

Introduction

Research has shown that classroom behavior, both positive and negative, has a profound affect on academic achievement (Malecki & Elliott, 2002; Wang, Haertel & Walberg, 1993; Wentzel, 1993). Unfortunately, the tools that we have to assess the effects of behavior problems in school are crude and unreliable (e.g., office discipline referrals, Sugai, Sprague, Horner, & Walker, 2000), biased against students of color (e.g., suspensions and expulsions, Gregory, Skiba, & Noguera, 2010), expensive to administer and insensitive to the interactive and relational effects of behavior in classrooms (e.g., standardized behavior rating scales such as the BASC2, Reynolds & Kamphaus, 2004). Using the classroom as the unit of analysis provides a new perspective on classroom psychosocial functioning. Using the philosophy of judgment-based assessment (JBA, Hayes, 1990), the Classroom Behavior and Asset Scales (CBAS teacher and student versions) have been developed through 9 years of research to assess problem behaviors and assets at the classroom level. The present study was designed to provide confirmatory evidence of the psychometric quality of the CBAS as well as an exploration of the relationship between teachers' and students' ratings of their classrooms.

Reliability and Teacher-Student Differences

Participants included 266 teachers and 1195 students from across Kansas in 2007 and 2009. Based on the entire dataset, the CBAS was revised to incorporate the student perspective. Six items that did not load strongly on their factors were removed from each of the asset and problem scales. Reliability and factor scores were computed for the revised scale.

Reliability	Assets	Problems
Complete surveys	$\alpha = .968$ (n=1180)	$\alpha = .969$ (n=1186)
Complete teacher surveys	$\alpha = .974$ (n=237)	$\alpha = .954$ (n=239)
Complete student surveys	$\alpha = .967$ (n=943)	$\alpha = .971$ (n=947)

The number of respondents for each class ranged from 4 to 20 with an average of 9. The mean class-wise reliability coefficient was .914 for assets (median .925) and .902 (median .92) for problem behaviors. The range of reliability coefficients for assets was .643 to .988 and for problem behaviors was .524 to .996.

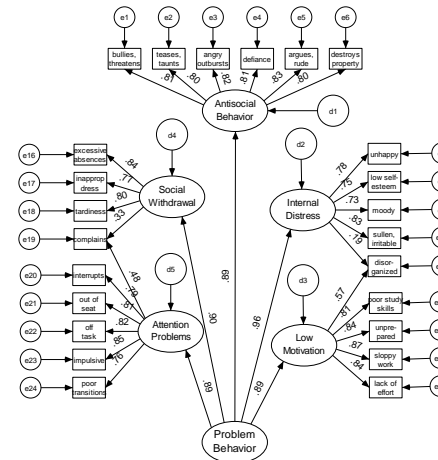
Teachers and students responded significantly differently for all factors except Assets and Internal Distress. Teachers rated Antisocial Behavior, Social Withdrawal, and Attention Problems as affecting fewer students than students believed. Students rated Low Motivation as being less prevalent than teachers perceived. Teachers have better knowledge of student performance for the entire class than students do, suggesting that teacher ratings of this domain may be more accurate. Students, in turn, may have better knowledge of peers' Antisocial Behavior. Interestingly, students also rated Attention Problems as affecting more students than teachers did, possibly because of the greater impact of peers' inattention on their own concentration in class.

Factor Invariance

The revised CBAS problem behavior model was subjected to multiple-group confirmatory factor analysis on the basis of sex and role for the purpose of evaluating the extent to which the factor structure is invariant across groups.

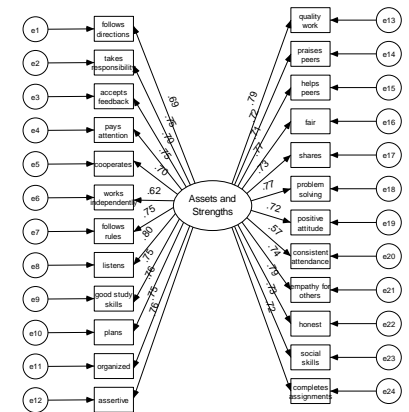
The revised model of problem behaviors and assets is shown in Figures 1 & 2. The model was invariant on the basis of sex for structural weights, structural intercepts, and measurement weights. The model was not strictly invariant for measurement intercepts, though ΔCFI was .001 when measurement weights, measurement intercepts, structural weights, and structural intercepts were constrained. For teachers and students, the model was invariant only for structural intercepts. When structural weights were also constrained, ΔCFI was .002, and when measurement weights were constrained, ΔCFI was .006.

Figure 1. 24-item CBAS Problem Behavior Model



CBAS Problem Behaviors, N = 1461
CFI = .961, RMSEA = .053

Figure 2. 24-Item CBAS Asset Model



CBAS Assets, N = 1461
CFI = .931, RMSEA = .067

Conclusions

Further analysis will be necessary to determine which specific model aspects differ between males and females and between students and teachers. Future research goals include concurrent validity studies with individual behavior rating scales and classroom climate measures as well as assessment of relationship of CBAS classroom profiles to academic growth.