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ABSTRACT

This paper reports on the first year's results of a screening procedure used to identify kindergarten and first grade children at risk of developing serious emotional disturbance. The Systematic Screening for Behavior Disorders (SSBD) is a three-stage, multiple-gated procedure for mass screening to determine whether a child should be referred for psycho-educational evaluation. The procedure was adapted to assess level of risk status in a population generally at-risk due to psychosocial factors. Students (N=624) in 24 classrooms in two schools (one with predominantly Hispanic students and the other with predominantly African American students) were screened through three steps or "gates": (1) teacher nomination of 10 children with externalizing behavior profiles and 10 children with internalizing behavior profiles; (2) teacher ranking of the five highest children in each group on the Critical Events Checklist and the Adaptive and Maladaptive Behavior Rating Scale; and (3) use of observational measures in the classroom by trained professionals. Students were classified as low- (14 percent), moderate- (10 percent), or high-risk (4.5 percent) based on the number of gates passed. Concurrent validity was also evaluated. Results suggest the procedure is well suited for classification of risk status as well as identifying children for further evaluation. (DB)

Systematic Screening Children at Risk for Developing SED: Initial Results from a Prevention Project

Introduction

The purposes of this presentation were to report the first year's results of a screening procedure used to identify kindergarten and first grade children who are at risk of developing Serious Emotional Disturbance (SED), and to present additional data on the concurrent validity of the screening procedure. The Systematic Screening for Behavior Disorders (SSBD) is a three-stage, multiple-gated procedure for mass screening to determine whether a child should be referred for psycho-educational evaluation (Walker & Severenson, 1992). We adapted this procedure to assess level of risk status in order to better target instructional, behavioral, and community-based services based on need and applied to a population that is at-risk in general due to a variety of psychosocial factors. This approach has the potential of providing more efficient and cost-effective means for allocating preventive services that vary in intensity and duration based on degree of risk.

Methods

Participants

The available sample of children who participated in the screening procedure were all (n= 624) kindergarten and first grade students in 24 classrooms in two full service schools. One school (FF) was composed of predominantly Hispanic students (79%) and the other (MP) was composed of predominantly African American students (72%). Based on the SSBD teacher nomination procedure (Walker & Severnson, 1992), 205 students

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were selected as "at risk" (see *Screening Procedure* which follows). Tables 1 and 2 show the sociodemographic and educational characteristics for the initial screening sample.

Screening Procedure

The SSBD is designed to assess for both the presence of emotional and behavior problems and the effects of problem behavior on academic and social functioning in school. The three-stage procedure involves teacher's nominating ten children who fit a behavioral profile of externalizing behavior and ten who fit a profile of internalizing behavior; the nominated children are then ranked on the extent to which they display each type of behavior (Stage 1). In Stage 2 teachers rated the five highest ranked children in each group (5 internalizers and 5 externalizers) on the Critical Events Checklist and the Adaptive and Maladaptive Behavior Rating Scales. Children who pass cut-off scores based on SSBD norms pass to Stage 3. In this stage, trained professionals use observational measures in the classroom (Academic Engaged Time) and on the playground (Peer Social Behavior). Children who pass cut-off scores based on the Stage 3 SSBD norms have passed through all three gates. When this occurs, the recommended assessment decision is to refer the child for a comprehensive psycho-educational evaluation.

In the present study we used this procedure to classify risk status as either *low*, *moderate*, or *high* based on the number of gates passed during the screening process. Children who did not pass gate 2 after ranking by teachers were classified as low risk. Those who passed gate 2, but not gate 3, were considered to be at moderate risk, and those who passed all three gates were considered to be at high risk.

Other Measures

To assess concurrent validity of the screening procedure, we collected data from the Social Skills Rating (SSRS; Gresham & Elliot, 1990); SSRS Teacher and Parent forms, and teacher ratings on the Classroom Behavior Inventory (CBI, Schaefer, Edgerton, & Aronson, 1977). Apart from social skills, the SSRS also has a brief scale to assess externalizing, internalizing, and hyperactive behaviors and a scale which assesses compliance with school rules. The Parent Form measures the same social skills (cooperation, assertion, and self control) and Problem Behavior, but also includes a scale for measuring responsibility in relationships with others. The CBI broadly measures academic competence, temperament (extroversion and introversion), and social deportment (considerateness

Table 1
Sociodemographic Characteristics of Sample

Variable	School		Total
	MP (n = 121) n (%)	FF (n = 84) n (%)	(n = 205) n (%)
Gender			
Male	72 (59)	55 (65)	127 (62)
Female	49 (40)	29 (34)	78 (38)
Race/Ethnicity			
African-American	82 (68)	6 (7)	88 (43)
Hispanic	33 (27)	70 (83)	103 (50)
White/Non-Hispanic	6 (5)	3 (6)	11 (5)
Other/UK	0 (0)	5 (4)	3 (1)
Free/Reduced Lunch	104 (86)	70 (83)	174 (85)
Home Language			
English	80 (66)	17 (20)	97 (47)
Spanish	33 (27)	62 (75)	95 (47)
Creole	8 (7)	0 (0)	8 (4)
Other/UK	0 (0)	4 (5)	4 (2)
Language Program	33 (27)	50 (59)	83 (40)

Note: ns vary due to missing data from school records

versus hostility). Also, we collect school records data yearly in the project; but these data have not been analyzed at the present time.

Results

Screening Procedure

Table 3 shows that 92 (14%) of the children from the initial sample of 628 children were identified as having low risk for SED. Sixty-three (10%) of the children were identified as having moderate risk, and 28 (4.5%) were classified as high risk. Also, Table 3 shows that about 3% more children were identified as having moderate to high risk (n=91, 14.5%) than would be predicted from the SSBD norms (n=73, 11.6%) This finding was predictable given that the research sample was composed of mostly disadvantaged children who were at risk generally due to a variety of other psycho-social risk factors.

The difference between the obtained and expected frequencies for the moderate and high risk categories was due in part to the finding that relatively more children with externalizing behavior passed gate two. This might be attributed to the fact that externalizing behavior is more visible than internalizing behavior, or to selection bias on the part of teachers. However, it should be noted that the frequencies of both types of behavior problems were comparable among low-risk children and that the assessment criteria were more objective and stringent at the second and third stages of screening. Although the obtained frequencies for moderate and high risk externalizers were higher than expected, they were comparable for internalizing children.

Significant differences were obtained between the means for the Miami sample on the SSBD screening instruments and those for the SSBD normative sample for both externalizers and internalizers. This analysis included 161 children who were at risk at all levels at stage II of the screening procedure for whom data were collected on the Critical Events Checklist and the Adaptive and Maladaptive Behavior rating scales (see Table 3). Those who proceeded to State III (n =77 moderate or high risk) were observed with the SSBD Peer Social Behavior instrument. This suggests that the Miami research sample displayed greater levels of severity with respect to risk indicators than might be expected in a general population sample.

Table 2
Educational Characteristics of Sample

Variable		School: MP (n = 121)	School: FF (n = 84)	Total (n = 205)
Age in Months	*M*	82.06	85.81	83.60
	SD	10.39	9.87	10.32
	n	121	84	205
Number School Attended	*M*	1.17	1.29	1.22
	SD	.40	.69	.54
	n	121	84	205
Absences (Days)	*M*	14.13	13.16	13.64
	SD	14.59	11.46	11.38
	n	86	49	135
SAT Reading Total (percentile rank)	*M*	27.00	40.2	30.56
	SD	21.31	30.58	24.60
	n	43	16	59
SAT Math Total (percentile rank)	*M*	43.78	52.60	46.10
	SD	28.97	34.20	30.37
	n	42	15	57

Note: SAT available only for 1st grade. *Ns* vary due to missing data from school records.

External Measures

A MANOVA on the three SSRS social skills scores indicated that teachers rated internalizing children higher on all social skills scales than externalizing children, $F(3, 76)=14.44$, $p< .0001$ (see Table 4). Externalizing children were rated as more externalizing and hyperactive than internalizing children on the Problem Behavior Scale. However, teachers tended to rate externalizing children as having more internalizing behavior problems than internalizing children, $F(3, 76)= 17.44$, $p<.0001$ (see Table 4) . Also, as Table 4 shows, externalizers were rated lower on the Academic Competence Scale than internalizers, $t(78)=3.26$, $p<.001$. Parents who completed the Parent Form of the SSRS did not perceive any differences between the children who were classified as having internalizing or externalizing behavior problems by the SSBD. This was the case with measures of both social skills and problem behavior. However, this was a small sample (n=57, 35%) due to significant non-response.

MANOVA comparisons of externalizing and internalizing children on the CBI showed significant differences in the predicted direction on all scales except Creativity/Curiosity and Extroversion/ Introversion, $F(10, 55)=7.06$, $p<.0001$ Externalizing children were perceived by teachers as less task-oriented ($p<.0007$), independent ($p<.0002$) , and considerate of others ($p<.0001$), and as more distractible ($p<.05$) , dependent ($p<.002$) , and hostile ($p<.0001$) .

Table 3
Results of Sampling Procedure for Risk Status Based on Total Sample in 24 K-1 Classes (n= 628)

		Predicted Sample[1]		Obtained Sample	
		Externalizing	Internalizing	Externalizing	Internalizing
Stage I [2]					
Not at Risk	*n*	120	120	120	120
At Risk Based on Teacher Rank	*n*	120	120	120	120
Stage II [3]					
Low Risk	*n*	60	60	43	49
	(% total sample)	(9.5)	(9.5)	(6.8)	(7.8)
Stage III [4]					
Moderate Risk	*n*	25	25	39	24
	(% total sample)	(3.9)	(3.9)	(6.2)	(3.8)
High Risk	*n*	13	9	18	10
	(% total sample)	(2.1)	1.4)	(2.9)	(1.6)

[1] Predicted sample based on SSBD Norms for n = 628

[2] Teacher nominates and ranks 10 Students in each category (n = 480)

[3] Teacher Ratings on Critical Events, Adaptive/Maladaptive Scales

[4] Observation of Peer Social Behavior and Academic Engaged Time

With respect to gender the SSBD identified 128 (62%) boys and 78 (38%) girls as having some level of risk. Relatively more boys were identified as having externalizing behaviors. However, a significant number of girls with internalizing and externalizing behaviors passed through the first stage of screening, and a proportional number of externalizing and internalizing girls were represented in the moderate and high risk groups (8%, 7%, and 2% each, respectively). Therefore, the procedures at stage 2 and 3 appeared to be successful in identifying a significant number of boys with internalizing problems.

Discussion

In general, the SSBD procedure appears to be well suited as an instrument for the classification of risk status, as well as for screening children who might be referred for evaluation for educational and mental health services. Also, this approach to assessment might have significant implications for refining the definition of risk for the purpose of planning and implementing preventive interventions, particularly of a comprehensive nature. Progress in the area of primary prevention has been impeded by the lack of reliable methods for assessing the level of risk for specific types of disorders. We typically use rather gross measures that are subject to high rates of false positive cases.

These results suggest that many of the children in our sample might benefit from universal interventions that target a defined population of at-risk children, while others might benefit to a greater extent from selective interventions that may meet the needs of particular subgroups of children who are at greater risk. Finally, a smaller group of high-risk children may require more intensive indicated interventions, given their more immediate needs. At the same time, the approach illustrated here has its limitations. There are some technical problems assessing children as young as five years with this instrument, and it is not designed to detect comorbidity, which is part of the clinical portrait presented by high risk children. However, the Early Screening Project (ESP) instruments developed by Walker, Severson, and Feil (1995) to screen children aged 3-6 using the SSBD procedure have been modified and now have been published.

Table 4
Comparison of Externalizers and Internalizers on the SSRS Teacher Rating Scales

		Groups		
Variables		Externalizers (n = 52)	Internalizers (n = 28)	p
Social Skills				
Cooperation	*M (SD)*	6.36 (4.18)	12.85 (5.22)	.000
Assertion	*M (SD)*	7.88 (4.39)	10.53 (5.69)	.02
Self-Control	*M (SD)*	7.00 (4.16)	12.50 (4.74)	.000
Total SS Score	*M (SD)*	21.25 (10.97)	35.89 (13.46)	.000
Problem Behavior				
Externalizing	*M (SD)*	7.42 (3.35)	2.93 (3.55)	.000
Internalizing	*M (SD)*	5.44 (3.36)	3.89 (2.84)	.04
Hyperactivity	*M (SD)*	9.23 (2.86)	4.39 (3.69)	.000
Total PB Score	*M (SD)*	22.09 (7.70)	11.21 (7.54)	.000
Academic Competence Total Score	*M (SD)*	19.05 (8.09)	25.28 (8.17)	.001

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