

A Community-Led Intervention to Support Elementary Social-Emotional Skill Development: An Exploratory Study

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Abstract

An afterschool program of a rural, Midwest US school district had no formal, elementary-level, social-emotional learning curriculum. A community-based, youth-serving organization, therefore, implemented a traditional school-based social-emotional learning intervention with full curricular units into the district's afterschool program. The purpose of this exploratory study was to examine elementary student participant social-emotional knowledge and observed social-emotional behaviors before and after the community-led intervention in this school district's afterschool program. Once each week for six weeks, student participants were instructed in 45 minute-long interactive social-emotional learning lessons that used streaming video to teach pro-social knowledge and skills. Student participants' social-emotional knowledge (measured by Knowledge Assessment accompanying the program) as well as frequency of observed sharing and befriending pro-social behaviors (measured by Child Social Behavior Questionnaire/Teacher-Rating Version) significantly increased pre-post program. However, frequency of observed physical and psychological abuse (negative social behaviors) as well bullying victimization were not significantly decreased. If results of this exploratory study are confirmed in future, larger studies, social-emotional learning programs can be effective additions to afterschool programs to enhance school-based outcomes.

Keywords: Social-emotional skills, elementary students, self-management, intervention.

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Introduction

Cognition and emotion have been strongly connected in neuroscience research; and social-emotional skills, competencies needed for school, work, and future life success, are linked to the learning process (Jones & Kahn 2017; Greenberg et al. 2017). For students, goal-setting, relationship-building, personal behavior management, and planning are important developmental tasks to master in order to achieve academically. Accomplishment of those tasks requires a foundation of strong social-emotional skills. Social-emotional skills such as effective coping, emotional regulation and self-management, empathy and relationships skills, and cooperation can be learned and practiced (Jones & Kahn 2017). Social-emotional learning theory is based in prevention science with a research-to-practice focus (Jones et al., 2019). In the social-emotional learning framework, developmentally-appropriate acquisition of these skills in a supportive learning environment helps students make responsible, healthy decisions (Collaborative for Academic, Social, and Emotional Learning, n.d.).

Connecting academics with healthy development of these interconnected skills leads to educating the whole child to prepare them for future success. Integrating quality social-emotional learning programs at the school site, in particular, has been found to improve student academic achievement in math and reading and in positive classroom behaviors (Corcoran et al., 2018; Jones & Kahn 2017). In a systematic review of school-based programs that focused specifically on the outcome of participant social-emotional skill development as part of a whole school approach, these types of interventions showed some potential for positive outcomes (Sancassinni et al., 2015). Social-emotional-based programs may also impact risky health behaviors in students (Greenberg et al. 2017).

Social-Emotional Learning at the Elementary Schoolsite

An example of an evidence-based social-emotional learning intervention for the elementary level is Second Step. A widely used curriculum, Second Step provides students instruction and practice in social-emotional competencies (Committee for Children 2018). In the most recent meta-analysis, participants in the Second Step Program demonstrated improved pro-social knowledge and skills (Moy & Hazen 2018). Specifically for elementary Second Step participants in school-based studies, a longitudinal study demonstrated improved academic achievement levels and pro-social skills (Top et al, 2016), and another study suggested that those with lower social-emotional skills and higher problem behaviors at pre-test improved their skill levels most as noted by their teachers (Low et al. 2015). Second Step also meets many of the late elementary goals [Self-awareness, Self-management, Social awareness, Relationship skills, Decision-making] for Social-Emotional Learning (Lindsey et al, 2014).

In other examples, elementary students participating in a social-emotional intervention who were matriculating to middle school were followed over the years. Their misconduct behaviors and social-emotional skill development were observed and noted. Program effects were promising for both across many types of student demographics (Duncan et al. 2017). Interventions to prevent risky health behaviors in elementary students were seen as most effective if social-emotional skill enhancement, especially emotional management, relationship skills, and decision-making skills, were emphasized (Onrust et al. 2016). Those elementary students participating in a social-emotional learning program on drug prevention improved not only their social-emotional skills but also their resistance and refusal skills and decision-making skills (Day et al. 2017). In addition, academically at-risk elementary students participating in a social-emotional learning program were assessed not only on social-emotional competencies but also on physical health behaviors during a longitudinal study. Participant self-reported health behaviors improved some over time even though the program primarily focused on social competency development (Bavarian et al. 2016).

Afterschool Time

In general, out-of-school time or afterschool programs have been demonstrated to help improve student academic achievement, school attendance and participation, as well as to decrease school discipline and poor conduct incidents, problem behaviors, and substance use (Afterschool Alliance 2017). Effective afterschool programs, usually sponsored by schools and community partner agencies, offer a variety of high quality, supervised remedial and enrichment activities and allow students to connect with adult role models during out-of-school time. Coordinated programs that use active-learning strategies let students practice not only academic skills but also some life skills in a supportive environment (Jones et al., 2018). For example, technology-assisted learning activities in the afterschool have been shown to enhance and supplement academic content learned during classroom lessons (Jagust et al., 2018). In a life skills intervention for rural elementary students during out-of-school-time, participants' self-reported non-tobacco use attitudes improved (Tymes et al., 2016).

Although most studies have been conducted at the school site, the afterschool setting may be appropriate for social-emotional learning interventions due to their active-learning focus. Social-emotional learning studies implemented in the field and in authentic out-of-school settings are now recommended (Low et al. 2015). It is recommended, too, that social-emotional skill development for students be included in afterschool programs to reinforce any programming at the school site (Jones & Kahn 2017). Therefore, the purpose of this exploratory study was to determine any change in student participant social-emotional knowledge and observed social-emotional behaviors before and after

implementation of the Second Step program for elementary students in an afterschool setting.

Methods

Procedure

During spring 2020, in one rural, Midwest US school district with no formal elementary level, social-emotional learning curriculum, the school district's afterschool program offered Second Step, a social-emotional learning curriculum for students. The traditional school-based Second Step intervention with full curricular units was conducted in the afterschool program. Members of a local community-based positive youth development coalition purchased the Second Step K-5 Bundle that included lesson manuals, streaming media, and online training, donated it to the afterschool program, and volunteered to implement the intervention.

Prior to program implementation, six adult community-member volunteers from the coalition, all with youth development or youth health-related backgrounds, were trained as program facilitators. They first participated in an online training included with the curriculum. Three self-paced training modules included Program Overview, Teaching the Lessons, and Reinforcing Skills and Concepts. An experienced classroom teacher acted as a trainer and helped volunteers with social-emotional program implementation. Volunteer program facilitators reviewed each lesson and practiced teaching the lesson with trainer feedback. As program facilitators, they were instructed to follow the lesson plans accompanying each unit of instruction and were supervised during the lesson implementation by the trainer to support curricular fidelity.

Intervention

Student program participants attended a 2.5 hour-long afterschool program housed at the schoolsite. The afterschool schedule followed a set activity rotation of snack in the cafeteria including individual homework time followed by supervised recess activity and games in the gymnasium. In the activity rotation, the social-emotional learning intervention immediately followed snack time.

All student participants entered the cafeteria at the same time for the intervention and sat in small groups at one of six pre-designated tables. Two program facilitators were assigned to each small group of five students at a table, with one group of six students. For each weekly lesson, the small groups met with their assigned program facilitator at the same cafeteria table. All students attended all of the lessons according to the afterschool attendance sheet; however, three students always had to leave 10 minutes early for early pick-up by their parents. Using streaming videos and interactive lessons on a laptops for

each small group, program facilitators taught three units of Second Step SEL instruction that included the titles of Empathy and Skills for Learning, Emotion Management, and Problem Solving. Every Wednesday for six weeks, the 45-minute long lessons were presented at the school cafeteria tables. Empathy and Skills for Learning Unit included content covering listening with respect, being assertive, understanding different perspectives, and joining in. Emotion Management Unit covered the topics of managing feelings, calming down after anger, and handling put-downs. Problem Solving Unit reviewed making a plan, solving playground problems, and dealing with peer pressure. All lessons started with video scenarios of potential social and emotional problem situations experienced by characters similar to the student participants. The video was stopped, and student participants discussed alternative solutions with the program facilitators and each other. Instructional content was then presented by the program facilitators. After discussion and instruction, the video scenarios were continued for all to observe and comment on character actions and choices. Lesson supplements and content reinforcements included songs, games, and take-home materials.

Participants

After Institutional Review Board approval, afterschool program director consent, parent/guardian consent, and student participant assent, all 31 elementary students attending the afterschool program participated in this study. Student participants were in grades three through five with 29 Caucasian and two Asian-American. The sex of the student participants was evenly split with 16 females and 15 males. Most participants were in third grade ($n = 23$, 74.2%) with only three and five students in grades fourth and fifth, respectively. Student participants were fairly representative of the elementary school population which is about 54% male and 92% White.

All six afterschool program supervisors consented and participated in this study. Each afterschool supervisor oversaw and managed a small group of the students as they rotated through afterschool activity stations, including the intervention program. Two (33%) supervisors were male, all were Caucasian, and all were between the ages of 20-24 years old.

Instruments

Pre-post-intervention student participant social emotional knowledge was assessed using the Knowledge Assessment [KA] accompanying the curriculum (Committee for Children 2011). The 12-question, content-valid, multiple-choice quiz included questions directly related to lesson content: Empathy and Skills for Learning, Emotion Management, and Problem Solving. Examples of questions included: 'Select the first two things you should do to calm down', 'Which of the following is not one of the problem-solving steps?'

and ‘What are some things you can do to keep a conversation going?’ Scoring is number of correctly answered questions. Student participants completed the confidential, written Pre-KA one week before the start of the intervention. Post-intervention, student participants completed their confidential written Post-KA one week after the last intervention session. All completed pre-post surveys were placed in sealed envelopes for the researcher.

Afterschool program supervisors used the Child Social Behavior Questionnaire/Teacher-Rating Version [CSBQ-T] (Warden et al. 1996; Warden et al. 2003) to rate pre-post, observed, student participant positive and negative social-emotional behaviors. The instrument uses a 5-point (1=Very Often to 5=Never) scale for teachers to rate how often student participants display five measures: two positive social-emotional behaviors [Sharing, Befriending], two negative social-emotional behaviors [Physically hurting someone, Psychologically hurting someone], and one victimization behavior [Victim of bullying]. The prosocial and antisocial scales have both demonstrated good reliability ($\alpha = 0.89$) (Warden et al. 2003). Lower scores indicate a behavior occurring more frequently, while higher scores reflect the behavior occurring less frequently. For each student participant in their supervised group, afterschool supervisors completed the Pre-CSBQ-T one week before the start of the intervention. Supervisors also completed their Post-CSBQ-T one week after the last intervention session. All completed pre-post-surveys were placed in sealed envelopes for the researcher. The intervention program in this study was started a month into the spring semester of the afterschool program, as the afterschool supervisors would have ample time to observe the student participants and their typical behaviors.

Analysis

For the KA, items were coded as correct (1) and incorrect (0). Items that were left blank were considered incorrect. Total score were computed by summing all items and paired a *t*-tests was used to compare pre-post scores. Item scores for the CSBQ-T, were coded from 1 to 5 (“very often” to “never”) and pre-post scores were compared using paired *t*-tests. Items that were missing were excluded from analysis. All data were analyzed using IBM SPSS 26. A Bonferroni correction was made to account for multiple *t*-tests adjusting alpha from .05 to .01.

Results

Social-emotional knowledge of student participants significantly improved from pre- (M = 4.45, SD = 1.73) to post- (M = 8.16, SD = 2.71) intervention ($t(30) = -6.08, p = 0.00$).

On each of the five measures used to assess pre-post observed student participant social-emotional behaviors (Sharing, Befriending, Physically hurting someone, Psychologically hurting someone, Victim of bullying), statistically significant pro-social improvements were noted for two measures after making a Bonferroni adjustment. There was a statistically significant/occurring more frequently difference in the mean scores of the pre- ($M = 2.89$, $SD = 0.92$) and post- ($M = 2.39$, $SD = 0.75$) item for Sharing things ($t(45) = 4.19$, $p = 0.00$). In addition, there was a statistically significant/occurring more frequently difference in the mean scores of the pre- ($M = 3.04$, $SD = 0.97$) and post- ($M = 2.54$, $SD = 0.86$) item for Befriending others ($t(45) = 4.05$, $p = 0.00$). There was not a statistically significant/occurring less frequently difference in the mean scores of the pre- ($M = 4.24$, $SD = 0.77$) and post- ($M = 4.48$, $SD = 0.59$) item for Physically hurting others ($t(45) = -2.12$, $p = 0.04$). Likewise, there was not a statistically significant/occurring less frequently difference in the mean scores of the pre- ($M = 3.91$, $SD = 0.76$) and post- ($M = 4.22$, $SD = 0.63$) item for Psychologically hurting others ($t(45) = -2.84$, $p = 0.01$). Lastly, there was not a statistically significant/occurring less frequently difference in the mean scores of the pre- ($M = 3.52$, $SD = 1.09$) and post- ($M = 3.93$, $SD = 0.44$) item for being a Victim of bullying ($t(45) = -2.49$, $p = 0.02$). See Table 1.

Discussion

Afterschool programs are out-of-school time strategies that allow students opportunities to reinforce academic and other skills learned during the school day (Jones et al. 2018). An elementary level social-emotional learning intervention, Second Step, was implemented by a community coalition in an afterschool program of a rural, Midwest US school district that had no formal elementary level social-emotional learning curriculum. Afterschool student participant social-emotional knowledge as well as frequency of observed sharing and befriending (pro-social skills) significantly increased pre-post program. Practicing such skills can lead to the establishment of friendships, and early friendships can improve children's quality of life and ability to adjust positively to change (Exchange Family Center, 2019). However, frequency of observed physical and psychological abuse (negative social behaviors) as well bullying victimization were not significantly decreased.

Although the afterschool intervention in the current study was not directly aligned with a formal school-based social-emotional learning curriculum, it may have still reinforced some social-emotional support training teachers could have received during professional development that was indirectly passed to students (Jones & Kahn 2017). If the district implements a formal social-emotional curriculum in the future, the afterschool program and district may wish to coordinate content and instruction schedules. The

ultimate aim is to deliver complementary content in both settings to support and enrich school-based learning.

Results of this study set in the afterschool are consistent with some promising improvements observed in elementary student social-emotional competency in school-based interventions (Duncan et al. 2017; Day et al. 2017). Specifically, student participants in this afterschool study using the Second Step curriculum improved pro-social behaviors (sharing/befriending) similar to results from school-based Second Step interventions (empathy) (Moy & Hazen 2018; Top et al, 2016). Results from the current study were specific to improving pro-social behaviors but not for decreasing negative behaviors and experiences (hurting others and being a victim). The school-based programs, on the other hand, decreased negative behaviors (disruptive classroom behaviors) (Moy & Hazen 2018; Top et al, 2016). Further research should be considered to investigate this phenomenon and its implications.

Nonetheless, the findings of this exploratory study indicate that in the afterschool, too, high-quality social-emotional learning interventions can positively affect social skill knowledge and some behaviors. Positive outcomes possibly resulted because the social-emotional learning intervention in this study followed best practices for effective school-based programs. The curriculum focused on self-management, social awareness, and relationship skills included as goals for social-emotional learning (Lindsey et al, 2014). It included lessons and activities [Empathy and Skills for Learning, Emotion Management, and Problem Solving units] dedicated to emotional management, relationship skills, and decision-making skills that have been shown to enhance social skill development (Onrust et al. 2016).

In addition, high-quality afterschool programs, with comprehensive, adult-facilitated, active-learning activities, have also been shown to impact student learning (Afterschool Alliance, 2017). Therefore, as student participants viewed and discussed with adult program facilitators the decisions and actions made by students in the video scenarios, student participants possibly identified and empathized with some of the characters. Becoming more aware of their own behaviors and more knowledgeable of pro-social behaviors may have contributed to the observed behavior change due to program quality and adult-led, interactive activities.

As an exploratory study to determine the usefulness of any future investigations, the pre-experimental design of this study is limiting. Results may be due to factors other than the intervention such as informal social-emotional learning in classrooms or through mass media. The lessons were monitored by the trainer for fidelity; however, the trainer had to observe the teaching groups simultaneously due to use of multiple cafeteria table

groups. Also, results may not be generalizable or universal due to lack of a control group, small sample size, and focus on one afterschool program curriculum and setting.

With some promising results for student participants, it is recommended that this study be conducted again using a larger sample of elementary afterschool programs with the addition of control groups. It would also be important to examine this intervention in an afterschool program based in a non-school building setting such as a community facility or recreation center. In addition, other out-of-school time settings like faith-based groups, community-agencies, and positive youth development organizations may provide opportunities to teach social-emotional learning programs that can also assist in continuation of student academic and social skill improvement outside of the school setting.

Conclusion

If results of this exploratory study are confirmed in future, larger studies, social-emotional learning programs can be effective additions to afterschool programs to enhance school-based outcomes. Social-emotional skills, critical to learning and life success (Jones & Kahn 2017; Greenberg et al. 2017), can be learned and practiced (Jones & Kahn, 2017). The afterschool setting can be an important opportunity for students to continue to study and apply social skills training after the school day has ended. Future expansion of social-emotional learning initiatives from school to afterschool to family/community may best promote seamless, comprehensive supports to address student needs in the academic and nonacademic domains.

References

- Afterschool Alliance. (2017). What does the research say about afterschool? Retrieved February 15, 2020 from http://afterschoolalliance.org/documents/What_Does_the_Research_Say_About_Afterschool.pdf.
- Bavarian, N., Lewis, K., Acock A., DuBois, D., Yan, Z., Vuchinich, S., Silverthorn, N., Day, J., & Flay, B. (2016). Effects of a school-based social-emotional and character development program on health behaviors: A matched-pair, cluster-randomized controlled trial. *The Journal of Primary Prevention*, 37 (1), 87-105.
- Collaborative for Academic, Social, and Emotional Learning. (n.d.) What Is the CASEL Framework? Retrieved June 5, 2021 from <https://casel.org/fundamentals-of-sel/what-is-the-casel-framework/>

- Committee for Children. (2018). What is Second Step? Retrieved February 15, 2020 from <https://www.secondstep.org/what-is-second-step>.
- Committee for Children. (2011). Second Step Social Emotional Learning. Retrieved February 12, 2020 from <https://www.secondstep.org/second-step-social-emotional-learning>
- Corcoran, R., Cheung, A., Kim, E., & Xie, C. (2018). Effective universal school-based social and emotional learning programs for improving academic achievement: A systematic review and meta-analysis of 50 years of research. *Educational Research Review*, 25, 56-72. <https://doi.org/10.1016/j.edurev.2017.12.001>
- Day, L., Miller-Day, M., Hecht, M., & Fehmie, D. (2017). Coming to the new D.A.R.E.: A preliminary test of the officer-taught elementary Keepin it REAL curriculum. *Addictive Behaviors*, 74, 67-73. doi:10.1016/j.addbeh.2017.05.025
- Duncan, R., Washburn, I., Lewis, K., Bavarian, N., Dubois, D., Acock, A., Vuchinich, S., & Flay, B. (2017). Can universal SEL programs benefit universally? Effects of the Positive Action program on multiple trajectories of social-emotional and misconduct behaviors. *Prevention Science*, 18 (2), 214-224. doi:10.1007/s11121-016-0745-1
- Exchange Family Center. (2019). *The benefits of early childhood friendships and 3 tips for helping your child establish meaningful friendships*. <https://www.exchangefamilycenter.org/exchange-family-center/blog/2019/10/1/the-benefits-of-early-childhood-friendships-and-3-tips-for-helping-your-child-establish-meaningful-friendships>.
- Greenberg, M., Domitrovich, C., Weissberg, R., & Durlak, J. (2017). Social and emotional learning as a public health approach to education. *The Future of Children*, 27(1), 13-32.
- Jagušt, T., Botički, H., & So, J. (2018). A review of research on bridging the gap between formal and informal learning with technology in primary school contexts. *Journal of Computer Assisted Learning*, 34 (4), 417-428. <https://doi.org/10.1111/jcal.12252>
- Jones, S., McGarrah, M., & Kahn, J. (2019). Social and emotional learning: A principled science of human development in context. *Educational Psychologist*, 54(3), 129-143. <https://doi.org/10.1080/00461520.2019.1625776>
- Jones, S., Bailey, R., Brush, K., & Kahn, J. (2018). Preparing for effective SEL implementation. Harvard Graduate School of Education. Retrieved January 15,

- 2020 from <https://www.wallacefoundation.org/knowledge-center/Documents/Preparing-for-Effective-SEL-Implementation.pdf>.
- Jones, S., & Kahn, J. (2017). The evidence base for how we learn: Supporting students' social, emotional, and academic development. National Commission on Social, Emotional, and Academic Development. Retrieved January 12, 2020 from https://assets.aspeninstitute.org/content/uploads/2018/03/FINAL_CDS-Evidence-Base.pdf?_ga=2.123469643.1377664628.1601408436-2089655819.1601408436
- Lindsey, B., Smith, K., Cox, T., James, M., Alvarez, M., & Kunkel, R. (2014). School Social Work National Standards for Social Emotional Learning. School Social Work Association of America. Retrieved December 28, 2020 from: http://www.msswa.org/resources/Documents/SSW%20Manual/School_Social_Work_SEL_Stand.pdf
- Low, S., Cook, C., 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. doi:10.1016/j.jsp.2015.09.002
- Moy, G., & Hazen, A. (2018). A systematic review of the Second Step program. *Journal of School Psychology, 71*, 8-41. doi:10.1016/j.jsp.2018.10.006
- Onrust, S., Otten, R., Lammers, J., & Smit, F. (2016). School-based programmes to reduce and prevent substance use in different age groups: What works for whom? Systematic review and meta-regression analysis. *Clinical Psychology Review, 44*, 5-59. doi: 10.1016/j.cpr.2015.11.002
- Sancassiani, F., Pintus, E., Holte, A., Paulus, P., Moro, M., Cossu, G., Angermeyer M., Carta M., Lindert, J. (2014). Enhancing the emotional and social skills of the youth to promote their wellbeing and positive development: A systematic review of universal school-based randomized controlled trials. *Clinical Practice & Epidemiology in Mental Health, 11* (1), 21-40. doi:10.2174/1745017901511010021
- Stalker, K., Wu, Q., Evans, C., & Smolkowski, P. (2018). The impact of the Positive Action program on substance use, aggression, and psychological functioning: Is school climate a mechanism of change? *Children and Youth Services Review, 84*, 143-151. doi:10.1016/j.childyouth.2017.11.020
- Top, N., Liew, J., & Lou, W. (2016). Effects of Second Step curriculum on behavioral and academic outcomes in 5th and 8th grade students: A longitudinal study on character development. *Novitas-ROYAL, 10*(1), 24-47. <https://hdl.handle.net/11491/4972>

Tymes, D., Outlaw, K., & Hamilton, B. (2016) Life skills interventions to improve social confidence, self-management, and protection against drug use in rural elementary school aged children. *Journal of Community Health Nursing*, 33 (1), 11-19. doi:10.1080/07370016.2016.1120592

Warden, D., Cheyne, B., Christie, D. Fitzpatrick, H., & Reid, K. (2003). Assessing children's perceptions of prosocial and antisocial peer behavior. *Educational Psychology*, 23(5), 547-567.

Warden, D., Christie, D., Kerr, C., & Low, J. (1996). Children's prosocial and antisocial behaviour, as perceived by children, parents and teachers. *Educational Psychology*, 16 (4), 65-378.

Table 1
Paired Samples *t*-Test Results for the Child Social Behavior Questionnaire/Teacher-Rating Version Scales

Items	N	Pre Mean	Pre SD	Post Mean	Post SD	df	t	p
Sharing	46	2.89	0.92	2.39	0.75	45	4.19	0.00*
Befriending	46	3.04	0.97	2.54	0.86	45	4.05	0.00*
Physically Hurting	46	4.24	0.77	4.48	0.59	45	- 2.12	0.04
Psychologically Hurting	46	3.91	0.76	4.22	0.63	45	- 2.84	0.01
Victim of Bullying	46	3.52	1.09	3.93	0.44	45	- 2.49	0.02

Note: Scores ranged from 1 (very often) to 5 (never) **p*<.01