Comparing Biannual and Triannual Behavioral Screenings Using DBR-SIS

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Introduction

Background

In recent years, the use of screening procedures to reliably identify students at-risk for school failure has become increasingly important. With an increased emphasis on early intervention and data-based decision making, it is necessary for schools to develop systems and procedures around regularly screening and monitoring student performance. A wide variety of commercially-available programs have helped create parameters around screening within academic domains. However, behavioral screening has received considerably less attention. Given relevance of behavior toward overall student success, it is critical that systematic research is carried out to develop and evaluate assessment strategies to meet key needs within systemic problem-solving models of service delivery.

Currently, consensus has not been obtained regarding: a) how many times a year students should be screened for behavioral problems and b) when the screenings should be performed. For example, Walker and Severson (1992) recommend screening biannually: once in the fall and once after winter break. However, Lane, Menzies, Oakes, and Kalberg (2012) recommend triannual screenings: six weeks into the school year, before winter break, and prior to the end of the academic year. Thus, clear guidelines have not been developed to help guide practitioners in evidence-based practices around behavioral screening. The purpose of the current investigation is to examine biannual and triannual screening results from a large-scale, multi-site investigation of student behavior.

Method

Participants and Setting

- The analytic sample included 1828 students.
- Ratings were performed by a total of 193 teachers.
- Students were enrolled in a total of 20 different schools, including rural, suburban, and urban districts.
- Public school settings were geographically located in Connecticut, New York, and Missouri.
- Participating students were in grades 1, 2, 4, 5, 7, 8

Table 1: *Student Demographic Characteristics*

Characteristic	*n*	%
Gender		
Male	953	52.1
Female	875	47.9
Race		
White	1507	82.4
African American	207	11.3
Asian	31	1.7
Other	83	4.5
Ethnicity		
Non-Hispanic	1693	92.6
Hispanic	135	7.4

Method

Measures

- *Direct Behavior Rating – Single Item Scale* (DBR-SIS)
  - DBR-SIS reflects the teacher's perception of the proportion of time a student is observed engaged in a target behavior (academic engagement, respectful, disruptive) from 0 (never) to 10 (always). Composite scores were created for each student, ranging from 0 (indicating substantial risk) – 30 (indicating little risk).
- *Social Skills Improvement System - Performance Screening Guide* (SSiS; Gresham & Elliott, 1990)
  - The SSiS Performance Screening Guide can be used to screen social and academic behaviors of all students in a class. This screener uses a scale of 1 (Substantial Difficulty), 2 or 3 (Moderate Difficulty), and 4 or 5 (Average). Student functioning is rated across four areas: Motivation to Learn, Prosocial Behavior, Math Skills, and Reading Skills.
- *Behavioral and Emotional Screening System* (BESS Teacher Form; Kamphaus & Reynolds, 2007)
  - The BESS is a brief rating scale that can be useful in screening for behavioral and emotional strengths and weaknesses in children and adolescents. The scoring of the BESS yields an overall *T* score; a student is considered to be at-risk if his or her score is ≥ 61.

Procedures

- Teachers completed behavioral ratings three times during the 2011-2012 academic year on a random sample of 10 students in their classroom. Screenings were conducted in fall, winter, and spring. The three screening assessments were counterbalanced to control for potential order effects. Direct Behavior Rating observations were structured such that five students were rated twice-daily for five days. Upon completion of the first group of DBR-SIS ratings, the teacher subsequently rated the second group of students for five days.

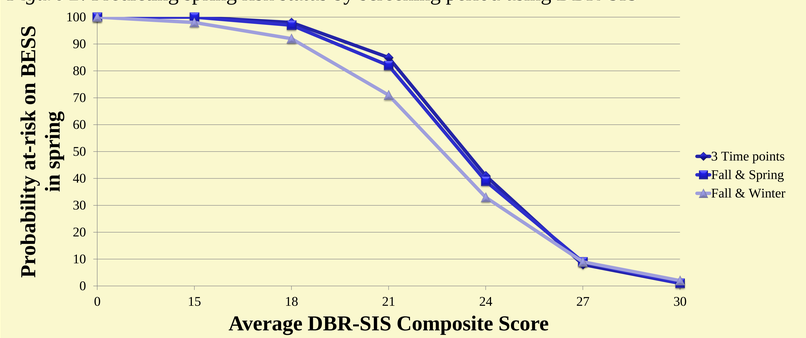
Results

- Multilevel logistic modeling was used to predict risk status on the BESS during the spring, with students (level 1) nested within teachers (level 2) to account for the rater bias. After running the unconditional model using the GLIMMIX procedure in SAS version 9.3 and discovering that significant amounts of variation in behavior remained within classrooms, $\chi^2(192, N=1828)= 1507.68$, $p<0.01$, we proceeded to run six multilevel models: Spring BESS intercepts predicted by SSiS Prosocial scores collected at (1) all three time points, (2) Fall and Spring only, (3) Fall and Winter only; and Spring BESS intercepts predicted by the DBR-SIS composite collected at (4) all three time points, (5) Fall and Spring only, and (6) Fall and Winter only. We used the results of these analyses to examine differences in predicted BESS risk rates. Figures 1 and 2 present probabilities of being identified at-risk assuming uniform scores on the independent variables across time points.

Results

Figure 1: Predicting spring risk status by screening period using SSiS Prosocial Behavior

Figure 2: Predicting spring risk status by screening period using DBR-SIS



Summary and Conclusions

The results from this investigation suggest that triannual behavioral screenings perform quite similarly to biannual screenings for students clearly not at-risk (e.g., SSiS Prosocial>3, DBR-SIS>26). However, differences do appear for clearly at-risk students (e.g., SSiS Prosocial<3, DBR-SIS<18). Triannual and biannual Fall/Spring ratings on both the SSiS Prosocial scale and on DBR-SIS yield similar proportions of students at-risk on the BESS in Spring for this group, with Fall/Winter ratings identifying smaller proportions of at-risk students. This trend is maintained for DBR ratings of students whose risk level is less clear (e.g., SSiS Prosocial 3, DBR-SIS 18-26). However, SSiS Prosocial scores spread out more, with triannual, Fall/Spring, and Fall/Winter scores identifying decreasing proportion of at-risk students on the Spring BESS. In summary, the current analyses provide support for conducting triannual behavioral screenings. When triannual screenings are not possible, Fall/Spring screenings are recommended.

Preparation of this poster was supported by a grant from the Institute for Education Sciences (IES), U.S. Department of Education (R324B060014). For additional information, please direct all correspondence to Sandra Chafouleas at sandra.chafouleas@uconn.edu