninstructional time dedicated for study hall–type activities that did not yield a grade (hereafter referred to as the noninstructional rater). In this way, the ratings were secured from teachers who observed students in different task-demand situations, providing a broader sampling of behavior than if one teacher evaluated student decorum (Kazdin, 1985; for a more detailed discussion on the types of raters selected, see Lane, Kalberg, Parks, & Carter, 2008).

During the 1st year of implementation, the PBS team used the SRSS as a screening tool to provide information on student progress by monitoring the overall level of risk evident in the school. Also, these data were used to inform secondary and tertiary intervention efforts. During the 2nd year of program implementation, the PBS team elected to add the SDQ to obtain more precise information regarding specific

types of concerns (e.g., hyperactivity, peer problems) as well as areas of strength (description to follow). However, the SDQ was discontinued after one administration (fall 2005) because of teachers' concerns regarding the time required to complete the SDQ. Therefore, in this article we focus on how the SRSS was used at the high school level.

The PBS team met with the faculty during a regularly scheduled faculty meeting prior to each administration to explain the purpose of both screening tools, explain how to complete the measures, and field questions. During each administration, the PBS team distributed the SRSS forms to be completed by the teachers and picked them up on completion. If a teacher was absent, the screening tool, directions, and contact information were placed in his or her mailbox to be completed within one week. Data were entered into an Excel database that contained a formula to compute the total score for the SRSS. Reliability of data entry was computed for 25% of protocols; reliability of data entry ranged from 99.0% to 99.9% across the six administrations.

Screening Measures

The SRSS is a no-cost, brief, systematic screening tool originally designed to identify K–6 elementary-age students who are at risk for antisocial behavior. The one-page instrument provides a place to list all students in the first column, with seven items, (a) steals, (b) lies, cheats, sneaks, (c) behavior problems, (d) peer rejection, (e) low academic achievement, (f) negative attitude, and (g) aggressive behavior, listed across the top row of successive columns. Instructional and noninstructional raters evaluated each student on their roster on each item using a 4-point Likert-type scale (*never* = 0, *occasionally* = 1, *sometimes* = 2, *frequently* = 3), taking approximately 15 min to evaluate an entire class. Total scores range from 0 to 21, with higher scores indicating higher levels of risk. Total scores yield three levels of risk, low (0–3), moderate (4–8), and high (9–21), with cutoff scores established by the developer of the instrument (Drummond, 1994).

The SRSS is a feasible, psychometrically sound instrument used to identify elementary-aged students who exhibit behaviors predictive of antisocial behavior patterns (Drummond, Eddy, & Reid, 1998a, 1998b). Evidence from validity studies indicates that the SRSS total score and the *Child Behavior Checklist* (CBCL) Aggressive Behavior subscale (Achenbach, 1991) significantly correlate ($r = 0.79$; Walker et al., 2004). Also, SRSS total scores predicted negative behavior and academic outcomes up to 10 years (Drummond, Eddy, Reid, & Bank, 1994).

A series of analyses were conducted on the current sample to examine the reliability and validity of the SRSS for use with high school (for detailed findings for initial evidence for score reliability and validity at the high school level, see Lane, Kalberg, Parks, et al., 2008). Results demonstrated high

internal consistency (.78–.86), test–retest stability (.22–.71 for instructional raters, .30–.73 for noninstructional raters), interrater reliability ($p < .0001$), and convergent validity with the SDQ (total score: instructional raters $r = .47$, noninstructional raters $r = .74$). Predictive validity was established over two academic years, with students at low risk for antisocial behavior differentiated on behavioral (ODR) and academic variables (grade point average; GPA) from students with moderate and high levels of risk according to the SRSS.

Experimental Design and Statistical Analysis

PHS participated in a longitudinal study of PBS conducted using a multiple baseline across-schools design, with high schools implementing the primary prevention program in successive years (Kennedy, 2005; Lane, Kalberg, Wehby, Barton-Arwood, & Menzies, 2008). In addition to the more formal study, descriptive procedures were used to analyze schoolwide data collected as part of regular school practices at the high school to (a) measure the overall level of risk present in a school over time following program implementation and (b) identify students who may require more targeted supports in the form of secondary and tertiary prevention efforts (Gay & Airasian, 2000).

First, data from the SRSS were analyzed using descriptive procedures by comparing screening scores from fall 2004 and fall 2005 as completed by both instructional and noninstructional raters to determine if the percentage of students at high risk for antisocial behavior decreased after 1 year of program implementation from these two perspectives. Specifically, the percentage of students scoring in the low, moderate, and high risk categories according to instructional raters was computed. The percentage of low risk students was computed by dividing the total number of students who received a total SRSS rating of 0 to 3 by the total number of students rated by teachers (total enrollment) and then multiplying the quantity by 100 to obtain a percentage (range = 0–100%). The process was repeated for the moderate (total scores of 4–8) and high risk (total scores of 9–21) groups, with these values being placed into a graphic similar to the graphic typically constructed using ODR data (e.g., Lane, Kalberg, Bruhn, et al., 2008). However, instead of the three categories of low, moderate, and high risk reflecting ODRs earned (*low* = 0–1 ODRs, *moderate* = 2–5 ODRs, *high* = 6+ ODRs), these three categories were constructed using SRSS data provided by instructional and noninstructional raters.

Second, descriptive procedures were employed to explore how individual students' risk status changed after participating in the SW-PBS program at both schools for a full academic year (Lane, Kalberg, Bruhn, et al., 2008; Lane & Menzies, 2002). Fall 2004 and fall 2005 SRSS scores were again compared for each type of rater to determine if students' risk status remained stable, improved, or worsened.

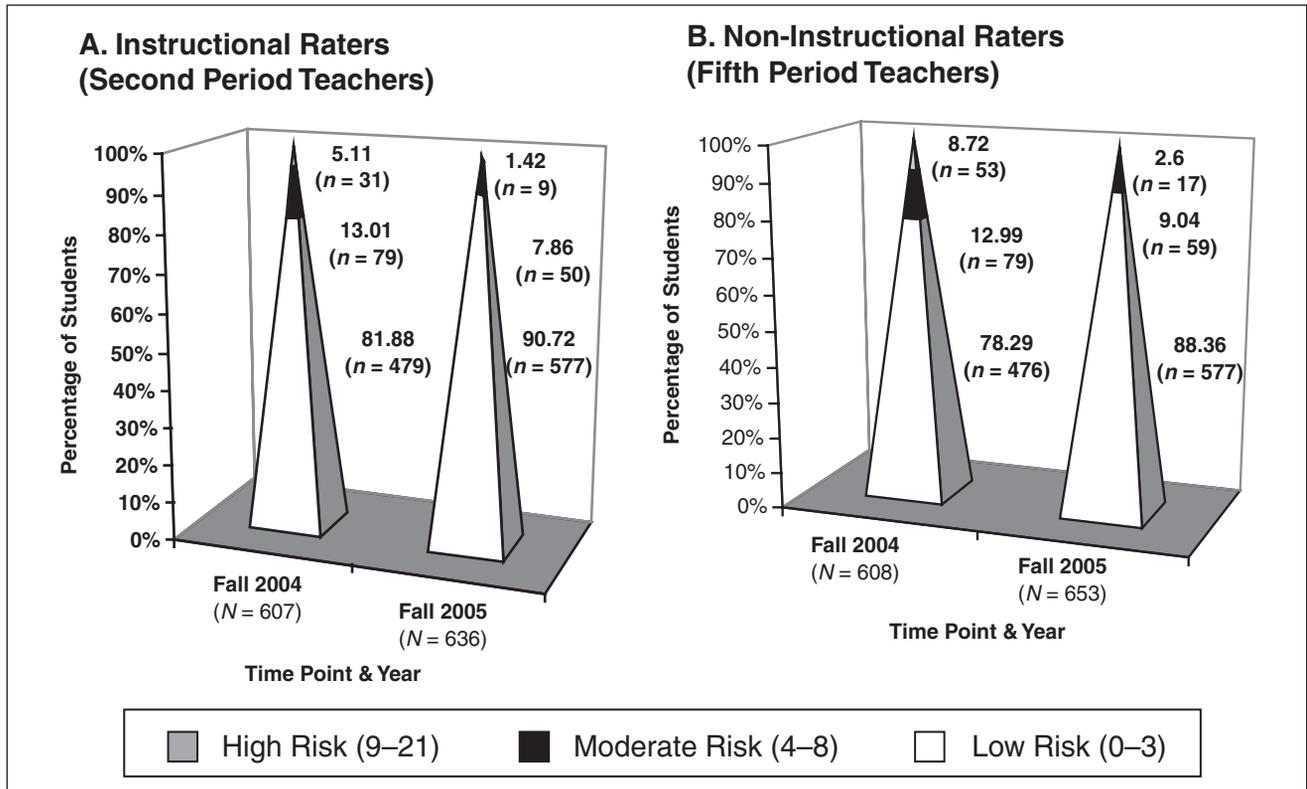


Figure 1. Student Risk Screening Scale data over time at the high school level: Fall 2004 to fall 2005

Stable risk referred to students who scored (a) in the low risk category during both assessment (fall 2004 and fall 2005) as rated by the same type of rater (instructional rater compared to instructional rater; noninstructional rater compared to noninstructional rater), (b) in the moderate risk category during both assessment points, or (c) in the high risk category during both assessment points. Improved risk status referred to students who scored in (a) the moderate risk category in fall 2004 and in the low risk category in fall 2005, (b) the high risk category in fall 2004 and in the moderate risk category in fall 2005, or (c) the high risk category in fall 2004 and in the low risk category in fall 2005, according to the same type of rater as previously described. Increased risk status referred to students who scored in (a) the low risk category in fall 2004 and the moderate risk category in fall 2005, (b) the low risk category in fall 2004 and the high risk category in fall 2005, or (c) the moderate risk category in fall 2004 and high risk category in fall 2005, according to the same type of rater.

Results

An index of risk. Findings of the SRSS data completed by instructional raters indicated that the percentage of students scoring in the low risk category increased from 81.88% ($n = 497$) in fall 2004 to 90.72% ($n = 577$) in fall 2005,

even taking into account a small increase in student enrollment (see Figure 1, Panel a). The percentage of students in the moderate risk category decreased from 13.01% ($n = 79$) in fall 2004 to 7.86% ($n = 50$) in fall 2005. Furthermore, the percentage of students scoring in the high risk category decreased from 5.11% ($n = 31$) to 1.42% ($n = 9$).

Findings of the SRSS data completed by noninstructional raters showed comparable decreases. The percentage of students scoring in the low risk category increased from 78.29% ($n = 476$) in fall 2004 to 88.36% ($n = 577$) in fall 2005 (see Figure 1, Panel b). The percentage of students in the moderate risk category decreased from 12.99% ($n = 79$) in fall 2004 to 9.04% ($n = 59$) in fall 2005. Furthermore, the percentage of students scoring in the high risk category decreased from 8.72% ($n = 53$) to 2.60% ($n = 17$).

Identifying students for targeted prevention efforts. Results indicated that 80.98% ($n = 322$) of students rated by instructional raters remained stable after participating in a SW-PBS program for 1 year (see Table 2). Of the student body, 78.29% ($n = 321$) remained in the low risk status, 2.20% ($n = 9$) in the moderate risk status, and 0.49% ($n = 2$) in the high risk status.

Approximately 15% ($n = 61$) of students rated by instructional raters showed improvements in their level of risk after participating in a SW-PBS program for 1 year. Of the student body, 10.98% ($n = 45$) moved from moderate risk

Table 2. Changes in Student Risk Status Over Time

Change Status	Instructional Raters				Noninstructional Raters				Support Considerations
	Screening Status		<i>n</i>	%	Screening Status		<i>n</i>	%	
	Fall 2004	Fall 2005			Fall 2004	Fall 2005			
Stable			332	80.98			311	74.22	
	Low	Low	321	78.29	Low	Low	296	70.64	Responder: Additional supports not required
	Moderate	Moderate	9	2.20	Moderate	Moderate	9	2.15	Secondary prevention
	High	High	2	0.49	High	High	6	1.43	Tertiary prevention
Improved			61	14.89			72	17.80	
	Moderate	Low	45	10.98	Moderate	Low	43	10.26	Responder: Additional supports not required
	High	Moderate	4	0.98	High	Moderate	7	1.67	Responder: Additional supports not required
Declined			17	4.14			36	8.59	
	Low	Moderate	16	3.90	Low	Moderate	29	6.92	Secondary prevention
	Low	High	1	0.24	Low	High	4	0.95	Tertiary prevention
	Moderate	High	0	0.0	Moderate	High	3	0.72	Tertiary prevention

Note: Low refers to *Student Risk Screening Scale* (SRSS; Drummond, 1993) total scores of 0 to 3; moderate refers to SRSS total scores of 4 to 8; high refers to SRSS total scores of 9 to 21.

status in fall 2004 to low risk status in fall 2005, 0.98% ($n = 4$) moved from high to moderate risk status, and 2.93% ($n = 12$) moved from high to low risk status.

Of students rated by instructional raters, 4.14% ($n = 17$) worsened, showing declines in their level of risk after 1 year of program implementation. Of the student body, 3.90% ($n = 16$) moved from low risk status in fall 2004 to moderate risk status in fall 2005, 0.24% ($n = 1$) moved from low to high risk status, and 0.0% ($n = 0$) moved from moderate to high risk status.

In terms of scores provided by noninstructional raters, results were very comparable to the changes observed by instructional raters. Of students, 74.22% ($n = 311$) remained stable after participating in a SW-PBS program for 1 year (see Table 2). Of the student body, 70.64% ($n = 296$) remained in the low risk status, 2.15% ($n = 9$) in the moderate risk status, and 1.43% ($n = 6$) in the high risk status.

Of students, 17.80% ($n = 72$) rated by noninstructional raters showed improvements in their level of risk after participating in a SW-PBS program for 1 year. Of the student body, 10.26% ($n = 43$) moved from moderate risk status in fall 2004 to low risk status in fall 2005, 1.67% ($n = 7$) moved from high to moderate risk status, and 5.25% ($n = 22$) moved from high to low risk status.

Of students rated by instructional raters, 8.59% ($n = 36$) worsened, showing declines in their level of risk after 1 year of program implementation—double the percentage of students rated as declining by instructional raters. Of the

student body, 6.92% ($n = 29$) moved from low risk status in fall 2004 to moderate risk status in fall 2005, 0.95% ($n = 4$) moved from low to high risk status, and 0.72% ($n = 3$) moved from moderate to high risk status.

Discussion

Collectively, findings from instructional and noninstructional raters' data suggest that fewer students exhibited anti-social behavior following 1 year of program implementation. However, noninstructional raters continued to identify a greater percentage of students in the high risk category as compared to instructional raters. This difference in behaviors observed by instructional and noninstructional raters may be because of the range of opportunities for social interactions possible in classes that provide less structure. Namely, noninstructional raters may have had occasion to observe a different sampling of student behavior given that students had more opportunities to interact with one another in a less structure context.

When looking at students who improved over time, you will also notice that although noninstructional raters rated a greater percentage of students as at high risk as compared to instructional raters, they also rated a higher percentage of students showing a substantial improvement as evidenced by moving from high to low risk after 1 year of implementing the primary prevention program. However, noninstructional raters also reported a substantially greater percentage

of students as declining than did the instructional raters. Again, this may have been because of the context (e.g., less structured environment, fewer instructional demands) of the classroom setting.

We would like to mention that this is just one way to use the SRSS data collected. Rather than comparing the same type of raters, another approach would have been to look for convergent ratings. For example, the PBS team could have identified those students rated by both types of teachers as moderate or high risk status and then examined how these students progressed over time. In addition, rather than waiting to analyze data across years, it would have been possible to analyze these data during the course of the academic year, as we demonstrate in the elementary illustration.

Either way, findings from these analyses can be used to identify students who might benefit from additional supports in the form of secondary and tertiary intervention efforts, as illustrated in Table 2. After conducting this schoolwide screening procedure, parental consent would be obtained to administer additional assessments to determine if secondary or tertiary supports are warranted as well as the nature of these supports (e.g., self-determination skills, function-based interventions, etc.; Lane, Kalberg, et al., in press).

In the next illustration, we describe how a middle school located in the same district whose students feed to the PHS used the SDQ to monitor the level of risk present in the school. In addition, we show how students were identified to receive a variety of targeted supports.

An Illustration at the Middle School Level: Using the SDQ

The second illustration is from BMS, which is a rural school located in middle Tennessee. Participants were 260 males (52%) and 240 females (48%) whose teachers ($n = 38$) evaluated them on two screening tools, SRSS and SDQ, as part of regular school practices. The school served sixth through eighth grades, and graduating students moved on to PHS (described in the previous illustration). The majority of the middle school students were Caucasian ($n = 488$, 97.60%). BMS had an economic disadvantage percentage of 30.8%, with approximately 20% of students receiving special education services.

Procedures for Designing, Implementing, and Evaluating the Primary Plan

The middle school selected an administrator, two general education teachers, a special education teacher, two counselors, a parent, and a student to serve on the school-site PBS team. The team attended a year-long training program in PBS sponsored by Vanderbilt University, conducted with private funding. The training series consisted of two full-day

sessions and five 2-hr sessions held after school, during which time the school developed a comprehensive three-tiered model of support containing primary, secondary, and tertiary levels of prevention to meet students' progressive needs (for a description of the plan, see Robertson & Lane, 2007). In brief, the middle school implemented a SW-PBS plan that addressed three domains: academics, behavior, and social skills. The plan specified (a) expectations for students and teachers in each domain, (b) procedures for teaching and reinforcing expectations, and (c) procedures for monitoring program implementation (treatment integrity) and student progress. As part of the training process, the PBS team collected data from the full faculty to determine which academic and behavioral skills were essential for student success at the school site (for a detailed description of the training process, see Lane, Kalberg, & Menzies, 2009). Information from this survey was used to identify academic and behavioral expectations that were included in the SW-PBS plan. As with the high school, Character Under Construction served as the foundation of the social skills area. The SW-PBS plan delineated specific procedures for teaching academic, behavioral, and social expectations, some of which included student-developed videos that were shown daily at the onset of each day, posters illustrating expectations, and modeling on the part of teachers. PBS tickets paired with verbal praise were distributed to students by adults, contingent on the student demonstrating one of the expectations. Students saved their PBS tickets to enter monthly award assemblies and earn prizes (e.g., tangible items, homework pass).

The assessment plan included a range of measures, including the SRSS and SDQ, with the SDQ added during the 2nd year of program implementation. Both systematic screening tools were completed at three time points: 6 weeks after the start of the school year (fall), before winter break (winter), and 6 weeks before year end (spring). The PBS team used the SRSS and SDQ data to monitor the overall level of risk present in the school and to identify students who might benefit from targeted interventions including secondary and tertiary levels of prevention (see Kalberg, Lane, & Lambert, in press; Robertson & Lane, 2007). The team began their PBS program with just one behavior screening tool, the SRSS, but then added the SDQ measure to the assessment plan during the 2nd year of implementation to obtain more detailed information regarding students' strengths as well as specific areas of concern.

The PBS team met with the full faculty during a regularly scheduled faculty meeting to explain the purpose of both the SRSS and SDQ screening tools along with instructions on how to complete both measures as part of regular school practices. The PBS team explained that the primary purpose for completing these systematic screening tools was to use these data to identify students who did not respond to

primary prevention efforts and who might benefit from more intensive supports. During each administration the PBS team placed blank copies of the forms in teacher mailboxes, along with (a) directions on how to complete the two behavior screeners and (b) contact information for the PBS team members should questions arise. The teachers completed the measures within 1 week and returned them to the PBS team. Data were entered into an Excel database prepared with a formula to compute the total scores to limit computation errors. Reliability of data entry was assessed for 25% of the protocols. Reliability values suggest highly accurate data entry: fall = 99.0%, winter = 99.6%, and spring = 99.5%.

Screening Measures

The school completed a range of measures such as treatment integrity of the schoolwide plan, social validity from the teachers' perspective, and a number of student outcome measures (e.g., GPA, course failures, ODRs, suspensions and expulsions, referrals to alternative learning centers, and prereferral intervention team support). However, in this article, we illustrate how SRSS and SDQ data were used to (a) assess the overall level of risk present for the school as a whole over time and (b) identify students for possible participation in secondary and tertiary prevention efforts.

SRSS. Please see the above description of the SRSS. Findings of score reliability and validity of the SRSS at the middle school level demonstrated high internal consistency (.78–.85), test–retest stability ($p < .0001$), and convergent validity with the SDQ (SRSS with the total score $r = .66$; see Lane, Parks, Kalberg, & Carter, 2007). Short-term predictive validity was established with students with risk statuses of low ($n = 422$), moderate ($n = 51$), and high ($n = 12$) according to the SRSS being best differentiated by behavioral variables (e.g., ODRs, in-school suspensions).

SDQ. The SDQ is an analytically factor-derived, no-cost, systematic screener developed to determine the strengths and deficits of students (ages 3–17) in various sociobehavioral domains as measured by a number of raters (Goodman, 2001; Goodman, Meltzer, & Bailey, 1998). For example, the SDQ contains teacher-completed, parent-completed, and self-report forms (ages 11–17 only) that are available online. The teacher-completed version requires teachers to complete one page containing 25 items for *each* student in his or her class. The 25 items constituting the SDQ are equally distributed across five factors, Emotional Symptoms, Conduct Problems, Hyperactivity, Peer Problems, and Prosocial Behavior, with the first four factors combined to reflect a Total Difficulties score. Teachers rate each item on a 3-point Likert-type scale (0 = *not true*, 1 = *somewhat true*, 2 = *certainly true*), with the scale reversed for negatively worded items. At BMS teachers completed the SDQ for all of the students in their homeroom class in approximately 60 min.

Subscale scores ranged from 0 to 10, with higher scores indicating higher levels of risk for the first four factors and total score as well as higher prosocial skills for the final factor (Prosocial Behavior). The Total Difficulties score (composite of the first four factors) ranged from 0 to 40. Each subscale, as well as the total score, placed students into one of three categories, normal, borderline, or abnormal, with individual cutoff scores varying for each subscale.

The teacher-completed secondary version has strong psychometric properties, as evidenced by the following alpha coefficients: Total Difficulties (.87), Emotional Symptoms (.78), Conduct Problems (.74), Hyperactivity (.88), Peer Problems (.70), and Prosocial Behavior (.84). SDQ scores have high concurrent validity with the CBCL and the *Rutter Questionnaires* (Goodman & Scott, 1999; Rutter, 1967). The SDQ identifies individuals with a psychiatric diagnosis as abnormal with a specificity of 94.6% (95% confidence interval = 94.1%, 95.1%) and a sensitivity of 63.3% (95% confidence interval = 59.7%, 66.9%).

Experimental Design and Statistical Analysis

This was a descriptive study in which 1 year of baseline data was collected prior to implementing a SW-PBS program (Gay & Airasian, 2000). We present information on how this middle school used the SDQ during the 2nd (2005–2006) and 3rd (2006–2007) year of program implementation to (a) measure the overall level of risk present in the school over time and (b) identify students with specific behavioral concerns who may require more targeted supports based on their individual needs.

First, data from the SDQ were analyzed using descriptive procedures by comparing screening scores from fall 2005 and fall 2006 that were completed by homeroom teachers to determine if the percentage of students scoring in the abnormal or borderline range for Emotional Symptoms, Conduct Problems, Hyperactivity, and Peer Problems as well as the Total Difficulties score (composite of the first four subscales) decreased between the 2nd and 3rd years of program implementation. In addition, comparisons were made to determine if the percentage of students scoring in the normal range on the Prosocial Behavior subscale increased during this same time frame. Specifically, the percentages of students scoring in normal, borderline, and abnormal categories according to homeroom teachers were computed for each subscale as well as the Total Difficulties score. For example, the percentage of students in the abnormal category on Peer Problems was computed by dividing the total number of students who received a Peer Problems score of 5 to 10 by the total number of students rated by teachers (total enrollment) and then multiplying the quantity by 100 to obtain a percentage (range = 0%–100%). The process was repeated for the borderline (total score of 4) and normal (total scores 0–3)

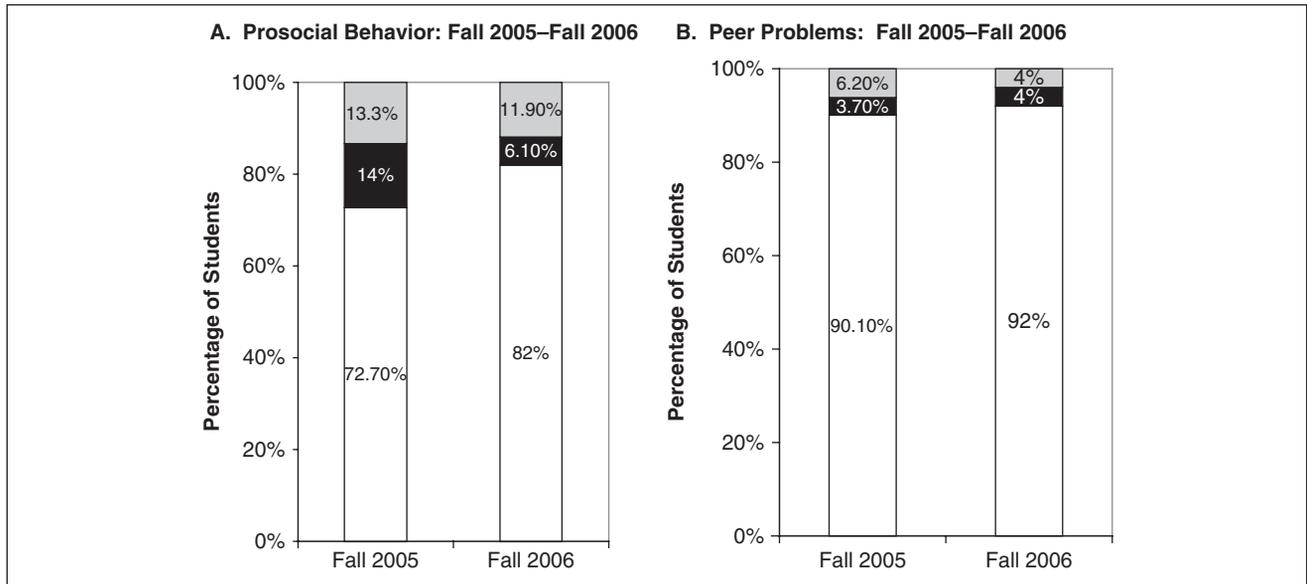


Figure 2. Strengths and Difficulties Questionnaire data over time at the middle school level: Comparing fall 2005 to fall 2006

groups, with these values being displayed graphically. This process was repeated for each of the remaining subscales (Emotional Symptoms, Conduct Problems, Hyperactivity, and Prosocial Behavior) as well as the Total Difficulties score using the cutoff scores provided in the manual for each of the respective subscales.

Second, descriptive procedures were examined to determine which students might benefit from targeted intervention efforts based on the initial ratings. Specifically, lists of students scoring in the abnormal range on one or more subscales were compiled and reviewed by the PBS team to determine if (a) the students were currently receiving necessary supplemental supports or (b) the student might be better served with additional supports currently available by the school.

Results

An index of risk. In Figure 2 you see two panels, the first of which illustrates the level of prosocial behavior evident in the school in fall 2005 and fall 2006 as measured by the SDQ. The lower white portion of the each bar graph represents the percentage of students who score in the normal range, the black area represents the percentage of students who scored in the borderline range, and the gray area represents the percentage of students who scored in the abnormal range. In fall 2005, 72.7% of the student body scored in the normal range, 14.0% in the borderline range, and 13.3% in the abnormal range. One year later, the overall level of prosocial behavior had improved for the school as a whole. Specifically, the percentage of students in the school in

the normal category for prosocial behavior increased from 72.7% in fall 2005 to 82.0% in fall 2006—an increase of almost 10%. Similarly, the percentage of students in the borderline category decreased from 14% to 6% and the percentage of students in the abnormal category decreased from 13% to 12%.

This same process can be repeated to examine how specific types of behavior concerns as measured by the SDQ (Emotional Symptoms, Conduct Problems, Hyperactivity, Peer Problems, and Total Difficulties) shift over time. For example, in Panel b of Figure 2 you see results of how peer problems shifted over time. In the case of peer problems, the percentage of students in the school in the normal category for peer problems slightly increased from 90.1% in fall 2005 to 92.0% in fall 2006. Although the percentage of students in the borderline category increased from 3.7% to 4.0%, the percentage of students in the abnormal category decreased from 6.2% to 4.0%.

Identifying students for targeted prevention efforts. In addition, SDQ data can be used to identify individual students with emotional symptoms, conduct problems, hyperactivity, peer problems, and prosocial behavior who fall into the abnormal category that could benefit from secondary or tertiary supports. One simple approach is to use the fall screening results to identify individual students who might benefit from targeted interventions offered at the school site and then obtain parent permission before providing these extra supports. Another option is to allow students time to participate in the primary plan without additional supports until the winter screening time point. Then, the fall and winter data can be compared in much the same way

we recommended comparing the fall 2004 and fall 2004 SRSS data collected at the high school level. Then, students who are still scoring in the abnormal categories could be placed into targeted interventions.

For example, students scoring in the borderline and abnormal ranges on the Peer Problems and Social Behavior subscales could be placed into social skills instruction groups, along with a selected number of students who scored in the normal range on both of these subscales to serve as peer models (see Lane et al., 2003; Miller, Lane, & Wehby, 2005). This type of secondary intervention could be offered 2 to 3 days per week, with sessions led by the school counselor or a school psychology intern during regularly scheduled elective classes. Or this intervention could be conducted as an elective class led by teachers during the regularly scheduled school day (Robertson & Lane, 2007). Similarly, students scoring in the highest levels of the abnormal range for conduct problems or emotional symptoms may be considered eligible to individually meet with the school psychologist, counselor, or other mental health services as a tertiary level of prevention.

Furthermore, these behavior data could also be analyzed in conjunction with academic data (e.g., GPA and/or course failures) to identify students who have both academic and behavioral challenges. By determining the magnitude and scope of the students' individual concerns, comprehensive secondary and tertiary interventions could be conducted at the school site using existing resources to meet each individual's multiple needs. For example, the PBS team at BMS analyzed fourth quarter data during spring 2005 to identify rising seventh and eighth grade students who had both academic and behavioral concerns. Specifically, they selected students who had a GPA less than or equal to 2.7 or earned one or more failing grades who also demonstrated behavioral risk, which was defined as earning one or more ODRs during the final semester or who scored in the moderate or high risk category on the SRSS. These students were randomly assigned to one of three intervention conditions, study skills, conflict resolution skills, or regular school practices, which were to begin at the onset of the following school year (for intervention outcomes, see Kalberg, Lane, & Lambert, in press). In this case, the PBS team wanted to determine how to best help students who had both academic and behavioral challenges. Namely, would improved study skills lead to improved interactions with peers and adults if the students learned the skills necessary to acquire knowledge and demonstrate what they learned? Or would improved conflict resolution skills lead to improved academic outcomes if the students learned the skills necessary to interact more smoothly with teachers and peers in the classroom setting? In brief, results suggested significant and comparable improvements in students' knowledge of study skills for students in both treatment groups as compared to students

receiving regular school practices. Yet students' levels of knowledge remained low (mean scores < 70%) following intervention completion. In addition, students showed significant changes in their study habits, with students in the study skills group demonstrating increases when compared to students in the conflict resolution skills group.

This same type of logic could be used to test the relative benefit of targeted interventions for students with various types of co-occurring problems as measured by the SDQ. For example, how well do targeted interventions such as self-monitoring strategies support students with abnormal levels of hyperactivity who are also struggling academically? To what extent are self-regulation strategies effective for students with abnormal levels of conduct problems and hyperactivity?

Discussion

Examining SDQ data collected by BMS's PBS team suggests that prosocial behavior improved between fall 2005 and fall 2006. In addition, there was some improvement in peer interactions as evidenced by a decreased percentage of students placing in the abnormal range and an increased percentage of students placing in the normal range on the Peer Problem subscale.

As previously described, the PBS team used SDQ data in isolation *and* in conjunction with other data (e.g., GPA) to identify students who might possibly benefit from targeted support. In particular, this school should be applauded for using scientifically rigorous experimental designs (e.g., randomized control designs) to determine the relative benefit of different secondary interventions.

In the next illustration, we describe how an elementary school located in another district used the SSBD to monitor the level of risk present in the school. In addition, we show how they identified students to receive tertiary support—functional assessment–based interventions for two students.

An Illustration at the Elementary Level: Using the SSBD

The final illustration is from SES, a large suburban elementary school located in middle Tennessee. Participants were 263 males (54.56%) and 219 females (45.44%) whose teachers ($n = 37$) evaluated them on two screening tools, the SRSS and the SSBD, as part of regular school practices. The school served kindergarten through fourth grades. The school was ethnically and culturally diverse with 23.33% African American, 3.75% Asian, and 72.08% Caucasian students. SES had an economic disadvantage percentage of 27.6%, with approximately 8% of the student body receiving special education services.

Procedures for Designing, Implementing, and Evaluating the Primary Plan

The elementary school selected an administrator, two general education teachers, a special education teacher, a reading specialist, a counselor, a parent, and a student to serve on the school-site PBS team. SES's PBS team attended a year-long PBS training program during the 2006–2007 academic year provided by Vanderbilt University and supported with private funding. The training series consisted of two full-day sessions and five 2-hr sessions held after school. Over the course of the training series, the PBS team developed a comprehensive three-tiered model of support containing primary, secondary, and tertiary levels of prevention to meet students progressive needs (for a detailed description of the plan, see Lane, Wehby, et al., 2007). In brief, the primary plan contained academic, discipline, and social skills components that specified student, teacher, and parent responsibilities for each component. The PBS team developed procedures for teaching and reinforcing three behavioral expectations (*respect, responsibility, and participation and best effort*). In addition, the PBS team created an expectation grid defining what each behavioral expectation looks like in a variety of school settings (e.g., classroom, hallway, cafeteria, etc.). These expectations were taught through classroom lessons, posters, and skits at assemblies and broadcast over the intercom during morning announcements. When students met the behavioral expectations, adults in the building (including teachers, administrators, parent volunteers, custodians, etc.) reinforced students by giving them "Tiger Tickets" paired with behavior specific verbal praise. Students then placed the tickets in their classroom bin. These ticket bins were used in daily classroom drawings, weekly school-wide drawings, and quarterly assemblies. A variety of tangible and nontangible reinforcers were available, such as schoolwide parties, extra recess, and school supplies.

The assessment plan included a range of measures such as standardized state achievement tests, referrals to the prereferral intervention team and special education, out-of-school suspensions, attendance, and the SRSS and the SSBD screening tools. The SRSS and SSBD were conducted at three time points during the 2007–2008 academic year: approximately 6 weeks after the start of the school year (fall), 1 week prior to winter break (winter), and 6 weeks before year end (spring). At the time of this article, the PBS team had just completed the winter time point.

The PBS team used the SRSS and SSBD data to monitor the overall level of risk present in the school and to identify students who might benefit from targeted interventions including secondary and tertiary levels of prevention (see Lane, Eisner, et al., 2008). The PBS team met with the full faculty during a regularly scheduled faculty meeting to explain the purpose of both the SRSS and SSBD screening

tools along with instructions on how to complete both measures. Namely, the intent of completing these systematic screening tools was to use these data to identify students who did not respond to primary prevention efforts and who could possibly benefit from more intensive supports. The PBS team elected to provide secondary and tertiary supports during the 1st year of program implementation.

During this 1st year of program implementation, the principal investigator and university students were present to answer questions and assist the PBS team. During each administration (fall, winter, and spring), the PBS team prepared the screening tools (e.g., making requisite photo copies, proving class rosters, and typing the names of students on the SRSS) and attended the faculty meetings, during which time teachers completed the screening tools. If teachers were absent, materials were placed in their boxes and were completed within 1 week following the faculty meeting. Data were entered into an Excel database prepared with a formula to compute the total scores to limit computation errors. Reliability of data entry was assessed for 100% of the protocols, indicating highly accurate data entry, as evident by the following reliabilities: SRSS (fall = 99.75%, winter = 99.98%, and spring = 100.0%) and SSBD (fall = 99.92%, winter = 100.0%, and spring = 99.96%).

Screening Measures

SRSS. Please see the previous description of the SRSS. Initial reliability and validity studies at the elementary level show significant correlations ($r = .79, p < .001$; Cohen, 1992) with the Aggressive Behavior subscale of the CBCL. A recent study examining the concurrent validity of the SRSS to predict results from the SSBD also suggested strong psychometric properties (Lane, Little, et al., 2009). Internal consistency of the SRSS was .83, exceeding the recommended minimum value of .80 (Nunnally & Bernstein, 1994). When comparing students scoring in the low versus high risk categories, the SRSS had excellent accuracy for predicting both externalizing (95%) and internalizing (93%) problems as measured by the SSBD. Although sensitivity (95%) and specificity (95%) were strong for externalizing behavior, for internalizing behavior sensitivity was lower (44%), although specificity was still strong (95%). Analysis of receiver operating characteristics curves also indicated that the SRSS is more precise in predicting externalizing (area under the curve [AUC] = .952) as compared to internalizing behaviors (AUC = .802).

SSBD. The SSBD uses a multigrating system for identifying elementary-age students with internalizing or externalizing behaviors. In Stage 1 teachers list and then rank order students on dimensions of internalizing or externalizing behaviors from *most like* (1) to *least like* (10). In Stage 2 teachers complete two rating scales, the Critical Events

Index (CEI) and a Combined Frequency Index (CFI), on six types of students: those ranked 1, 2, or 3 on either the internalizing or externalizing dimension. The CEI contains 33 items that are scored as occurrence or nonoccurrence of low frequency, high intensity behaviors (e.g., steals, damages others' property, exhibits painful shyness). The CFI assesses high frequency, low intensity behavior, with teachers rating 12 adaptive behavior items (e.g., follows established classroom rules) with 11 maladaptive behavior items (e.g., pouts or sulks). Teachers rate each item on a 5-point Likert-type scale ranging from *never* (1) to *frequently* (5). Students exceeding normative criteria move to Stage 3. In Stage 3 direct observations are conducted in the classroom setting (academic engagement) and on the playground (peer-related social behavior) by an outside observer. Students exceeding normative criteria on direct observation measure may be referred for a formal assessment of EBDs (Elliott & Busse, 2004). The multigated process of the SSBD is an excellent tool for screening for behavior disorders. It allows for more intense methods of screening for fewer numbers of students, resulting in a timely and fiscally efficient way to screen students. Interrater agreements range from .89 to .94 for externalizing dimensions and .82 to .90 for internalizing dimensions, with test-retest stability ranging from .81 to .88 and from .74 to .79 for externalizing and internalizing dimensions, respectively (Walker et al., 1988).

SES's PBS team decided to have teachers complete the SRSS as well as Stages 1 and 2 of the SSBD as part of regular school practices. They elected not to complete Stage 3 of the SSBD as it was perceived as being too cumbersome.

Experimental Design and Statistical Analysis

This was a descriptive study in which 1 year of baseline data was collected prior to implementing a SW-PBS program. In this article we present information on how this elementary school used the SSBD during the 1st year of program implementation to (a) measure the overall level of risk present in a school during the fall and winter time points and (b) identify students with multiple risk factors who might benefit from tertiary prevention efforts.

First, data from the SSBD were analyzed using descriptive procedures by comparing screening scores from fall 2007 and winter 2007 as completed by homeroom teachers to determine if the percentage exceeding normative criteria on Stage 2 of the SSBD in the externalizing and internalizing categories decreased between these two time points. Specifically, the number of students passing through Stage 2 on the externalizing dimension was divided by the total number of students in the school who were screened (total enrollment) and the quantity multiplied by 100 to obtain a percentage (range = 0%–100%). This was done with data collected in fall 2007 and winter 2007. The process was

repeated for students passing through Stage 2 on the internalizing dimension during the same two time points.

Second, descriptive procedures were used to analyze fall data to determine which students might benefit from functional assessment-based interventions—a tertiary prevention support provided as part of a nonfunded study—Project FUNCTION. Specifically, the school-site administration, in conjunction with the PBS team, generated a list of potential participants and confirmed the students' risk status by identifying which of these students scored in the high risk category on the SRSS and exceeded normative criteria on Stage 2 of the SSBD. This list was compiled and reviewed by the PBS team to determine if (a) the students were currently receiving necessary supplemental supports or (b) the students might benefit from a functional assessment-based intervention with teacher and parent permission.

Results: Interpreting the SSBD

An index of risk. In Figure 3 you see two gray bars, the first of which illustrates the percentage of students enrolled who exceeded Stage 2 criteria for externalizing behaviors during fall 2007—the beginning of the 1st year of program implementation. The second gray bar represents the percentage of students who exceeded Stage 2 criteria for externalizing behaviors during winter 2007—the end of the first semester of program implementation. During the first time point, 6.23% of the student body was considered at risk for externalizing behaviors. At the end of the first semester, the percentage of students at risk for externalizing behaviors decreased to 5.17%.

The next two white bars illustrate the percentage of students who exceeded Stage 2 criteria for internalizing behaviors. The data suggest that the program was especially effective with this population of students. The percentage of students at risk for internalizing behaviors decreased from 3.65% of students in fall 2007 to 1.29% of students in winter 2007.

Identifying students for targeted prevention efforts. Sigma's PBS team elected to begin secondary and tertiary levels of prevention during the first semester of program implementation and identified two students, Mark and Derek, using the procedures described above. After securing teacher and parental consent, these students were invited and assented to participate in a university program that involved collaborating with master's students in special education to design, implement, and evaluate a functional assessment-based intervention at the school site. Mark earned a 14 on the SRSS, placing him in the high risk category. In addition, Mark was ranked number 1 on the Externalizing subscale of the SSBD and received a CEI score of 7, along with low adaptive (14) and high maladaptive (46) scores on the CFI. These latter scores moved Mark into Stage 3 on the SSBD.

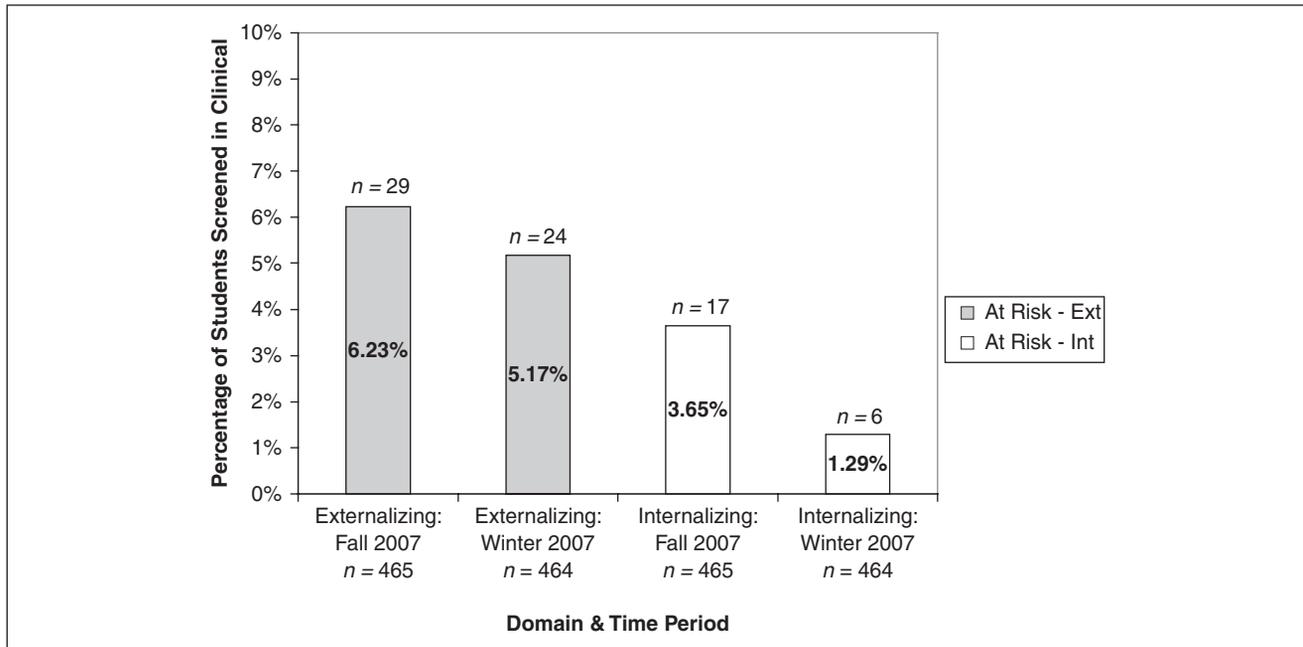


Figure 3. Systematic Screening for Behavior Disorders data over time at the elementary school level: Comparing fall 2007 to winter 2007

Derek earned a 16 on the SRSS, placing him in the high risk category. Derek was ranked 2 on the Externalizing subscale of the SSBD and received a CEI score of 9, along with low adaptive (19) and high maladaptive (43) scores on the CFI. These latter scores also moved Derek into Stage 3 on the SSBD.

Both Mark and Derek were first grade students in the same classroom. They had two teachers who participated in a job-share situation, meaning that each teacher worked 2 days per week and alternated the 3rd day. After securing parental consent, both teachers participated in the functional assessment processes to support both students as part of a tertiary prevention effort. Please see Lane, Eisner, et al. (2009) for a detailed description of this tertiary prevention.

Discussion

In this illustration, this ambitious PBS team from SES designed a comprehensive three-tiered program that produced immediate improvement in the overall level of risk present after the first semester of program implementation. As evidenced from the SSBD data, the program was particularly effective for students with internalizing behaviors.

This illustration also depicts one method of using school-wide data to identify students with multiple risk factors who might benefit from tertiary prevention efforts. Although the most common practice is to first place students in secondary prevention efforts prior to moving to tertiary supports, it might be wise to consider more immediate, intensive supports

when students exhibit extreme levels of risk (Severson & Walker, 2002). It is important to reiterate that secondary and tertiary supports should be implemented only with parental consent. We recommend that screening data be used to identify students who might benefit from these additional supports. Then, parents should be contacted and permission secured to administer additional assessments (when necessary) to determine if secondary or tertiary supports are warranted as well as the specific nature of these supports.

Implications for Practice

Over the past decade, many school systems have adopted three-tiered models of prevention containing primary, secondary, and tertiary prevention efforts (Severson & Walker, 2002; Sugai & Horner, 2002). Such models offer graduated supports that increase in intensity and focus to meet the multiple needs of an increasingly diverse student population. Although beneficial for all students, we contend that such models offer particular benefit for students with or at risk for EBDs by providing a primary program that prevents the development of problem behaviors and offers more focused supports in the form of secondary and tertiary supports for students with existing cases of EBDs (Lane, 2007). Given the multiple deleterious outcomes within and beyond the school setting for students with EBDs, their parents, their educators, and society as a whole, we are especially encouraged by such an efficient, effective model (Carter et al., 2006; Kauffman, 2007; Wagner et al., 2006; Walker et al., 2004).

Despite the promise of three-tiered models, one current limitation of some is the absence of brief behavioral probes to (a) monitor the overall health of a school and (b) identify students in need of additional supports. Although curriculum-based measures (e.g., DIBELS and *AIMSweb* probes) are available to monitor academic progress, similar measures do not yet exist to monitor behavioral performance. This is problematic given the limitations surrounding the use of ODRs (e.g., reliability; Lane, Wehby, et al., 2007).

Until such measures are developed, we suggest using systematic screening tools such as the SSBD, the SRSS, the SDQ, and the BERS to not only monitor the level of risk evident in a given school but also identify students whose behavior patterns suggest nonresponsiveness to the primary prevention plan (Lane, Kalberg, & Menzies, 2009).

In this article we offered practitioners and researchers three illustrations on how to meet this charge at the elementary, middle, and high school levels. In each of the illustrations we described the student population, the procedures used by each school to construct the three-tiered model, the primary prevention plan they developed, the systematic screening tool incorporated into regular school practices, and the data analysis plan. In addition, we presented findings of how student risk shifted over time following program implementation as well as hypothetical and actual illustrations of how to use data from a variety of screening tools to identify students for secondary and prevention efforts. As previously mentioned, there are numerous methods for using data collected from systematic screening tools, particularly in conjunction with other data collected as part of regular school practices. We hope these illustrations will prove useful to those seeking to further support students who need more than the primary prevention plan can offer.

For practitioners seeking to apply some of the structures and processes introduced in this article, we would like to offer a few considerations. First, unless ODRs are monitored using a systematic approach that is consistently implemented, then the information gleaned from ODRs may suffer from poor reliability and poor validity. Consequently, it is important for practitioners to consider the reliability of the ODR data collected at the school site. If these data are not accurate, then it is possible that incorrect conclusions will be drawn when analyzing these data. For example, it is possible a student who may require additional supports may be overlooked, or one might conclude that the level of risk present in a building is decreasing when it is actually increasing. Also, it is possible that administrative styles may influence ODRs. One of the elementary school principals we worked with years ago was quick to suspend students who violated major rules. Had there been a change in leadership with the new principal being reluctant to use suspensions, then the data would look as if problem behavior was diminishing when it was really just a shift in administrative

style. We are not suggesting that ODR data be disregarded but that PBS teams take an objective look at the accuracy of this data source (Lane, Kalberg, & Menzies, 2009).

Second, we encourage PBS teams to strongly consider incorporating systematic screening tools as part of regular school practices. When selecting a screening tool it is important to consider the target population or populations of interest (e.g., students with externalizing or internalizing behaviors, only antisocial behavior patterns) as well as issues of feasibility (e.g., costs, scoring time, ease of interpretation). Once the behavior screening measure is selected, then the PBS team will need to address the following questions: (a) When and how often should the behavior screenings be administered? (b) Who should prepare the materials? (c) Who should administer the behavior screenings? (d) Who should complete the behavior screenings? (e) Who should conduct the scoring? and (f) When and how should the results be shared? For suggested answers to these questions, we refer the reader to a recent book dedicated to developing school-wide programs to prevent and manage problem behavior (Lane, Kalberg, & Menzies, 2009).

Third, it is imperative that the PBS team be prepared to support students who are identified as being at high risk for behavioral challenges. It is not acceptable to identify students who are not responsive to primary prevention efforts and then *not* provide additional supports (Kauffman, 2007; Severson & Walker, 2002). Consequently, the school-site teams need to consider the scope of services available in the forms of secondary and tertiary levels of prevention. Furthermore, it is important that the logistics of these supports be delineated. For example, it is necessary to determine the focus of the support, the interventionist, the frequency and duration of the support, the monitoring procedures, and the exit criteria (Lane, Kalberg, & Menzies, 2009).

Fourth, because learning and behavioral challenges often co-occur, we also encourage practitioners to analyze the behavior screening data in conjunction with other data collected as part of regular school practice. For example, as mentioned in the middle school illustration, behavior screening data can be examined in conjunction with academic measures. In this way, it is possible to identify students with common academic deficits who do and do not have common interfering behavior problems. This is important information as this can shape intervention efforts. Namely, the student with limited early literacy skills who has high rates of externalizing behavior patterns may require a phonemic awareness training just like a student who struggles only in the reading domain. However, the former student may very well require additional behavioral support (e.g., contingency contracting) to help him or her access the phonemic awareness training.

Thus, there are a number of practical considerations that need to be addressed with respect to systematic behavior

screening tools. We encourage school-site teams to adopt systematic screenings as part of regular school practices to (a) monitor the overall health of a school and (b) identify students who require more intensive supports. However, we advocate responsible adoption so that the school-site structures are prepared to draw accurate conclusions regarding the information obtained and provide the necessary supports at the primary, secondary, and tertiary levels as indicated by the data.

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