

Community and Youth Collaborative Institute
School Experience Surveys



Technical Report: School Connectedness
Elementary School Student Version

Produced By:

Dawn Anderson-Butcher, Anthony J. Amorose, Aidyn Iachini, and Annahita Ball

Community and Youth Collaborative Institute
College of Social Work
The Ohio State University



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COLLEGE OF SOCIAL WORK

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SCHOOL CONNECTEDNESS

Elementary School Student Version

I. Definition of Construct

The *School Connectedness* scale measures students' general perceptions of their relationship to school.

II. Relevance for Practice

Past studies have shown that enhanced experiences of school connectedness relate to improved grades, higher academic performance, and graduation from high school (Battin-Pearson, et al., 2000; Klem & Connell, 2004; Nasir, Jones, & McLaughlin, 2011; Voelkl, 1995; Wentzel, 1995).

III. Scale Description and Instructions

A. Items

1. I enjoy coming to school.
2. I have good relationships with teachers and other adults at my school.
3. I am proud to be at my school.
4. I feel like I belong at my school.

B. Response Options

Response options for each item include the following:

- 1 = NO!
- 2 = No
- 3 = Yes
- 4 = YES!

C. Instructions for Respondents

These questions ask you about your experiences at school. Please mark how strongly you feel about each sentence.

D. Instructions for Scale Administrators

For complete instructions on how to administer the survey, reference the "Student Survey Directions" that are printed on the survey itself. Once each student has a survey, explain that the purpose of the survey is to learn more about their experiences at school. They should mark one answer per statement, selecting the choice that best reflects how they feel.

As students finish, look thoroughly through the surveys to make sure that they didn't miss any items or questions. Please remember that students do NOT have to answer every question, but do encourage them to complete as much of the survey as possible. Remind students that their answers will help the school know how to best support them.

IV. Scoring Procedures

An average of the response scores from the 4 items should be calculated and used as an indicator of school connectedness, with higher scores indicating that students perceive greater feelings of connectedness.

V. Psychometric Properties of the Scale

A. Description of Sample

Participants used to test the psychometric properties of the scale included 3436 elementary school students from around the state of Ohio. This included 885 students in K-3rd grade (25.8%) and 2304 students in 4th – 6th grade (67.1%). The mean age of the students was 11.31 (SD = 1.31). Both males (49.7%) and females (45.3%) were represented. The majority of students identified themselves as White/Non-Hispanic (81.8%), Mixed/Multi-Racial (8.1%), African American (3.6%), Latino/Latina (0.7%), or Asian (.7%), and 53.3% indicated they received a free or reduced lunch. Data on these students were collected as part of a needs assessment within each school’s improvement planning process. Some data were collected using the on-line instrument, whereas others were collected via paper/pencil survey.

B. Basic Descriptive Statistics and Relevant Group Differences

Sample	Mean	SD	Range	α
Full Sample ($N = 3436$)	3.20	.67	1-4	.80
Gender				
Males ($n = 1707$)	3.08	.72	1-4	.80
Females ($n = 1556$)	3.35	.61	1-4	.78
Race/Ethnicity				
White/Non-Hispanic ($n = 2811$)	3.22	.67	1-4	.79
Other ($n = 445$)	3.12	.76	1-4	.82
Grade Level				
K-3 rd ($n = 885$)	3.42	.62	1-4	.77
4 th -6 th ($n = 2304$)	3.13	.69	1-4	.80

Note. Group specific data omits students who did not indicate their status. The groups were significantly different ($p > .05$). The effect sizes (η^2) for the gender and grade level comparison indicated that group membership differences accounted for 4% of the variance in the scores, where the race/ethnicity differences account for less than 1% of the variance in the scores.

C. Maximum Value Percentages and Classification of Scores

Percentages		Classification of Scores		
Maximum Value	$\frac{1}{2}$ SD	Excelling	Emerging	Needs Improvement
80.0%	8.4%	88+	87-72	<72

Note. The max value percentages reflect the scale mean divided by the number of response options in the scale. This value allows the subscale to be compared with other measured constructs measured in the CAYCI surveys, thereby providing relative information regarding the extent to which students’ experiences are favorable across constructs. The classification of scores provides ranges of values based on the maximum value percentage plus or minus $\frac{1}{2}$ SD percentage. Based on these cut points, schools may determine where they stand on students’ experiences of school connectedness relative to normed data.

D. Relationship between School Connectedness Scores and Other Student Perception Constructs

Construct	<i>r</i> =
Academic Motivation ^a	.47*
Academic Press ^b	.40*
Support for Learning ^b	.56*

Notes. ^a Represents the students answer to the following item from the CAYCI surveys (Anderson-Butcher, Amorose, Iachini, & Ball, 2013): “I work my hardest every day at school”, with response options ranging from 1 (NO!) to 4 (YES!). ^b Average score on the respective subscale scores from the CAYCI surveys (Anderson-Butcher, Amorose, Iachini, & Ball, 2013). * relationship significant ($p < .01$).

E. Factorial Validity

A confirmatory factor analysis (CFA) was conducting using robust maximum likelihood estimation procedures in LISREL 8.71 (Scientific Software International, Inc., Chicago). The CFA model specified that the 4 items loaded on a single latent School Connectedness factor. The factor variance was freely estimated, as was the uniqueness for each item. No covariances between uniquenesses were modeled. The data were input using the asymptotic covariance matrix.

The overall fit of the model to the data was reasonably good based on commonly recommended cut off values for evaluating model fit (see Hu & Bentler, 1999), S-B $\chi^2 = 10.52$, $df = 2$, $p = .00$; RMSEA = .035 (90% CI = .016-.057), SRMR = .01; CFI = 1.00, TLI = 1.00. The table below presents the completely standardized factor loadings and uniquenesses for each item. Squared multiple correlations averaged .51. The modification indices did not suggest any major areas of local strain.

Item	Loading	Uniqueness
I enjoy coming to school.	.67	.54
I have good relationships with my teachers.	.57	.67
I am proud to be at my school.	.83	.32
I feel like I belong at my school.	.74	.45

VII. Past and Future Scale Development

The current recommendation is to use the 4-item version of the measure as described in this report. Future scale development work may consider revising items #1 (“I enjoy coming to school”) and #2 I have good relationships with my teachers given their relatively lower factor loading. Adding additional items tapping feeling connectedness with other groups (e.g., students, support staff) may enhance the overall quality of the measure. Finally, work is needed to validate the Spanish version of this scale.

VII. Summary

Overall, the results of the psychometric testing indicate initial support for the reliability and validity of the School Connectedness scale with elementary school students. The use of this measure could provide valuable information about students’ experiences of school connectedness which has shown in the literature to relate to improved grades, higher academic performance, and graduation from high school.

VIII. References

- Anderson-Butcher, D., Amorose, A. J., Iachini, A., & Ball, A. (2013). Community and Youth Collaborative Institute School Experience Surveys. Columbus, OH: College of Social Work, The Ohio State University.
- Battin-Pearson, S., Newcomb, M. D., Abbott, R. D., Hill, K. G., Catalano, R. F., & Hawkins, J. D. (2000). Predictors of early high school dropout: A test of five theories. *Journal of Educational Psychology*, 92, 568-582.
- Battistich, V., Schaps, E., & Wilson, N. (2004). Effects of an elementary school intervention on students' "connectedness" to school and social adjustment during middle school. *The Journal of Primary Prevention*, 24(3), 243-262.
- Hu, L. & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6, 1-55.
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- Nasir, N. S., Jones, A., & McLaughlin, M. W. (2011). School connectedness for students in low-income urban high schools. *Teachers College Record*, 113(8). Retrieved from <http://www.tcrecord.org>
- Voelkl, K. E. (1995). School warmth, student participation, and achievement. *Journal of Experimental Education*, 63, 127-138
- Wentzel, K. R. (1998). *Social relationships and motivation in middle school. Journal of Educational Psychology*, 90, 202-209

IX. Recommended Citation of Scale

When using the School Connectedness scale for program evaluation or research purposes, we recommend using the following citation:

Anderson-Butcher, D., Amorose, A. J., Iachini, A., & Ball, A. (2013). Community and Youth Collaborative Institute School Experience Surveys: School Connectedness Scale in Elementary School. Columbus, OH: College of Social Work, The Ohio State University.

If this scale is used along with additional Community and Youth Collaborative Institute School Experience Surveys, then the following citation would be appropriate to cover all scales:

Anderson-Butcher, D., Amorose, A. J., Iachini, A., & Ball, A. (2013). Community and Youth Collaborative Institute School Experience Surveys. Columbus, OH: College of Social Work, The Ohio State University.