Development and Validation of Instruments to Assess the Behavior and Assets of Students at the Classroom Level

Steven W. Lee, Julia Shaftel, Jeaveen Neaderhiser & Jessica Oeth
University of Kansas

INTRODUCTION

The unit of analysis of social and emotional adjustment of school children varies by the question of interest. Psychologists and educators have traditionally been interested in these data for individual children. Many tools have been developed to assess the social-emotional adjustment of individual students (Merrill & Isava, 2005). Recently, the emphasis on school reform (Gettinger & Kalymon, 2005) and the adequacy of schools under the No Child Left Behind Act of 2001 (NCLB) have brought the question of social-emotional adjustment of whole classrooms of children to the forefront. Disruptive student behavior is likely to impair the academic performance of not only the student involved but others in the classroom as well.

Over the past several years, Lee and Shaftel (2004, 2005, 2006) have been involved in research that has focused on the whole class as the unit of analysis in schools. This body of research has led to the development of the Classroom Behavior and Asset Survey: Teachers (CBAST). The CBAST is designed to efficiently provide a snapshot of the teacher's perception of the problem behaviors and assets of an entire class of students. CBAST data can be used for the evaluation of whole school or classroom interventions, resource allocation, professional development needs, and the evaluation of the relationship of classroom behaviors to standardized achievement test results, to name a few uses.

Since students will likely report the behaviors, emotions and strengths of their peers and classmates somewhat differently than teachers, the Classroom Behavior and Asset Scale: Students (CBASS) was developed using items from the CBAST. By obtaining the classroom perspectives of both students and teachers, a more realistic and comprehensive picture of the classroom environment can be created. In this study, the psychometric properties of the CBASS are explored as well as its relationship with classroom behavior problems as perceived by the teacher (CBAST), gender, grade, years of teaching experience, teacher age, and the school variables of economic disadvantage and proportion of minority ethnicity.

METHOD

Participants

The subjects included 59 teachers and 543 students in 60 classes in grades 4-12 from all subject areas in Kansas schools. Teachers averaged 42 years of age and 15 years of experience. Fifty-nine percent had bachelor's degrees while 39 percent held master's degrees. Ninety-five percent were White and 87 percent were female. The number of student respondents for each class ranged from 4 to 20 with an average of 9. Students ranged in age from 8 to 17. Student ethnicity was 67% White, 9% African-American, 9% Hispanic, and 9% Other.

Procedure

The study data were obtained through a mailing to all Kansas principals, at both public and private schools, who were requested to nominate teachers at their schools for participation in the study. Packets of CBAST and CBASS forms with parent information and permission forms were mailed to nominated teachers along with return envelopes. Packets were coded for school and classroom. Student data were not personally identified. For each classroom, a teacher CBAST and at least 10 student CBASS surveys were requested.

The 60 CBAST items of 30 problem behaviors and 30 assets were selected from 69 total items that were tested during the spring of 2006 with 347 local teachers. Exploratory factor analysis resulted in 5 problem behavior factors and a single asset factor. The CBASS used identical items and rating scale. A different cover sheet requested relevant demographic information.

The CBAST/CBASS rating scale asks students and teachers to estimate the total number of students in the class displaying a particular behavior or strength. The options are phrased in terms of proportion of the class rather than an absolute number of students in order to be useful for any class size.

<u>CBAST/ CBASS Scale</u>

1 = 0 students 2 = 1-2 students 3 = A few students
4 = About ¼ of the class 5 = About ½ of the class
6 = About ¾ of the class 7 = Most of the class 8 = All of the class

ANALYSES AND RESULTS

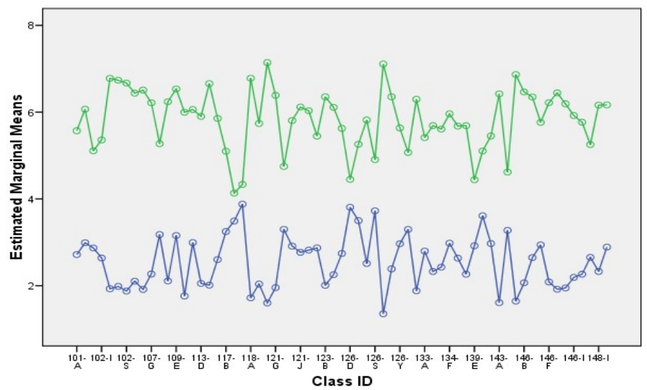
Reliability was assessed separately for problem behaviors and assets according to respondent, teacher or student. The alpha coefficient of the CBAST for 56 complete teacher surveys was .962 for assets and .941 for problem behaviors. A total of 385 complete student surveys showed α = .954 for assets and 403 complete surveys resulted in α = .955 for problem behaviors. However, because data within classes were not independent, a second set of reliability analyses were conducted by classes, combining teacher and student data. Alpha coefficients for all classes were within acceptable limits except for four instances in which reliability was either very low or could not be computed. After imputation of missing data in order to conduct reliability analyses with complete data, two classes remained whose reliability was unacceptably low. Data for these two classes were removed from the data set, and all further analyses were done without imputed data.

Factor scores were computed using the factor structure from the previous large teacher dataset (2006). The five factors include Attention Problems (out of seat, off task, talking), Antisocial Behavior (arguing, fighting, bullying), Internal Distress(moody, sad, disorganized), Poor Social Presentation (poor hygiene, inappropriate dress, absences and tardiness), and Low Academic Achievement (poor work quality, poor study skills, lack of effort). T-tests comparing student and teacher ratings showed significant differences for each problem behavior factor and total assets. Teachers rated Low Academic Achievement as the problem affecting the most students while students rated Attention Problems as most pervasive. Both students and teachers rated Antisocial Behavior and Poor Social Presentation as affecting the fewest students.

Teacher and student ratings within classes were compared by computing the bivariate correlations for each teacher with the mean student rating for each class. With control of Type I error, all factor scores were moderately to strongly correlated except for Internal Distress. Ratings between teachers and students did not agree on a class-by-class basis even though overall ratings were similar. This outcome suggests that internal distress is either not readily observable or is interpreted differently by teachers and peers while the other four factors and assets consist of evidence that is more likely to be observed by both students and teachers.

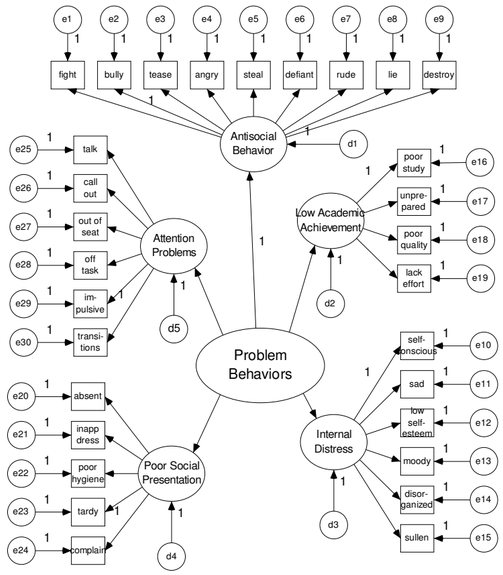
Regression analyses showed that higher levels of economic disadvantage and minority ethnicity were significantly correlated with higher levels of problem behaviors and lower levels of assets. In addition, teacher years of experience yielded a significant positive relationship with total assets and a negative correlation with problem behaviors. Teacher age, gender, ethnicity and student gender and ethnicity had no significant effect on outcomes. Student-rated levels of total problem behaviors, Antisocial Behavior, Low Academic Achievement, Attention Problems, and Internal Distress increased with grade level, while student reports of total assets decreased with grade level.

The factor structure of the CBASS was examined with LISREL to evaluate invariance for male and female students. The five factor model showed acceptable model fit overall (X^2 = 1958, df = 792, CFI = .970, RMSEA = .0784). There was no significant difference in model fit between males and females, demonstrating that the CBASS measures the same constructs for boys and girls.



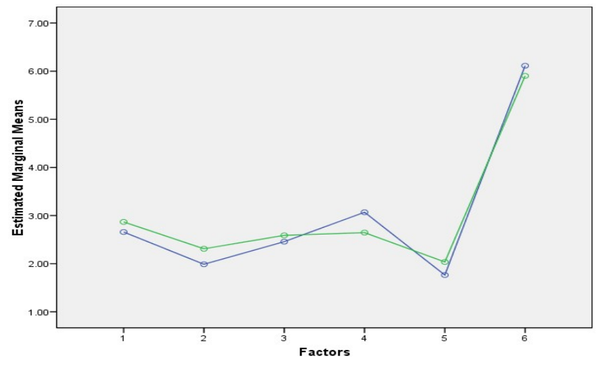
The graph above shows the inverse relationship between assets (in green) and problem behaviors (in blue) for each class: higher levels of assets correspond to lower levels of problem behaviors.

FACTOR STRUCTURE OF THE CBAST



CONCLUSIONS AND DISCUSSION

This study endeavored to explore students' assessment of problem behavior and assets of all students in their classroom through the use of the Classroom Behavior and Asset Scale: Students (CBASS). The CBASS demonstrated excellent internal consistency and good within-class reliability when combined with teacher CBAST data. In addition, the comparisons of factor scores between students (CBASS) and teachers (CBAST) on a class-by-class basis were correlated except for symptoms of internal distress. While additional research is needed, these data point out that students and teachers are likely to agree on and corroborate the most salient and observable of classroom behavior problems and thus provide confirmatory evidence for the implementation of whole class or whole school interventions to improve the behavior of students in school.



This graph shows the relationship between teacher ratings (in blue) and student ratings (in green) for the factors of (1) Attention Problems, (2) Antisocial Behavior, (3) Internal Distress, (4) Low Academic Achievement, (5) Poor Social Presentation, and (6) Total Assets.

Steven W. Lee, University of Kansas, Department of Psychology and Research in Education, 130T JRP Hall, 1122 West Campus Road, Lawrence, Kansas 66045. Email swlee@ku.edu.
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