

## **A School Connectedness Program for Student Social-emotional Knowledge and Skills**

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### **Abstract**

School connectedness, student perception of how much school staff care about their academic and social success, is a protective factor found to decrease risk for student behavioral problems that disrupt learning. A small group of elementary-aged students in an afterschool program participated in six weekly lessons of a school connectedness curriculum that focused on social-emotional learning knowledge and skills. Before and after the curriculum intervention, student participant social skill knowledge was assessed. In addition, afterschool staff members observed and reported student participant level of positive social behavior exhibited. Student knowledge scores significantly improved, however, observed pro-social behaviors did not significantly differ pre-post program. Many previous school connectedness studies have concentrated on secondary-level students, and more studies in the non-school setting were suggested. The current study contributes to the literature as it examined elementary-level students and occurred in the out-of-school time setting.

**Keywords:** Elementary school, School connectedness, Social-emotional learning

## Introduction

Mental health and behavioral problems in school students contribute to poor academic achievement and risky health choices that may continue into adulthood. Poor youth mental and behavioral health are national public health concerns, and schools are now on the front lines in efforts to prevent these problems (Cook, et al., 2015). Behavioral problems and classroom disturbances subtract from teaching time available for others in the class. For secondary students in one study, disruptive classroom behaviors were associated with lower test scores as the misconduct affected academic achievement of an entire class (Blank & Shavit, 2016).

By implementing evidence-based approaches in schools such as positive behavioral interventions and supports, strengthening school connectedness, and recognition/intervention during mental health crises, student mental health function may improve (Cook, et al., 2015). Behavior problems, anxiety, and depression are the most common mental health problems found in students. They generally begin in childhood, and many co-occur (Centers for Disease Control and Prevention, 2019). Problem recognition and support is important, too, as about one-fifth of students possess a mental or behavioral health problem that affects their learning and social interactions - critical for school success (Association for Children's Mental Health, 2019). For example, those with mental or behavioral health problems are more likely to drop out of school (Association for Children's Mental Health, 2019).

School connectedness in a supportive, safe school climate is related to student academic and behavioral success (Centers for Disease Control and Prevention, 2018). Studied over decades, school connectedness, student perception of how much school staff care about their well-being and academic success, is a protective factor found to decrease risk for unhealthy behaviors, violence/bullying, and behavioral problems. The construct is also positively related to school attendance and retention rates, pro-social behaviors, and academic achievement (Centers for Disease Control and Prevention, 2018).

Influences on school connectedness for secondary students, reported in a systematic review, included peer and teacher support as well as the perception of school as a safe environment. Teacher support, especially in rural schools, was identified as one of the strongest predictors of school connectedness (Allen et al., 2018). In addition, positive staff-student relationships have been associated with decreased drop out and improved mental health in secondary students (Krane et al., 2016). In a meta-analysis, school connectedness was also related to lower rates of teen suicidal thoughts and behaviors (Marraccini & Brier, 2017).

Evidence notes student and teacher perceptions of school climate and school connectedness have been associated with academic achievement for math and writing (Reynolds et al., 2017; Maxwell et al., 2017). Supportive school climate, according to a review, was also found to negate the effect of low socio-economic status on student academic achievement (Berkowitz et al., 2016). In a statewide study, those high school students who felt that teachers supported them and that their school climate positively promoted high academic expectations had lower dropout rates (Jia et al., 2016). In a meta-analysis, school climate had a small, significant effect on student behaviors over a long period of time (Reaves et al., 2018). A

literature review also cited the relationship between school climate and secondary student mental health with the recommendation for longer term study (Aldridge & McChesney, 2018). By encouraging school connectedness through positive relationships and a healthy school climate, students are provided with the academic and social-emotional skills they need to be successful in school (Centers for Disease Control and Prevention, 2018).

Implementing school connectedness interventions may improve social skills that have been linked to improved pro-social behaviors in secondary students. By encouraging school connectedness, research suggests students are provided with the academic and social-emotional skills they need to be successful. There is limited literature on school connectedness and elementary students, and more studies of connectedness in non-school/community-based settings have been recommended (Jones & Kahn, 2017; Low et al., 2015). Therefore, the purpose of this exploratory study was to determine the effect of a school connectedness curriculum in the afterschool setting on elementary student participant social skill knowledge and pro-social behaviors.

## Methods

### Sample

Thirty-one of 35 (89%) upper elementary students attending a small rural school district's afterschool program held at a recreation center consented and participated in this study. Student participants were in grades three through five. Grade three participants included 10 students (six boys, four girls; eight White), grade four participants included eight students (three boys, five girls; all White), and grade five participants included 13 students (five boys, eight girls; nine White).

All 10 afterschool program staff consented and participated in this study. Seven (70%) staff were female, all were White, and all were between the ages of 20-24 years old.

### Instruments

Pre-post-curriculum, student participant social skill knowledge was assessed using the 14-question, content valid, Summative Assessment (SA) that accompanied the curriculum (Committee for Children, 2020). The instrument included 3 true-false questions and 11 multiple choice items specific to curricular content knowledge. A sample true-false question was "If you see a new strategy to solve a problem, you can strengthen your brain." Multiple choice questions included "What's one characteristic of a good goal?" Which of the following skills can people get better at with practice?" and "What should you do after you've set a goal for yourself?" Scoring is number/percentage of correctly answered questions.

Pre-post curriculum, afterschool program staff observed and rated student participants in the groups that they supervised on their level of social skills and positive social behavior using the Child Social Behavior Questionnaire/Teacher-Rating Version [CSBQ-T] (Warden et al., 2006; Warden et al., 2010). Each of the five items describing sharing, befriending, physically hurting, psychologically hurting and victimization were to be rated as observed in the student participant: 5-Very often, 4-Often, 3- Sometimes, 2- Rarely, or 1-Never. Sample statements included "Sharing things or helping another child in the class" and "Physically hurting another child in the class e.g. hitting, kicking, or tripping." The negative behaviors of hurting and victimization are reverse-scored. Higher scores are associated with more observed pro-social behaviors in the participant.

### Procedure

Before the start of the curricular intervention, 12 community members with experience in youth substance use prevention and positive youth development education were trained to implement a school connectedness curriculum, Second Step. The Second Step intervention was a universal-level, school-based, social-emotional learning curriculum designed to improve school connectedness (Committee for Children, 2020). All participated in an online training course that accompanied the intervention to familiarize themselves with lesson content and effective teaching strategies. The training focused on how to use the web-based portal, prepare and organize lessons, and integrate activities, challenges, and projects into the lessons and discussions. In addition, two certified teachers, also trained in the curriculum, supervised the facilitators as they delivered the lessons and provided feedback post-lesson to help maintain fidelity to the curriculum.

After all Institutional Review Board approvals and consent/assent, student participants completed a confidential, written Pre-SA one week before the start of the curriculum during their snack time. Afterschool staff also completed a Pre-CSBQ-T for each student participant in the groups that they supervised during their break time.

Once each week for six weeks in the afterschool program, the trained facilitators led small groups of student participants through 45-minute long lessons at the recreation center. Each grade level of students was assigned a room in the center with two pair of facilitators per room. Each facilitator pair had a laptop with the web-based lessons on it. Facilitators in each room divided students into two smaller groups for more personalized lesson instruction, small group activities, and post-lesson discussions.

Specifically, the lessons and activities covered four units of instruction. The first unit, Mindset and Goals, covered brain growth, personality, and goal setting. The next, Recognizing Bullying and Harassment, overviewed social values and friendships. The next, Thoughts, Emotions, and Decisions, covered emotional regulation. The final unit, Managing Relationships and Social Conflicts, reviewed conflict management and resolution. Lessons were web-based, video scenarios projected from each facilitator's laptop computer. As scenarios unfolded in phases, facilitators led discussions and posed questions to allow participants to apply their new knowledge and critically analyze social skill and connectedness decisions made by the characters in the scenarios.

One week after conclusion of the final lesson, student participants completed their confidential written Post-SA during their snack time. Afterschool staff also completed their Post-CSBQ-T surveys during their break time.

### Analysis

Total score and item percentages were calculated for the student participant SA, and independent t-tests were used to compare pre-post scores.

Total score was calculated for the CSBQ-T, and pre-post total scores were compared using paired samples *t*-tests.

## Results

When pre-post student participant total SA scores for knowledge were compared, post-test knowledge scores were statistically significantly higher ( $M = 10.6$ ,  $SD = 2.69$ ) than the pre-test knowledge scores ( $M = 8.03$ ,  $SD = 3.33$ ),  $t(54) = -3.12$ ,  $p = 0.00$ .

The highest post-test scores (96% correctly answered) were for the items: “How you feel during your first weeks at school usually determines your experience for the entire year,” “If you work really hard on your history assignments but always get bad grades, it’s likely because you haven’t used the right strategies,” and “Ryan could become a good student this year if he works hard, asks for help, and uses the right strategies.” The lowest post-test scores (only 48% correctly answered) were for the items: “Which of the following skills can people get better at with practice?” and “What have researchers found is the most effective way to achieve goals?” (Table 1).

For afterschool staff observed pre-post program level of social skills and positive social behavior of the students in their small groups, there were no statistically significant differences between the pre- and post-scores ( $M = 21.24$ ,  $SD = 3.94$  and  $M = 20.94$   $SD = 3.26$ , respectively) on the CSBQT ( $t(32) = 0.65$ ,  $p = 0.52$ ).

## Discussion

Implementing school connectedness interventions may improve student social skills leading to more pro-social behaviors and improved academics (Centers for Disease Control and Prevention, 2018). A small group of elementary-aged students in an afterschool program participated in six weekly lessons of a school connectedness curriculum that focused on social-emotional learning knowledge and skills. Before and after the curriculum intervention, student participant social skill knowledge was assessed. In addition, afterschool staff members observed and reported student participant level of social skills and positive social behavior exhibited. Student knowledge scores significantly improved, however, observed pro-social behaviors did not significantly differ pre-post program.

Many previous school connectedness and climate studies have concentrated on secondary-level students (Allen et al., 2018; Krane et al., 2016; Marraccini & Brier, 2017; Jia et al., 2016), and more studies in the non-school setting have been suggested (Jones & Kahn, 2017; Low et al., 2015). The current exploratory study contributes to the literature as it examined elementary-level students and occurred in the out-of-school time setting.

Student participant social skill knowledge significantly improved possibly due to adherence to the pre-packaged, manualized curriculum. Lesson delivery was also supervised by certified teachers. The teachers gave constructive feedback after each lesson to help improve curricular fidelity. Knowledge gained from the lessons was applied immediately in web-based scenarios that possibly reinforced learning. Students needed to understand lesson concepts in order to apply content to real-world examples. In addition, the small group teaching methodology may have helped students retain knowledge as they were given much instructor attention, far more than in a typical, large classroom-based setting.

The emphasis on applying a goal-setting strategy was also reinforced in each lesson. Interestingly, knowledge assessment questions that almost all student participants correctly answered post-program focused on use of the goal-setting strategy emphasized throughout the lessons. It seems the repetition helped student participants remember the importance of the strategy, a positive accomplishment. A little less than half, though, correctly answered the post-test questions about skill practice and the specific plan used to achieve a goal. Although they understood the goal-setting concept, the specific steps and practice in the plan to achieve it may have been too complex.

Afterschool staff, however, did not observe significant change in student participant level of social skills and positive social behavior. Correct application of the learned concepts and strategies in curricular example scenarios was not reflected in student behavior or practice. Adult recognition of concerning behaviors such as mental or behavioral health issues is important because the issues may affect present and future academic and social success (Association for Children's Mental Health, 2019). Although afterschool staff observed no significant differences in student participant pro-social skill behaviors, the short duration of the intervention may not have been enough time to view any changes. Post-program, staff should continue to intentionally observe student social skills, reward and reinforce pro-social behaviors, and refer students back to the strategies learned during the intervention when student behaviors are inappropriate.

This study was limited due to small sample size from one afterschool program in one region of the county that restricts generalizability of findings. Study design, as there was no control group available, also affects interpretation of data. The use of pre-post-assessment, although conducted on a structured, objective-focused curriculum, may have also limited results. Students may have learned from the pretest, and other classroom or media lessons may have influenced results. Although supplemented by the knowledge assessment, the observation process may have been influenced by afterschool staff bias and short amount of observation time, making generalizability difficult.

Because behavior problems are one of the most common mental health problems that can occur at early ages (Centers for Disease Control and Prevention, 2019), early intervention, like the program in this study, is important for students. It is suggested that additional elementary-level grades and geographically diverse schools be studied, with control groups, in varied out-of-school-time settings. In addition, the viewpoints and voices of elementary students about their perceptions of school connectedness is an avenue for future examination.

## References

- Aldridge, J. M., McChesney, K. (2018). The relationships between school climate and adolescent mental health and wellbeing: A systematic literature review. *International Journal of Educational Research*, 88, 121-145. <https://doi.org/10.1016/j.ijer.2018.01.012>
- Allen, K., Kern, M. L., Vella-Brodrick, D., Hattie, J., Waters, L. (2018). What schools need to know about fostering school belonging: A meta-analysis. *Educational Psychology Review*, 30(1), 1-34. <https://doi.org/10.1007/s10648-016-9389-8>
- Association for Children's Mental Health. (2019). Problems at School. *Association for Children's Mental Health*. Retrieved from [www.acmh-mi.org/get-help/navigating/problems-at-school/](http://www.acmh-mi.org/get-help/navigating/problems-at-school/)
- Berkowitz, R., Moore H., Astor, R. A., Benbenishty, R. (2016). A research synthesis of the associations between socioeconomic background, inequality, school climate, and academic achievement. *American Educational Research Association*, 87(2). <https://doi.org/10.3102/0034654316669821>
- Blank, C., Shavit, Y. (2016). The association between student reports of classmates' disruptive Behavior and student achievement. *American Educational Research Association*. <https://doi.org/10.1177/2332858416653921>
- Centers for Disease Control and Prevention. (2018). School connectedness. *Adolescent and School Health*. Retrieved from [https://www.cdc.gov/healthyyouth/protective/school\\_connectedness.htm](https://www.cdc.gov/healthyyouth/protective/school_connectedness.htm)
- Centers for Disease Control and Prevention. (2019). Data and statistics on children's mental health. *Children's Mental Health*. Retrieved from <https://www.cdc.gov/childrensmentalhealth/data.html>
- Committee for Children. Second Step Grade 6 Unit. (2020). Retrieved from: <https://www.secondstep.org/middle-school-curriculum>
- Cook, C. R., Frye, M., Stemrod, T., Lyon, A. R., Renshaw, T. L., Zhang, Y. (2015). An integrated approach to universal prevention: Independent and combined effects of PBIS and SEL on youths' mental health. *School Psychology Quarterly*, 30(2), 166-183. Retrieved from <https://doi.org/10.1037/spq0000102>
- Jia, Y., Konold, T. R., Cornell, D. (2016). Authoritative school climate and high school dropout rates. *School Psychology Quarterly*, 31(2), 289-303. <https://doi.org/10.1037/spq0000139>

- Jones, S. M., & Kahn, J. (2017). The evidence base for how we learn: Supporting students' social, emotional, and academic development. *Aspen Institute*. Retrieved from [https://www.aspeninstitute.org/wp-content/uploads/2018/03/FINAL\\_CDS-Evidence-Base.pdf](https://www.aspeninstitute.org/wp-content/uploads/2018/03/FINAL_CDS-Evidence-Base.pdf)
- Krane, V., Bengt, K., Ness, O., Kim, H. S. (2016). Teacher-student relationship, student mental health, and dropout from upper secondary school: A literature review. *Psykologisk.no*. <https://doi.org/10.15714/scandpsychol.3.e11>
- Low, S., Cook, C. R., Smolkowski, K., & Buntain-Ricklefs, J. (2015). Promoting social-emotional competence: An evaluation of the elementary version of Second Step®. *Journal of School Psychology*, 53(6), 463-477. <https://doi.org/10.1016/j.jsp.2015.09.002>
- Marraccini, M. E., Brier, Z. M. F. (2017). School connectedness and suicidal thoughts and behaviors: A systematic meta-analysis. *School Psychology Quarterly*, 32(1), 5-21. <https://doi.org/10.1037/spq0000192>
- Maxwell, S., Reynolds, K., Lee, E., Subasic, E., Bromhead, D. (2017). The impact of school climate and school identification on academic achievement: Multilevel modeling with student and teacher data. *Frontiers in Psychology*. <https://doi.org/10.3389/fpsyg.2017.02069>
- Reaves, S., McMahon, S. D., Duffy, S. N., Ruiz, L. (2018). The test of time: A meta-analytic review of the relation between school climate and problem behavior. *Aggression and Violent Behavior*, 39, 100-108. <https://doi.org/10.1016/j.avb.2018.01.006>
- Reynolds, K. J., Lee, E., Turner, I., Bromhead, D., Subasic, E. (2017). How does school climate impact academic achievement? An examination of social identity process. *School Psychology International*. <https://doi.org/10.1177/0143034316682295>
- Warden, D., Cheyne, B., Christie, D., Fitzpatrick, H. & Reid, K. (2010). Assessing children's perceptions of prosocial and antisocial peer behaviour. *Educational Psychology*, 23(5), 547-567. <https://doi.org/10.1080/0144341032000123796>
- Warden, D., Christie, D., Kerr, C. & Low, J. (2006). Children's prosocial and antisocial behaviour, as perceived by children, parents and teachers. *Educational Psychology*, 16(4), 365-378. <https://doi.org/10.1080/0144341960160402>



Table 1: Correct and Incorrect Responses Knowledge Assessment

Item	Pre-Test Students n (%)	Post-Test Students n (%)
1. How you feel during your first weeks at school usually determines your experience for the entire year.		
<b>Correct (False)</b>		
Incorrect	17 (54.8)	24 (96.0)
	14 (45.2)	1 (4.0)
2. You're born with a fixed amount of intelligence, and if you work hard, you can make the most of it.		
<b>Correct (False)</b>		
Incorrect	22 (71.0)	14 (56.0)
	9 (29.0)	11 (44.0)
3. If you use a new strategy to solve a problem, you can strengthen your brain.		
<b>Correct (True)</b>	26 (83.9)	23 (92.0)
Incorrect	5 (16.1)	2 (8.0)
4. Which of the following statements is true?		
<b>Correct (You can grow your brain to make it stronger.)</b>	20 (64.5)	22 (88.0)
Incorrect	11 (35.5)	3 (12.0)
5. Which of the following makes more connections in your brain?		
<b>Correct (Trying something, making a mistake, and trying again.)</b>	20 (64.5)	23 (92.0)
Incorrect	11 (35.5)	2 (8.0)
6. Which of the following statements is true?		
<b>Correct (You can change your personality.)</b>	20 (64.5)	22 (88.0)
Incorrect	11 (35.5)	3 (12.0)

7. If you work really hard on your history assignments but always get bad grades, it's most likely because: <b>Correct (You haven't used the right strategies.)</b>		
Incorrect	16 (51.6)	24 (96.0)
8. Your friend has never done well at math. What should he do to get better? Choose all that apply. <b>Correct (Study harder; Use different strategies; Ask for help.)</b>	15 (48.4)	1 (4.0)
Incorrect	10 (32.3)	14 (56.0)
9. Which of the following skills can people get better at with practice? Choose all that apply. <b>Correct (Learning an instrument; Handling their thoughts and emotions; Solving problems; Getting along with others; Playing a sport.)</b>	21 (67.7)	11 (44.0)
Incorrect	14 (45.2)	12 (48.0)
10. Ryan did so poorly in school last year that he almost got held back. Which of the following statements do you most agree with? <b>Correct (Ryan could become a good student this year if he works hard, asks for help, and uses the right strategies.)</b>	17 (54.8)	13 (52.0)
Incorrect	20 (64.5)	24 (96.0)
11. One of your classmates has made fun of you all year. Which of the following statements about her do you most agree with? <b>Correct (She could become nice, because personalities can change.)</b>	11 (35.5)	1 (4.0)
Incorrect		
12. What should you do after you've set a goal for yourself? <b>Correct (Break your big goal down into small steps, and then make a plan to accomplish each step.)</b>	24 (77.4)	19 (76.0)
Incorrect	7 (22.6)	6 (24.0)
13. What's one characteristic of a good goal? <b>Correct (Measurable)</b>	16 (51.6)	19 (76.0)
Incorrect	15 (48.4)	6 (24.0)
14. What have researchers found is the most effective way to achieve goals? <b>Correct (Creating an IF-THEN PLAN)</b>	9 (29.0)	13 (52.0)
Incorrect	22 (71.0)	12 (48.0)
	15 (48.4)	12 (48.0)
	16 (51.6)	13 (52.0)

Note: Correct responses are in bold font.

