



Bilaga 4 Inkluderade studier

Appendix 4 Included studies

SEL-based programs (54 studies)	2
Experiences of SEL-based programs (11 studies)	83
Mindfulness and Yoga-programs (16 studier)	91
Experiences of Mindfulness and Yoga-programs (6 studies)	115
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Other programs (21 studies)	127
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SEL-based programs (54 studies)

Author	Allen
Year	2020
Country	USA
Ref	[1]
Study design	Randomized controlled trial
Study protocol	No information
Setting	High school
Inclusion criteria	Informed consent from parents and assent from students was obtained prior to randomization
Follow up	Prior to the beginning of the intervention, in the week immediately following completion (12 weeks) of the intervention, and 4 months following completion of the intervention.
Population characteristics	<p>High school children, year 10</p> <p>Intervention group:</p> <p>Age; Mean (SD): Not stated</p> <p>Sex;(Percent girls): 50.3 %</p> <p>Socioeconomic/educations; Mean (SD):</p> <p>Parental education (1 = less than high school to 4 = college graduate or higher): 3.02 (1.02)</p> <p>(Free or reduced school lunch for total population: 67%, not specified on group level)</p> <p>Control group:</p> <p>Age; Mean (SD): Not stated</p> <p>Sex (Percent girls): 52.5</p> <p>Socioeconomic/educations; Mean (SD):</p> <p>Parental education (1 = less than high school to 4 = college graduate or higher): 3.04 (1.02)</p> <p>(Free or reduced school lunch for total population: 67%, not specified on group level)</p>
Intervention program	The Connection Project
Program extent	<p>Number of sessions: 12</p> <p>Intensity: One 45-60 min sessions / week</p> <p>Duration: 12 weeks</p> <p>Attendance Mean (SD): 9.8 (2.7)</p> <p>Implementation:</p>
Participants (n)	322
Drop-outs (n)	<p>End of intervention: 54</p> <p>4 months follow up: 24</p>
Program Deliverer	Classroom teachers

	<i>Training: 2-day workshop led by the authors. Weekly or biweekly supervision via video conference was then provided.</i>
Comparison program	<i>Common school curriculum (no specific program)</i>
Participants (n)	<i>288</i>
Drop-outs (n)	<i>End of intervention: 38 4 months follow up: 29</i>
Program Deliverer	<i>Not applicable</i>
Outcomes	<i>Outcome</i> <u><i>Coping strategies:</i></u> <i>Coping scale, Coping scale indication</i> <i>SMD: 0.19, 95% CI (0.00 to 0.38); p=0.04</i>
Comments	<i>Additional outcomes:</i> <i>Degree of their depressive symptoms; Child Depression Inventory (Kovacs & Beck, 1977)</i> <i>Comfort with classmates and Peer-rated approachability; rate each student in terms of how comfortable they felt around them, with ratings ranging from 1 = I always keep my guard up to 5 = I'm always open.</i> <i>Classroom academic engagement; 10-item scale that tapped student effort, attention, and persistence while initiating and participating in learning activities (Skinner, Furrer, Marchand, & Kindermann, 2008; Skinner, Zimmer-Gembeck, & Connell, 1998)</i>
Risk of bias	<i>Moderate</i>
Author	<i>An</i>
Year	<i>2021</i>
Country	<i>China</i>
Ref	<i>[2]</i>
Study design	<i>Randomized controlled trial</i>
Study protocol	<i>No information</i>
Setting	<i>Elementary public school</i>
Inclusion criteria	<i>Informed consent from parents/guardians</i>
Follow up	<i>Post intervention, 2 months</i>
Population characteristics	<i>School children, year 5</i> <i>Intervention group:</i> <i>Age, years; Mean (SD): Not stated</i> <i>Sex; (Percent girls): Not stated</i> <i>Socioeconomic/educations; Mean (SD): Not stated</i> <i>Control group:</i> <i>Age, years; Mean (SD): Not stated</i> <i>Sex;(Percent girls): Not stated</i> <i>Socioeconomic/educations; Mean (SD): Not stated</i>

	<p>Total population: Age, years; Mean (SD): 11-12 Sex; (Percent girls): 51.83% Socioeconomic/educations; Mean (SD): Not stated</p>
<p>Intervention program Program extent</p>	<p>SEL programs (Durlak et al., 2011)</p> <p>Number of sessions: 8 Intensity: 40 min session weekly Duration: 8 week Attendance: Not stated Implementation: Not stated</p>
<p>Participants (n) Drop-outs (n) Program Deliverer</p>	<p>111 5 Classroom teachers Training: not stated</p>
<p>Comparison program Participants (n) Drop-outs (n) Program Deliverer</p>	<p>Common school curriculum (no specific program)</p> <p>53 7 Not applicable</p>
<p>Outcomes</p>	<p>Outcome <u>Social and emotional competence (CASEL 3: Social awareness):</u> The Emotional Intelligence Questionnaire $t=2.09$, $p<0.05$ (Calculated: 0.35 (0.02 till 0.68))</p>
<p>Comments Risk of bias</p>	<p>Additional outcomes: Class environment; The Class Environment Questionnaire, (Jiang, 2004) Students perception of the SEL intervention; The survey contained two open-ended questions: (1) How do you feel about this curriculum? and (2) What have you learned from the curriculum? Moderate</p>
<p>Author Year Country Ref</p>	<p>Ashdown 2012 Australia [3]</p>
<p>Study design Study protocol Setting Inclusion criteria Follow up</p>	<p>Randomized controlled trial No information Preparatory school, Not stated End of intervention, 10 weeks.</p>

<p>Population characteristics</p> <p>Participants:</p> <p>Drop Out:</p>	<p><i>Prep school and grade 1 classes. Preparatory classes were 5-year- olds</i></p> <p><i>Intervention group:</i></p> <p><i>Age; Mean (SD): Not stated</i></p> <p><i>Sex;(Percent girls): Not stated</i></p> <p><i>Socioeconomic/educations; Mean (SD):</i></p> <p><i>The participating school had been identified as being of 'low socioeconomic status' according to the Catholic Education Office (Melbourne)</i></p> <p><i>Control group:</i></p> <p><i>Age; Mean (SD): Not stated</i></p> <p><i>Sex (Percent girls): Not stated</i></p> <p><i>Socioeconomic/educations; Mean (SD):</i></p> <p><i>The participating school had been identified as being of 'low socioeconomic status' according to the Catholic Education Office (Melbourne)</i></p> <p><i>Total population</i></p> <p><i>Age; Mean (SD): Not stated</i></p> <p><i>Sex (Percent girls): 45%</i></p> <p><i>4 teachers, 100 students</i></p> <p><i>1 student</i></p>
<p>Intervention program</p> <p>Program extent</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p><i>You Can Do It! Early Childhood Education Program</i></p> <p><i>Number of sessions: 90</i></p> <p><i>Intensity: 20 min, 3 sessions per week</i></p> <p><i>Duration: 10 weeks per term for 3 terms, (1 school year is 4 terms)</i></p> <p><i>Attendance: Not stated</i></p> <p><i>Implementation: neither teacher closely followed the scripted lesson plans in the YCDI curriculum manual</i></p> <p><i>Not stated</i></p> <p><i>Not stated</i></p> <p><i>Classroom teachers</i></p> <p><i>Training: 2 hour development session</i></p>
<p>Comparison program</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p><i>Common school curriculum (no specific program)</i></p> <p><i>Not stated</i></p> <p><i>Not stated</i></p> <p><i>Not applicable</i></p>
<p>Outcomes</p>	<p><i>Outcome</i></p> <p><u><i>Subjected pshychological well-being:</i></u></p> <p><i>Social-emotional well-being</i></p> <p><i>ACER Well-being Survey (Teacher Form—Early Years) (Bernard et al. 2009), Part 1</i></p> <p><i>Eta2: 0.16; F1,95 = 18.52; p<0.01</i></p>

	<p><u>Social and emotional competence (CASEL 4: Relationship skills):</u></p> <p>Total social-emotional competence</p> <p>ACER Well-being Survey (Teacher Form—Early Years) (Bernard et al. 2009), Part 2</p> <p>eta:0.32. d*=1.3; CI: 0.9 to 1.8</p>
Comments	<p>Additional outcomes:</p> <p>Problem Behaviors; Social Skills Rating System—Teacher Form (SSRS-T) (Gresham and Elliot 1990)</p> <p>Independent Text Reading Level</p>
Risk of bias	Moderate
Author	Bermejo-Martins
Year	2019
Country	Spain
Ref	[4]
Study design	Randomized controlled trial
Study protocol	No information
Setting	Public school
Inclusion criteria	(a) Children enrolled in a public school; (b) aged 5 and 6 years old; (c) taking part of the school's extracurricular activities; (d) able to read and/or speak in Spanish; and (e) with their caregivers' informed consent.
Follow up	Post test (4 -6 weeks from start) - test measure and 7 - months follow - up
Population characteristics	<p>School children, age 5-6 years</p> <p>Intervention group:</p> <p>Age; Mean (SD):</p> <p>Sex;(Percent girls):</p> <p>Socioeconomic/educations; Mean (SD):</p> <p>Control group:</p> <p>Age; Mean (SD):</p> <p>Sex (Percent girls):</p> <p>Socioeconomic/educations; Mean (SD):</p>
Intervention program	CRECES programme
Program extent	<p>Number of sessions: 8</p> <p>Intensity: 40-50 min twice per week</p> <p>Duration: 4 weeks</p> <p>Attendance:</p> <p>Implementation:</p>
Participants (n)	19
Drop-outs (n)	Post test: 0 - 2

Program Deliverer	7 month follow up: 0 - 1 First author, a mental health nurse with the support of an infant teacher Training: Not stated
Comparison program	Common school curriculum (no specific program)
Participants (n)	18
Drop-outs (n)	Post test: 0 - 2 7 month follow up: 0 - 2
Program Deliverer	Not applicable
Outcomes	<p>Outcome</p> <p><u>Social and emotional competence (CASEL 3: Social awareness):</u> The ability test Perceval v.2.0 test (Mestre, Guil, Martínez - Cabañas, Escandón, & Gonzalez de la Torre, 2011) Cohens´d: 0.56; CI 95%: -0.12 to 1.25</p> <p><u>Social and emotional competence (CASEL 4: Relationship skills):</u> Preschool and Kindergarten Behavior Scale (PKBS - II; Merrell, 2003) Cohen´s d: 0.10; 95%CI: -0.61 to 0.8. (Not significant result)</p> <p><u>Subjective Psychological well-being (Health Related Quality of Life - HRQoL)</u> Child Health and Illness Profile; Child and Parent - Edition (CHIP - CE/PE; Riley et al., 2004) Cohens´d: 0.02; 95% CI:-0.66 to 0.69</p>
Comments	Additional outcomes: The Peabody Picture Vocabulary Test - Third Edition (PPVT - III; Dunn & Dunn, 1997)
Risk of bias	Low
Author	Bierman
Year	2008
Country	USA
Ref	[5]
Study design	Randomized controlled trial
Study protocol	No information
Setting	Preschool
Inclusion criteria	Consent by parents and complete preassessment. If siblings, only one of them was included in study.
Follow up	End of intervention, approximately 25 weeks of exposure of 35 week program.
Population characteristics	Preschool children, 4 years old Total population: Age; Mean (SD): 4 years old Sex;(Percent girls): 54%

	<p>Socioeconomic/educations; Mean (SD): Not stated</p> <p>Intervention group:</p> <p>Age; Mean (SD): Not stated</p> <p>Sex;(Percent girls): Not stated</p> <p>Socioeconomic/educations; Mean (SD): Not stated</p> <p>Control group:</p> <p>Age; Mean (SD): Not stated</p> <p>Sex (Percent girls): Not stated</p> <p>Socioeconomic/educations; Mean (SD): Not stated</p>
<p>Intervention program</p> <p>Program extent</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p>PATHS - Head Start REDI (Research-based, Developmentally Informed)</p> <p>Number of sessions: 33 lessons</p> <p>Intensity: 1 lesson and one extension activity per week</p> <p>Duration: One schoolyear, 35 weeks</p> <p>Attendance: Not stated</p> <p>Implementation: 1.77 (SD: 0.12) lessons and extension activities per week</p> <p>22 Classrooms, about 14 children per classroom</p> <p>Not stated</p> <p>Classroom teachers</p> <p>Training: 3 days pre intervention, 1 booster day mid intervention, manuals and kits, weekly mentoring support by educational consultants</p>
<p>Comparison program</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p>Common school curriculum (no specific program)</p> <p>22 Classrooms, about 14 children per classroom</p> <p>Not stated</p> <p>Not applicable</p>
Outcomes	<p>Outcomes</p> <p><u>Social and emotional competence (CASEL 3: Social awareness):</u></p> <p>Assessment of Children's Emotions Scales (ACES)</p> <p>*SMD: 0.14; CI: -0.07 to 0.35</p> <p><u>Social and emotional competence (CASEL 4: Relationship skills):</u></p> <p>Social Competence Scale (SCS), sub scale: Prosocial behaviour</p> <p>Teacher rating: ES: 0.24; p=0.10</p> <p>Parent rating: ES: 0.09; p=0.24</p> <p>Observer rating: ES: 0.26; p=0.08</p> <p><u>Social and emotional competence (CASEL 5: Responsible decision making):</u></p> <p>Challenging Situations Task (CST)</p> <p>Effect size (η^2): 0.35; p=0.005</p>

Comments	<p><i>Additional outcomes:</i></p> <p><i>Language skills; Expressive One-Word Picture Vocabulary Test Test of Language Development (TOLD)</i></p> <p><i>Emergent literacy skills; Three subscales of Test of Preschool Early Literacy (TOPEL; previously labelled the Pre-CTOPP)</i></p> <p><i>Emotional understanding and social-cognitive skills; Emotion Recognition Questionnaire Variation of the Challenging Situations Task</i></p> <p><i>Social-emotional behaviors; Seven items from the Teacher Observation of Child Adaptation – Revised (TOCA– R), Six items from the Preschool Social Behavior Scale – Teacher Form</i></p> <p><i>Learning engagement at school; Eight-item inventory developed for the study ADHD Rating Scale</i></p>
Risk of bias	<i>Moderate</i>
Author	<i>Brackett</i>
Year	<i>2012</i>
Country	<i>USA</i>
Ref	<i>[6]</i>
Study design	<i>Randomized controlled trial. Quasi-experimental design, pilot effectiveness study.</i>
Study protocol	<i>No information</i>
Setting	<i>School</i>
Inclusion criteria	<i>parental permission</i>
Follow up	<i>Six weeks after the start of the academic year and six week prior to the end of the academic year. (End of intervention)</i>
Population characteristics	<p><i>School children, year 5-6</i></p> <p><i>Intervention group:</i></p> <p><i>Age; Mean (SD): Not stated</i></p> <p><i>Sex;(Percent girls): Not stated</i></p> <p><i>Socioeconomic/educations; Mean (SD): Not stated</i></p> <p><i>Control group:</i></p> <p><i>Age; Mean (SD): Not stated</i></p> <p><i>Sex (Percent girls): Not stated</i></p> <p><i>Socioeconomic/educations; Mean (SD): Not stated</i></p> <p><i>Total population</i></p> <p><i>Age; Mean (SD): 11 years (1)</i></p> <p><i>Sex (Percent girls): 55%</i></p> <p><i>Socioeconomic/educations; Mean (SD): ≤7%</i></p>
Participants:	<i>273 students from 15 classrooms</i>
Drop Out:	<i>Not stated</i>

Intervention program	<i>RULER Feeling Words Curriculum</i>
Program extent	<i>Number of sessions: 72 lessons, 15 units</i> <i>Intensity:</i> <i>Duration:</i> <i>Attendance: Not stated</i> <i>Implementation: all teachers had completed at least 12 of 15 units</i>
Participants (n)	155
Drop-outs (n)	Not stated
Program Deliverer	<i>Classroom teachers</i> <i>Training: three-hour overview of emotional literacy. Highly interactive training that lasted one and a half days (approximately 9 h).</i>
Comparison program	<i>Common school curriculum (no specific program)</i>
Participants (n)	118
Drop-outs (n)	Not stated
Program Deliverer	<i>Training: three-hour overview of emotional literacy.</i>
Outcomes	<i>Outcome</i> <i>Social and emotional competence (CASEL 4: Relationship skills):</i> <i>Behavioral Assessment System for Children (BASC), sub scale: Adaptability</i> <i>F(1, 244)= 7.66, p= 0.006, partial η^2s= 0.030. d^*=0.34; CI: 0.097 to 0.5793</i>
Comments	<i>Additional outcomes:</i> <i>Student grades, report cards</i>
Risk of bias	<i>Moderate</i>
Author	<i>Cefai</i>
Year	2014
Country	<i>Malta</i>
Ref	[7]
Study design	<i>Semi- Randomized controlled trial, pilot study</i>
Study protocol	<i>No information</i>
Setting	<i>Primary school</i>
Inclusion criteria	<i>Parental consent was obtained for all the students who participated in the study.</i>
Follow up	<i>Post-intervention, 10 weeks</i>
Population characteristics	<i>School children, year 1–5</i> <i>Intervention group:</i> <i>Age; Mean (SD): Not stated</i> <i>Sex;(Percent girls): Not stated</i> <i>Socioeconomic/educations; Mean (SD): Not stated</i> <i>Control group:</i> <i>Age; Mean (SD): Not stated</i>

	<p><i>Sex (Percent girls): Not stated</i></p> <p><i>Socioeconomic/educations; Mean (SD): Not stated</i></p> <p>Total population:</p> <p><i>Age; Mean (SD): Not stated</i></p> <p><i>Sex;(Percent girls): 46%</i></p> <p><i>Socioeconomic/educations; Mean (SD): Not stated</i></p>
<p>Intervention program</p> <p>Program extent</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p><i>Circle time (CT)</i></p> <p><i>Number of sessions: 10</i></p> <p><i>Intensity: One 30-45 min session per week</i></p> <p><i>Duration: 10 weeks</i></p> <p><i>Attendance: Not stated</i></p> <p><i>Implementation: Not stated</i></p> <p><i>37</i></p> <p><i>Not stated</i></p> <p><i>Classroom teachers</i></p> <p><i>Training: One session of training, offered mentoring during implementation process (no teacher made use of this service)</i></p>
<p>Comparison program</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p><i>Common school curriculum (no specific program)</i></p> <p><i>38</i></p> <p><i>Not stated</i></p> <p><i>Not applicable</i></p>
Outcomes	<p>Outcome</p> <p><i>Social and emotional competence (CASEL 3: Social awareness):</i></p> <p><i>Strengths and Difficulties Questionnaire (SDQ), sub scale Prosocial behaviour evaluation</i></p> <p><i>Not significant difference</i></p>
Comments	<i>Additional outcomes:</i>
Risk of bias	<i>Moderate - borderline high</i>
<p>Author</p> <p>Year</p> <p>Country</p> <p>Ref</p>	<p><i>Cejudo</i></p> <p><i>2020</i></p> <p><i>Spain</i></p> <p><i>[8]</i></p>
<p>Study design</p> <p>Study protocol</p> <p>Setting</p> <p>Inclusion criteria</p> <p>Follow up</p>	<p><i>Quasi-experimental design Randomized Controlled Trial</i></p> <p><i>No information</i></p> <p><i>High school</i></p> <p><i>Participants' parents gave informed written consent and adolescents gave verbal assent.</i></p> <p><i>After intervention, end of school year</i></p>

Population characteristics	<p><i>Middle and high school students</i></p> <p>Intervention group:</p> <p><i>Age, years; Mean (SD): Not stated</i></p> <p><i>Sex; (Percent girls): Not stated</i></p> <p><i>Socioeconomic/educations; Mean (SD): Not stated</i></p> <p>Control group:</p> <p><i>Age, years; Mean (SD): Not stated</i></p> <p><i>Sex;(Percent girls): Not stated</i></p> <p><i>Socioeconomic/educations; Mean (SD): Not stated</i></p> <p>Intervention group:</p> <p><i>Age, years; Mean (SD): 13.82 (1.62)</i></p> <p><i>Sex; (Percent girls): 53</i></p> <p><i>Socioeconomic/educations; Mean (SD): Not stated</i></p>
Intervention program Program extent Participants (n) Drop-outs (n) Program Deliverer	<p><i>Social and Emotional Learning (SEL) by "Aislados" Program (2016 by the Interdisciplinary Service of Attention to Drug Dependencies (in Spanish, SIAD))</i></p> <p><i>Number of sessions: 28</i></p> <p><i>Intensity: 55 minutes weekly</i></p> <p><i>Duration: 1 school year</i></p> <p><i>Attendance: students not attending at least 75% of the intervention programme sessions were excluded</i></p> <p><i>Implementation: Not stated</i></p> <p><i>97</i></p> <p><i>Not stated</i></p> <p><i>Secondary teacher</i></p> <p><i>Training: 10-h workshop about the implementation of the program, weekly coordination meetings and explanations as requested.</i></p>
Comparison program Participants (n) Drop-outs (n) Program Deliverer	<p><i>Common school curriculum (no specific program)</i></p> <p><i>90</i></p> <p><i>Not stated</i></p> <p><i>Not applicable</i></p>
Outcomes	<p>Outcome</p> <p><u><i>Subjective psychological well-being (Health Related Quality of Life - HRQoL)</i></u></p> <p><i>Self-report version of the Kidscreen-27 (KS27)</i></p> <p><i>Cohens'd: 0.1; CI 95%: -0.2 to 0.4*; c</i></p> <p><u><i>Subjective psychological well-being (Health Related Quality of Life - HRQoL):</i></u></p> <p><i>Satisfaction with Life Scale (SWLS)</i></p> <p><i>Cohens'd: 0.1; CI 95%: -0.2 to 0.4*; c</i></p>

	<p><u>Quality of life</u></p> <p>Mental health (MH-5) (subscale of SF-36)</p> <p>Cohens d': 0.2, CI: 0.0 to 0.5*</p>
Comments	<p>Additional outcomes:</p> <p>Positive and Negative Emotions; Positive and Negative Affect Schedule (PANAS)</p> <p>Emotional intelligence; Trait Emotional Intelligence Questionnaire Adolescents Short Form (TEIQue-ASF)</p>
Risk of bias	Moderate
Author	Clarke
Year	2014
Country	UK
Ref	[9]
Study design	Clustered randomized controlled trial
Study protocol	No information
Setting	Disadvantaged schools
Inclusion criteria	(i) schools had to be mixed gender school and assigned the designated disadvantaged status by the Department of Education and Skills and (ii) classes had to contain 10 or more children.
Follow up	Post intervention and 12 months after end of intervention.
Population characteristics	<p>School children, year 1, aged 7-8 years</p> <p>Intervention group 1:</p> <p>Age; Mean (SD): 7.3 (For all children)</p> <p>Sex;(Percent girls): 50.6</p> <p>Socioeconomic/educations; Mean (SD): Not stated</p> <p>Intervention group 2:</p> <p>Age; Mean (SD): 7.3 (For all children)</p> <p>Sex;(Percent girls): 46.0</p> <p>Socioeconomic/educations; Mean (SD): Not stated</p> <p>Control group:</p> <p>Age; Mean (SD): 7.3 (For all children)</p> <p>Sex (Percent girls): 46.7</p> <p>Socioeconomic/educations; Mean (SD): Not stated</p>
Intervention	Zippy's Friends
Program 1	Teachers were asked to implement the programme as faithfully as possible.
Program extent	<p>Number of sessions: 24</p> <p>Intensity: Once a week for 1 hour</p> <p>Duration: One academic year</p> <p>Attendance: Not stated</p> <p>Implementation: Teacher reported programme fidelity</p>

<p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p>full implementation: 86.4 %.</p> <p>partial implementation: 7.2 %.</p> <p>activities not implemented: 6.2 %</p> <p>267</p> <p>Post intervention: 48</p> <p>12 months follow up: 14</p> <p>Classroom teachers</p> <p>Training: 2-day training workshop with intervention teachers.</p>
<p>Intervention</p> <p>Program 2</p> <p>Program extent</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p>Zippy's Friends</p> <p>Teachers were requested to use the programme as a resource.</p> <p>Number of sessions: 24 (Full implementation)</p> <p>Intensity: Once a week for 1 hour (Full implementation)</p> <p>Duration: One academic year</p> <p>Attendance: Not stated</p> <p>Implementation: Teacher reported programme fidelity</p> <p>full implementation: 86.6 %.</p> <p>partial implementation: 6.2 %.</p> <p>activities not implemented: 7.2 %</p> <p>277</p> <p>Post intervention: 23</p> <p>12 months follow up: 6</p> <p>Classroom teachers</p> <p>Training: 2-day training workshop with intervention teachers.</p>
<p>Comparison program</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p>Common school curriculum (no specific program)</p> <p>222</p> <p>Post intervention: 23</p> <p>12 months follow up: 4</p> <p>Not applicable</p>
<p>Outcomes</p>	<p>Outcome</p> <p><u>Social and emotional competence (CASEL 1: Self-awareness):</u></p> <p>Emotional Literacy Checklist, (SS: self-awareness)</p> <p>ES: 0.39, SE = 0.057, P < 0.001</p> <p><u>Social and emotional competence (CASEL 2: Self- management):</u></p> <p>Emotional Literacy Checklist (ELC), sub scales: Motivation and self-regulation</p> <p>SS Motivation: Estimate = 0.215, SE = 0.058, P < 0.001</p> <p>SS Self regulation: Estimate = 0.220, SE = 0.083, P < 0.01</p> <p><u>Social and emotional competence (CASEL 3: Social awareness):</u></p>

	<p><i>Emotional Literacy Checklist (ELC), SS: Empathy</i> <i>Estimate = 0.072, SE = 0.060, p = 0.229</i></p> <p><u><i>Social and emotional competence (CASEL 3: Social awareness):</i></u> <i>_Strengths and Difficulties Questionnaire (SDQ), sub scale Prosocial behaviour</i> <i>Estimate = 0.058, SE = 0.054, p = 0.282</i></p> <p><u><i>Social and emotional competence (CASEL 4: Relationship skills):</i></u> <i>Emotional Literacy Checklist (ELC), SS: Social skills</i> <i>Estimate = 0.215, SE = 0.058, P < 0.001</i></p>
Comments	
Risk of bias	<i>Moderate</i>
Author	<i>Coelho</i>
Year	<i>2015</i>
Country	<i>Portugal</i>
Ref	<i>[10] associated with [11]</i>
Study design	<i>quasi-experimental, pre-test, post-test and follow-up design with a control group.</i>
Study protocol	<i>Not stated</i>
Setting	<i>Middle school</i>
Inclusion criteria	<i>All schools used passive informed consent,</i>
Follow up	<i>Pre-test, Post-test and follow up 6 months after program end</i>
Population characteristics	<p><i>School children, year 7–9</i></p> <p><i>Intervention group:</i> <i>Age; Mean (SD): Not stated</i> <i>Sex;(Percent girls): 47%</i> <i>Socioeconomic/educations; Mean (SD): Not stated</i></p> <p><i>Control group:</i> <i>Age; Mean (SD): Not stated</i> <i>Sex (Percent girls): 44%</i> <i>Socioeconomic/educations; Mean (SD): Not stated</i></p> <p><i>Total population:</i> <i>Age; Mean (SD): 13.40 (1.32)</i></p>
Intervention program	<i>Positive Attitude</i>
Program extent	<p><i>Number of sessions: 12</i></p> <p><i>Intensity: One lessons per week, 60 min per session</i></p> <p><i>Duration: Not stated</i></p> <p><i>Attendance: Not stated</i></p>

Participants (n)	<i>Implementation: Not stated</i> 855
Drop-outs (n)	418
Program Deliverer	<i>Educational psychologists</i> <i>Training: At least three years of experience in the Project</i>
Comparison program	<i>Common school curriculum (no specific program)</i>
Participants (n)	236
Drop-outs (n)	114
Program Deliverer	<i>Not applicable</i>
Outcomes	<p><i>Outcome</i></p> <p><u><i>Social and emotional competence (CASEL 2: Self-management):</i></u> <i>Bateria de Socializacao-3 (BAS-3; Silva & Martorell, 1993; adapted by Ferreira & Rocha, 2004)</i> <i>B=-0.41, 95%CI=-0.74 to -0.07; p=0.018</i></p> <p><u><i>Social and emotional competence (CASEL 2: Self-management):</i></u> <i>Social and Emotional Competencies Evaluation Questionnaire— Teachers Version (QACSE-P; Coelho, Sousa, & Marchante, 2014), sub scale Self Control</i> <i>B=-5.44, 95%CI=-7.90, -2.98; p<0.001</i></p> <p><u><i>Social and emotional competence (CASEL 3: Social awareness):</i></u> <i>Bateria de Socializacao-3 (BAS-3; Silva & Martorell, 1993; adapted by Ferreira & Rocha, 2004)</i> <i>Sub scale social awareness</i> <i>t=2.45; B=-0.36, 95%CI=-0.66, -0.07; p=0.016</i></p> <p><u><i>Social and emotional competence (CASEL 3: Social awareness):</i></u> <i>Social and Emotional Competencies Evaluation Questionnaire— Teachers Version (QACSE-P; Coelho, Sousa, & Marchante, 2014), sub scale social awareness</i> <i>B=-6.17, 95%CI=-8.43, -3.91; p<0.001; t-value: 5.38. Computation gives d=-0.3956, CI: -0.5407 to -0.2505</i></p> <p><u><i>Social and emotional competence (CASEL 4: Relationship skills):</i></u> <i>Bateria de Socializacao-3 (BAS-3; Silva & Martorell, 1993; adapted by Ferreira & Rocha, 2004)</i> <i>Sub scale Leadership</i> <i>t= 1.57; *d=0.115; CI: -0.029 to 0.260, p=0.121</i></p> <p><u><i>Social and emotional competence (CASEL 4: Relationship skills):</i></u> <i>Social and Emotional Competencies Evaluation Questionnaire— Teachers Version (QACSE-P; Coelho, Sousa, & Marchante, 2014), sub scale Leadership</i> <i>t=3.84, *d= -0.2824, CI: -0.427 to -0.1378.</i></p>

	<p><u>Resilience:</u> Self-Description Questionnaire I : $\beta = -2.07$, 95%CI=-2.89, -1.26; $p < 0.001$ **</p>
Comments	
Risk of bias	Moderate
Author	Coelho
Year	2016
Country	Portugal
Ref	[12]
Study design	Quasi-experimental design
Study protocol	No information
Setting	Elementary school
Inclusion criteria	Only one school grouping utilized active parental informed consent, while the other five school groupings used passive informed consent since the program was conducted within the school schedule.
Follow up	Pre intervention and at end of intervention, three months
Population characteristics	<p>School children, 4th grade</p> <p>Intervention group: Age; Mean (SD): Sex;(Percent girls): 47.8% Socioeconomic/educations; Mean (SD): Class level 50% or more F/R lunch: 24 (29.2%) 25–50% F/R lunch: 29 (35.4%) Less than 25% F/R lunch: 29 (35.4%)</p> <p>Control group: Age; Mean (SD): Sex (Percent girls): 43.0% Socioeconomic/educations; Mean (SD): Class level 50% or more F/R lunch: 5 (23.8%) 25–50% F/R lunch: 8 (38.1%) Less than 25% F/R lunch: 8 (38.1%)</p> <p>Total population: Age; Mean (SD): 9.2 years</p>
Intervention program	Program Positive Attitude
Program extent	Number of sessions: 13

<p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p><i>Intensity: One session per week, 60 min per session</i></p> <p><i>Duration: 1 year</i></p> <p><i>Attendance: Not stated</i></p> <p><i>Implementation: Not stated</i></p> <p>970</p> <p><i>Not stated</i></p> <p><i>Educational psychologists</i></p> <p><i>Training: Not stated</i></p>
<p>Comparison program</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p><i>Common school curriculum (no specific program)</i></p> <p>267</p> <p><i>Not stated</i></p> <p><i>Not applicable</i></p>
<p>Outcomes</p>	<p><i>Outcome</i></p> <p><u><i>Social and emotional competence (CASEL 2: Self-management):</i></u></p> <p><i>Bateria de Socializacao-3 (BAS-3; Silva & Martorell, 1993; adapted by Ferreira & Rocha, 2004)</i></p> <p><i>B=-0.62, 95%CI=-0.99 to -0.24; p<0.01</i></p> <p><u><i>Social and emotional competence (CASEL 2: Self-management):</i></u></p> <p><i>Social and Emotional Competencies Evaluation Questionnaire— Teachers Version (QACSE-P; Coelho, Sousa, & Marchante, 2014), sub scale Self Control</i></p> <p><i>B=-6.46, 95%CI=-11.73 to -1.18; p<0.01</i></p> <p><u><i>Social and emotional competence (CASEL 3: Social awareness):</i></u></p> <p><i>Bateria de Socializacao-3 (BAS-3; Silva & Martorell, 1993; adapted by Ferreira & Rocha, 2004)</i></p> <p><i>Sub scale social awareness</i></p> <p><i>B=-0.46, 95%CI=-0.78, -0.14; p<0.01</i></p> <p><u><i>Social and emotional competence (CASEL 3: Social awareness):</i></u></p> <p><i>Social and Emotional Competencies Evaluation Questionnaire— Teachers Version (QACSE-P; Coelho, Sousa, & Marchante, 2014), sub scale social awareness</i></p> <p><i>d=-0.3956, CI: -0.5407 to -0.2505</i></p> <p><u><i>Social and emotional competence (CASEL 4: Relationship skills):</i></u></p> <p><i>Bateria de Socializacao-3 (BAS-3; Silva & Martorell, 1993; adapted by Ferreira & Rocha, 2004)</i></p> <p><i>Sub scale Leadership</i></p> <p><i>B= -0.18, CI: -0.54, 0.18. Not significant</i></p> <p><u><i>Social and emotional competence (CASEL 4: Relationship skills):</i></u></p>

	<p><i>Social and Emotional Competencies Evaluation Questionnaire— Teachers Version (QACSE-P; Coelho, Sousa, & Marchante, 2014), sub scale Leadership</i></p> <p><i>B=-4.03, CI: -4.46, 8.02, Not significant</i></p> <p><u>Resilience:</u></p> <p><i>Self-Description Questionnaire I</i></p> <p><i>β=-0.74, 95%CI=-1.46, -0.02; p<0.05 **</i></p>
Comments	
Risk of bias	<i>Moderate</i>
Author	<i>Coelho</i>
Year	<i>2017</i>
Country	<i>Portugal</i>
Ref	<i>[11] associated with [10]</i>
Study design	<i>Quasi-experimental design pre-post study</i>
Study protocol	<i>No information</i>
Setting	<i>Middle school</i>
Inclusion criteria	<i>Not stated</i>
Follow up	<i>Pre-test, Post-test and follow up 6 months after program end</i>
Population characteristics	<p><i>School children, 11 to 17 years old</i></p> <p>Intervention group:</p> <p><i>Age; Mean (SD): Not stated</i></p> <p><i>Sex;(Percent girls): Not stated</i></p> <p><i>Socioeconomic/educations; Mean (SD): Not stated</i></p> <p>Control group:</p> <p><i>Age; Mean (SD): Not stated</i></p> <p><i>Sex (Percent girls): Not stated</i></p> <p><i>Socioeconomic/educations; Mean (SD): Not stated</i></p> <p>Total population:</p> <p><i>Age; Mean (SD): 13.54 (1.36)</i></p> <p><i>Sex (Percent girls): 50.6</i></p> <p><i>Socioeconomic/educations; Mean (SD): Not stated</i></p>
Intervention program	<i>Program Positive Attitude</i>
Program extent	<p><i>Number of sessions: 13</i></p> <p><i>Intensity: 1 per week 45 min session</i></p> <p><i>Duration: 1 school year</i></p> <p><i>Attendance: Not stated</i></p> <p><i>Implementation: Not stated</i></p>
Participants (n)	<i>472</i>

Drop-outs (n)	11
Program Deliverer	Trained psychologists Training: Not stated
Comparison program	Common school curriculum (no specific program)
Participants (n)	156
Drop-outs (n)	2
Program Deliverer	Not applicable
Outcomes	<p>Outcome</p> <p><u>Social and emotional competence (CASEL 2: Self-management):</u> Bateria de Socializacao-3 (BAS-3; Silva & Martorell, 1993; adapted by Ferreira & Rocha, 2004) $F = 13.94$, Cohen's $d = 0.30$, $p < .0001$</p> <p><u>Social and emotional competence (CASEL 3: Social awareness):</u> Bateria de Socializacao-3 (BAS-3; Silva & Martorell, 1993; adapted by Ferreira & Rocha, 2004) Sub scale social awareness $F = 17.77$, $p < .0001$, Cohen's $d = 0.40$</p> <p><u>Social and emotional competence (CASEL 4: Relationship skills):</u> Bateria de Socializacao-3 (BAS-3; Silva & Martorell, 1993; adapted by Ferreira & Rocha, 2004) Sub scale Leadership $F = 1.08$, $p = 0.299$, $d = 0.05$</p>
Comments	
Risk of bias	Moderate
Author	Coelho
Year	2018
Country	Portugal
Ref	[13]
Study design	Quasi-experimental design
Study protocol	No information
Setting	Upper middle school
Inclusion criteria	School not participation in other SEL program
Follow up	Post-test and 7 months after end of intervention
Population characteristics	Upper middle school children, year 1–5 Intervention group 1: Age; Mean (SD): Sex;(Percent girls): 47.2 Socioeconomic/educations; Mean (SD): Intervention group 2:

	<p>Age; Mean (SD):</p> <p>Sex;(Percent girls): 49.0</p> <p>Socioeconomic/educations; Mean (SD):</p> <p>Control group:</p> <p>Age; Mean (SD):</p> <p>Sex (Percent girls): 44.7</p> <p>Socioeconomic/educations; Mean (SD):</p> <p>Total population:</p> <p>Age; Mean (SD): 12.70 (0.98)</p> <p>Sex (Percent girls): 47.2</p> <p>Socioeconomic/educations; Mean (SD):</p>
<p>Intervention program 1</p> <p>Program extent</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p>Positive attitude</p> <p>Within school hours</p> <p>Number of sessions: 13</p> <p>Intensity: Not stated</p> <p>Duration: Not stated</p> <p>Attendance: Not stated</p> <p>Implementation: 96%</p> <p>269</p> <p>25</p> <p>Educational psychologists</p> <p>Training: Not stated</p>
<p>Intervention program 2</p> <p>Program extent</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p>Positive attitude</p> <p>After school hours</p> <p>Number of sessions: 18</p> <p>Intensity: Not stated</p> <p>Duration: Not stated</p> <p>Attendance: Not stated</p> <p>Implementation: 91%</p> <p>314</p> <p>33</p> <p>Educational psychologists</p> <p>Training: Not stated</p>
<p>Comparison program</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p>Common school curriculum (no specific program)</p> <p>244</p> <p>21</p> <p>Not applicable</p>
<p>Outcomes</p>	<p>Outcome</p> <p><u>Social and emotional competence (CASEL 2: Self-management):</u></p>

	<p><i>Social and Emotional Competences Evaluation Questionnaire (QACSE; Coelho et al. 2015), sub scale social awareness</i></p> <p>**$\beta = -0.61$, $SE = 0.11$; $t = -5.55$, $p < 0.001$</p> <p><u><i>Social and emotional competence (CASEL 3: Social awareness):</i></u></p> <p><i>Social and Emotional Competences Evaluation Questionnaire (QACSE; Coelho et al. 2015)</i></p> <p>**$B = -0.90$, $SE = -0.12$, $t = -7.26$; $p < 0.001$</p> <p><u><i>Social and emotional competence (CASEL 4: Relationship skills):</i></u></p> <p><i>Social and Emotional Competences Evaluation Questionnaire (QACSE; Coelho et al. 2015), sub scale Peer relations</i></p> <p><i>F: 3.180, $p = 0.044$, Effect size (ηp^2): 0.033</i></p> <p><u><i>Social and emotional competence (CASEL 5: Responsible decision making):</i></u></p> <p><i>Social and Emotional Competences Evaluation Questionnaire (QACSE; Coelho et al. 2015), sub scale Responsible decision making</i></p> <p>** $\beta = -0.18$, $SE = 0.10$; $t = 1.76$, $p > 0.05$</p> <p>*$d = 0.134$; CI: -0.015 to 0.284</p> <p><u><i>Resilience:</i></u></p> <p><i>Self-Description Questionnaire I</i></p> <p>$\beta = -0.97$, $SE = -0.18$, $t = -5.44$; $p < 0.001$ **</p>
Comments	
Risk of bias	Moderate
Author	Coelho
Year	2014
Country	Portugal
Ref	[14]
Study design	Quasi experimental Controlled pre-post study
Study protocol	No information
Setting	Public middle schools
Inclusion criteria	one school utilized active informed consent (and only for 7th graders), the other five used passive informed consent
Follow up	After study end 2 school years), and 6 months after study end
Population characteristics	Middle school students (7th to 9 th grade)
	Intervention group:
	Age, years; Mean (SD): Not stated on group level
	Sex; (Percent girls): 52.0

	<p>Socioeconomic/educations; Mean (SD): Not stated</p> <p>Control group:</p> <p>Age, years; Mean (SD): Not stated on group level</p> <p>Sex;(Percent girls): 46.8</p> <p>Socioeconomic/educations; Mean (SD): Not stated</p> <p>Total population:</p> <p>Age, years; Mean (SD): 13.54 (1.36)</p>
<p>Intervention program</p> <p>Participants (n)</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p>Social and Emotional Learning Program - Project Positive Attitude</p> <p>Number of sessions: 13</p> <p>Intensity: Weekly sessions 60 minutes</p> <p>Duration: 2 school years</p> <p>Attendance: Not stated</p> <p>Implementation: Not stated</p> <p>474</p> <p>6</p> <p>Trained psychologist (in the presence of the class teacher)</p> <p>Training: Not specified</p>
<p>Comparison program</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p>Common school curriculum (no specific program)</p> <p>156</p> <p>0</p> <p>Not applicable</p>
Outcomes	Outcome
Comments	<p>Additional outcomes:</p> <p>self-report questionnaires</p> <p>Self-concept Auto-Conceito Forma – A (AFA; Musitu et al., 1997; Musitu et al., 2001)</p>
Risk of bias	Moderate
<p>Author</p> <p>Year</p> <p>Country</p> <p>Ref</p>	<p>Coehlo</p> <p>2021</p> <p>Portugal</p> <p>[15]</p>
<p>Study design</p> <p>Study protocol</p> <p>Setting</p> <p>Inclusion criteria</p> <p>Follow up</p>	<p>Randomized Controlled Trial</p> <p>No information</p> <p>Elementary school</p> <p>Parental consent</p> <p>Post intervention and 10 months post intervention</p>

Population characteristics	<p><i>Elementary school children, grade 4</i></p> <p>Intervention group:</p> <p><i>Age, years; Mean (SD): Not stated</i></p> <p><i>Sex; (Percent girls): 48.6</i></p> <p><i>Socioeconomic/educations; Mean (SD): Not stated</i></p> <p>Control group:</p> <p><i>Age, years; Mean (SD): Not stated</i></p> <p><i>Sex;(Percent girls): 49.3</i></p> <p><i>Socioeconomic/educations; Mean (SD): Not stated</i></p> <p>Total population:</p> <p><i>Age, years; Mean (SD): 9.14 (0.64)</i></p> <p><i>Sex;(Percent girls): 48.8</i></p> <p><i>Socioeconomic/educations; Mean (SD): it ranged from 34.7% to 39.8% of students per class eligible for free or reduced lunches</i></p>
Intervention program Program extent Participants (n) Drop-outs (n) Program Deliverer	<p><i>Social and Emotional Learning (SEL)</i></p> <p><i>Number of sessions: 13</i></p> <p><i>Intensity: 60 min session weekly</i></p> <p><i>Duration: 4 months</i></p> <p><i>Attendance: Not stated</i></p> <p><i>Implementation: implementation fidelity varied between 93.7% and 100%</i></p> <p><i>702</i></p> <p><i>Not stated on group level. Attrition was due to students who left school during fourth-grade (four students, 0.4%) and, (19 students, 1.8%) were also unavailable for the third measurement.</i></p> <p><i>Trained educational psychologists in the teacher's presence</i></p> <p><i>Training: Not stated</i></p>
Comparison program Participants (n) Drop-outs (n) Program Deliverer	<p><i>Common school curriculum (no specific program)</i></p> <p><i>361</i></p> <p><i>Not stated on group level. Attrition was due to students who left school during fourth-grade (four students, 0.4%) and, (19 students, 1.8%) were also unavailable for the third measurement.</i></p> <p><i>Not applicable</i></p>
Outcomes	<p>Outcome</p> <p><u><i>Resilience:</i></u></p> <p><i>Self-Description Questionnaire I</i></p> <p><i>Beta: 0.81; SE:0.16</i></p>
Comments Risk of bias	<p><i>Moderate</i></p>

Author	<i>Coelho</i>
Year	<i>2017</i>
Country	<i>Portugal</i>
Ref	<i>[16]</i>
Study design	<i>Randomized controlled trial</i>
Study protocol	<i>No information</i>
Setting	<i>Public middle schools</i>
Inclusion criteria	<i>Not stated</i>
Follow up	<i>Four months, eight months and one year after start of intervention.</i>
Population characteristics	<p><i>School children, 4-5 grade</i></p> <p>Intervention group:</p> <p><i>Age, years; Mean (SD): Not stated</i></p> <p><i>Sex; (Percent girls): 46.5</i></p> <p><i>Socioeconomic/educations; Mean (SD): Not stated</i></p> <p>Control group:</p> <p><i>Age, years; Mean (SD): Not stated</i></p> <p><i>Sex;(Percent girls): 43.5</i></p> <p><i>Socioeconomic/educations; Mean (SD): Not stated</i></p> <p>Total population:</p> <p><i>Age, years; Mean (SD): 9.62 (0.30)</i></p> <p><i>Sex;(Percent girls): 45.7</i></p> <p><i>Socioeconomic/educations; Mean (SD): Not stated</i></p>
Intervention program	<i>SEL Positive Transition Program</i>
Program extent	<p><i>Number of sessions: 20 (15 session in grade 4 + five sessions in grade 5.</i></p> <p><i>Intensity: 50 min sessions weekly</i></p> <p><i>Duration: 2 school years</i></p> <p><i>Attendance: Not stated</i></p> <p><i>Implementation: Not stated</i></p>
Participants (n)	<i>825</i>
Drop-outs (n)	<i>Only stated on total population: 97 % of students completed the first measurement, 86 % the second measurement, 73 % the third measurement and 74 % the last assessment</i>
Program Deliverer	<p><i>Educational psychologist.</i></p> <p><i>Training: Not stated</i></p>
Comparison program	<i>Common school curriculum (no specific program)</i>
Participants (n)	<i>322</i>
Drop-outs (n)	<i>Only stated on total population: 97 % of students completed the first measurement, 86 % the second measurement, 73 % the third measurement and 74 % the last assessment</i>

Program Deliverer	<i>Not applicable</i>
Outcomes	<p>Outcome</p> <p><u>Quality of Life:</u></p> <p><i>Five-Factor Self Concept Questionnaire (AF-5)</i></p> <p><i>SS: Social self-concept: Beta: 0.11; SE:0.07; No significant effect</i></p> <p><i>SS: Emotional self-concept: Beta: 0.26; SE: 0.08; p<0.01.</i></p> <p><u>Resilience:</u></p> <p><i>General Self scale from the Self-Description Questionnaire I—(SDQ I; Marsh 1989; Portuguese adaptation by Faria and Fontaine 1990)</i></p> <p><i>Beta: 0.58; SE:0.11; p<0.001</i></p>
Comments	
Risk of bias	<i>Moderate</i>
Author	<i>Conduct Problems Prevention Research Group</i>
Year	<i>2010</i>
Country	<i>USA</i>
Ref	<i>[17]</i>
Study design	<i>Randomized controlled trial</i>
Study protocol	<i>No information</i>
Setting	<i>Elementary school, Grade 1-3</i>
Inclusion criteria	<i>Students who remained in the same school building from the beginning of Grade 1 to the end of Grade 3 and had complete Grades 1–3 information on the Social Health Profile (SHP; CPPRG, 1998) and sociometric outcomes.</i>
Follow up	<i>During and after intervention</i>
Population characteristics	<p><i>School children, year 1–3</i></p> <p>Intervention group:</p> <p><i>Age; Mean (SD): Not stated</i></p> <p><i>Sex;(Percent girls): Not stated</i></p> <p><i>Socioeconomic/educations; Mean (SD): Not stated</i></p> <p>Control group:</p> <p><i>Age; Mean (SD): Not stated</i></p> <p><i>Sex (Percent girls): Not stated</i></p> <p><i>Socioeconomic/educations; Mean (SD): Not stated</i></p> <p>Total population:</p> <p><i>Age; Mean (SD): Not stated (Elementary School 1-3 Grade is 6-9 years old.)</i></p> <p><i>Sex; (Percent girls): Not stated</i></p> <p><i>Socioeconomic/educations: 57 % of children received free or reduced lunch</i></p>
Participants (n)	

Drop-outs (n)	<p><i>Total:</i> <i>Nashville: 1560</i> <i>Pennsylvania: 1696</i> <i>Seattle: 1825</i></p> <p><i>Retention:</i> <i>Total: 2937</i> <i>Nashville: 482 (30.9%)</i> <i>Pennsylvania: 1272 (75%)</i> <i>Seattle: 759 (41.6%)</i></p>
Intervention program	<i>Fast Track Promoting Alternative Thinking Strategies [PATHS] curriculum and behavioral consultation)</i>
Program extent	<p><i>Number of sessions:</i> <i>Grade 1: 57 lessons</i> <i>Grade 2: 46 lessons</i> <i>Grade 3: 48 lessons</i> <i>Intensity: 2-3 times per week</i> <i>Duration: 3 schoolyears</i> <i>Attendance: Not stated</i> <i>Implementation:</i> <i>Grade 1 lessons (range, SD): 48.2 (13 - 57, 9.7)</i> <i>Grade 2 lessons (range, SD): 39.6(22 - 49, 10.2)</i> <i>Grade 3 lessons (range, SD): 38.4 (17 - 48, 9.6)</i></p>
Participants (n)	<i>Classrooms: 190</i>
Drop-outs (n)	<i>Not stated</i>
Program Deliverer	<p><i>Classroom teachers</i> <i>Training: A 2-day training workshop and received wee weekly consultation and observation from project staff.</i></p>
Comparison program	<i>Common school curriculum (no specific program)</i>
Participants (n)	<i>Classrooms: 180</i>
Drop-outs (n)	<i>Not stated</i>
Program Deliverer	<i>Not applicable</i>
Outcomes	<p><i>Outcome</i> <i>Social and emotional competence (CASEL 4: Relationship skills):</i> <i>Social Health Profile (SHP), sub scale: Social competence</i> <i>Beta=-0.399, p<0.0001</i></p>
Comments	<p><i>Additional outcomes:</i> <i>By teachers: Authority acceptance (TOCA-R)</i></p>

Risk of bias	By peers: three sociometric outcomes; aggressive, hyperactive– disruptive, and prosocial behaviors Moderate
Author	Correia
Year	2016
Country	Portugal
Ref	[18]
Study design	Quasi-experimental
Study protocol	No information
Setting	First cycle schools
Inclusion criteria	Authorization to conduct the study was requested from the school administrations involved and the principals of the first-cycle schools. Written informed consent was obtained from the teachers and parents along with the verbal consent of the children involved in the study.
Follow up	Before and after intervention.
Population characteristics	School children, first year Intervention group 1: Age; Mean (SD): Not stated Sex;(Percent girls): Not stated Socioeconomic/educations: Up to second cycle [fifth to sixth grade]: 29 3 rd cycle: 11 secondary [tenth to twelfth grade]: 15 higher education levels: 14 Intervention group 2: Age; Mean (SD): Not stated Sex;(Percent girls): Not stated Socioeconomic/educations: Up to second cycle [fifth to sixth grade]: 16 3 rd cycle: 16 secondary [tenth to twelfth grade]: 20 higher education levels: 8 Control group: Age; Mean (SD): Not stated Sex;(Percent girls): Not stated Socioeconomic/educations: Up to second cycle [fifth to sixth grade]: 7

	<p>3rd cycle: 7</p> <p>secondary [tenth to twelfth grade]: 18</p> <p>higher education levels: 31</p> <p>Population total:</p> <p>Age; Mean (SD): 5.95 (0.3) years</p> <p>Sex (Percent girls):</p> <p>Socioeconomic/educations: Not stated</p>
<p>Intervention program 1</p> <p>Program extent</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p><i>Giant leap</i></p> <p><i>Number of sessions: 18</i></p> <p><i>Intensity: 60 minutes once per week</i></p> <p><i>Duration: Not stated</i></p> <p><i>Attendance: Not stated</i></p> <p><i>Implementation: Not stated</i></p> <p>79</p> <p>10</p> <p><i>Psychologist</i></p> <p><i>Training: Not stated</i></p>
<p>Intervention program 2</p> <p>Program extent</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p><i>Giant leap</i></p> <p><i>Number of sessions: 18</i></p> <p><i>Intensity: 60 minutes once per week</i></p> <p><i>Duration: Not stated</i></p> <p><i>Attendance: Not stated</i></p> <p><i>Implementation: Not stated</i></p> <p>65</p> <p>5</p> <p><i>Psychologist</i></p> <p><i>Training: Not stated</i></p>
<p>Comparison program</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p><i>A fine arts activity program with an identical duration and extent</i></p> <p>84</p> <p>21</p> <p><i>Psychologist</i></p> <p><i>Training: Not stated</i></p>
<p>Outcomes</p>	<p><i>Outcome</i></p> <p><i><u>Social and emotional competence (CASEL 3: Social awareness):</u></i></p> <p><i>Assessment of Children's Emotions Scale (ACES) (Schultz, Izard, & Bear, 2004; Portuguese version by Alves, Cruz, Duarte, & Martins, 2008)</i></p>

	<p>$F=15.278$. Effect size (η^2): 0.256; $p=0.000$</p> <p><u>Social and emotional competence (CASEL 4: Relationship skills):</u> School Social Behavior Scales (SSBS-2), sub scale: Peer relations (SSBS-2) $F: 3.180$, $p= 0.044$, Effect size (η^2): 0.033</p> <p><u>Social and emotional competence (CASEL 2: Self-management):</u> School Social Behavior Scales (SSBS-2), sub scale :Self-management (SSBS-2) $F=3.723$. Effect size: 0.038; $p=0.026$.</p>
Comments	<p>Additional outcomes:</p> <p>Children-s strengths; Behavioral and Emotional Rating Scale — 2 (BERS-2) (Epstein, 2004; Portuguese version by Correia & Marques- Pinto, 2015c)</p> <p>School adaptation The School adaptation questionnaire for teachers (Correia & Marques- Pinto, 2015d)</p> <p>Social support: Two perceived social support indicators were used: the number of support providers identified by the children and their degree of satisfaction with this support network</p> <p>School learning skills; The Battery of Skills for School Learning (Cruz, 1996)</p>
Risk of bias	Moderate
Author	Domitrovich
Year	2007
Country	USA
Ref	[19]
Study design	Randomized controlled trial
Study protocol	No information
Setting	Head Start preschools
Inclusion criteria	English as primary language, no previous participation in intervention and parental permission.
Follow up	Post-intervention data collected directly after the intervention ended
Population characteristics	<p>Preschool children, three and four-year-old</p> <p>Intervention group: Age, years; Mean (SD): 4.20 (0.50) Sex;(Percent girls): 55% Socioeconomic/educations): <u>Parent education:</u> Less than high school: 15% High school or equivalent: 62% Greater than high school: 23%</p> <p>Control group: Age, years; Mean (SD): 4.36 (0.47)</p>

<p>Participants:</p> <p>Drop Out:</p>	<p><i>Sex (Percent girls): 48%</i></p> <p><i>Socioeconomic/educations):</i></p> <p><u><i>Parent education:</i></u></p> <p><i>Less than high school: 28%</i></p> <p><i>High school or equivalent: 47%</i></p> <p><i>Greater than high school: 25%</i></p> <p>246</p> <p>Post-test sample: 201</p>
<p>Intervention program</p> <p>Program extent</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p><i>Promoting Alternative Thinking Strategies (PATHS; Kusché & Greenberg, 1994)</i></p> <p><i>Number of sessions: 30</i></p> <p><i>Intensity: 1 lesson/week</i></p> <p><i>Duration: Attendance: Implementation: 9 months (one schoolyear)</i></p> <p><i>Implementation:</i></p> <p><i>Fidelity (Likert scale 1-4): 3.62</i></p> <p><i>Generalization (Likert scale 1-4): 3.37</i></p> <p><i>Openness to consultation (Likert scale 1-4): 3.67</i></p> <p>10 classrooms (number of children not specified on group level)</p> <p>number of children not specified on group level</p> <p>Classroom teachers</p> <p><i>Training: two-day training before and one-day booster mid intervention, supervisor contact and meetings throughout</i></p>
<p>Comparison program</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p><i>Head Start programs for preschool</i></p> <p>10 classrooms (number of children not specified on group level)</p> <p>number of children not specified on group level</p> <p>Classroom teachers</p>
<p>Outcomes</p>	<p><i>Outcome</i></p> <p><u><i>Social and emotional competence (CASEL 3: Social awareness):</i></u></p> <p><i>Assessment of Children's Emotions Scales (ACES)</i></p> <p><i>*SMD: 0.3016; CI 0.0502 to 0.553</i></p> <p><u><i>Social and emotional competence (CASEL 3: Social awareness):</i></u></p> <p><i>Kusche Emotional Inventory (KEI)</i></p> <p><i>Total score: 0.36 (adjusted value), p<0.01</i></p> <p><u><i>Social and emotional competence (CASEL 4: Relationship skills):</i></u></p> <p><i>Preschool and Kindergarten Behavior Scales (PKBS)</i></p> <p><i>Total score: 0.48, p<0.0001</i></p> <p><u><i>Social and emotional competence (CASEL 5: Responsible decision making):</i></u></p>

	<p><i>Challenging Situations Task (CST)</i></p> <p><i>No significant difference between groups</i></p> <p><u><i>Social and emotional competence (CASEL: Composite score):</i></u></p> <p><i>Head Start Competence Scale HSCS</i></p> <p><i>Teacher rating: $d=0.46$; $p<0.0001$</i></p> <p><i>Parent rating: $d=0.36$; $p<0.01$</i></p>
Comments	<p><i>Additional outcomes:</i></p> <p><i>Affective perspective-taking skills; The Denham Puppet Interview (DPI; Denham, 1986)</i></p> <p><i>Inhibitory control: Day/Night task developed (Diamond & Taylor, 1996), An adaptation of Luria's (1966) tapping test with procedures described by Diamond (Diamond & Taylor, 1996).</i></p> <p><i>Attention: Attention Sustained subtest from the Leiter-Revised Assessment Battery, (Roid & Miller, 1997).</i></p> <p><i>Interpersonal Problem Solving; The problem-solving portion of the Challenging Situations Task (CST, Denham, Bouril, & Belouad, 1994)</i></p> <p><i>Moderate - borderline high</i></p>
Risk of bias	
Author	<i>DiPerna</i>
Year	<i>2015</i>
Country	<i>USA</i>
Ref	<i>[20]</i>
Study design	<i>Multisite cluster randomized controlled trial</i>
Study protocol	<i>No information</i>
Setting	<i>Elementary school</i>
Inclusion criteria	<i>Parental consent</i>
Follow up	<i>Post intervention,</i>
Population characteristics	<p><i>School children, Second grade</i></p> <p><i>Intervention group:</i></p> <p><i>Age; Mean (SD): 7.37 (0.38)</i></p> <p><i>Sex;(Percent girls): 53.51</i></p> <p><i>Socioeconomic/educations; Mean (SD): Not stated</i></p> <p><i>Control group:</i></p> <p><i>Age; Mean (SD): 7.34 (0.38)</i></p> <p><i>Sex (Percent girls): 55.39</i></p> <p><i>Socioeconomic/educations; Mean (SD): Not stated</i></p>
Intervention program	<i>Social Skills Improvement System Classwide Intervention Program (SSIS-CIP; Elliott & Gresham, 2007)</i>
Program extent	<i>Number of sessions: 30</i>

	<p><i>Intensity: 20-25 min 3 times per week</i></p> <p><i>Duration: 10 weeks</i></p> <p><i>Attendance: Not stated</i></p> <p><i>Implementation: implementing classrooms based on summative ratings by teachers (98%) and independent observers (97%)</i></p>
Participants (n)	268
Drop-outs (n)	7
Program Deliverer	<p><i>Classroom teachers</i></p> <p><i>Training: 1 day workshop</i></p>
Comparison program	<i>Common school curriculum (no specific program)</i>
Participants (n)	226
Drop-outs (n)	3
Program Deliverer	<i>Not applicable</i>
Outcomes	<p><i>Outcome</i></p> <p><u><i>Social and emotional competence (CASEL: Composite score):</i></u></p> <p><i>(SSIS) total score</i></p> <p><i>Cohens' d: 0.36 No significant differences</i></p>
Comments	<p><i>Additional outcomes:</i></p> <p><i>Classroom instructional environment; The CLASS K-3 (Pianta et al., 2008)</i></p>
Risk of bias	<i>Moderate</i>
Author	<i>DiPerna</i>
Year	<i>2018</i>
Country	<i>USA</i>
Ref	<i>[21]</i>
Study design	<i>Randomized controlled trial</i>
Study protocol	<i>No information</i>
Setting	<i>Elementary school</i>
Inclusion criteria	<i>Teacher and Parental consent</i>
Follow up	<i>After implementation (4 months)</i>
Population characteristics	<p><i>School children, year 1</i></p> <p><i>Intervention group:</i></p> <p><i>Age; Mean (SD): 6.29 (0.42)</i></p> <p><i>Sex;(Percent girls): 48.39</i></p> <p><i>Socioeconomic/educations; Mean (SD): Not stated</i></p> <p><i>Control group:</i></p> <p><i>Age; Mean (SD): 6.30 (0.43)</i></p> <p><i>Sex (Percent girls): 45.07</i></p> <p><i>Socioeconomic/educations; Mean (SD): Not stated</i></p>

Intervention program	<i>Social Skills Improvement System Classwide Intervention Program (SSIS-CIP; Elliott & Gresham, 2007)</i>
Program extent	<p><i>Number of sessions: 30</i></p> <p><i>Intensity: 20-25 min lessons, 3 times per week</i></p> <p><i>Duration: 12 weeks</i></p> <p><i>Attendance: Not stated</i></p> <p><i>Implementation: the SSIS-CIP program was fully implemented across all classrooms; summative ratings by teachers (M: 3.92, SD: 0.16) and independent observers (M: 3.97, SD: 0.08).</i></p> <p><i>(Five core lesson components (introduce, define, discuss, identify steps and practice, and model/role-play); 4-point scale ranging from not implemented (1) to full implementation (4).)</i></p>
Participants (n)	373
Drop-outs (n)	17
Program Deliverer	<p><i>Classroom teachers</i></p> <p><i>Training: 1 day workshop</i></p>
Comparison program	<i>Common school curriculum (no specific program)</i>
Participants (n)	393
Drop-outs (n)	13
Program Deliverer	<i>Not applicable</i>
Outcomes	<p><i>Outcome</i></p> <p><i><u>Social and emotional competence (CASEL: Composite score):</u></i></p> <p><i>(SSIS) total score</i></p> <p><i>Cohens' d: 0.18; 95% CI: 0.03 to 0.33</i></p>
Comments	<p><i>Additional outcomes:</i></p> <p><i>Approaches to learning; teacher perspectives regarding their students' approaches to learning; ACES (DiPerna & Elliott, 2000)</i></p> <p><i>Academic skills. The STAR Math (Renaissance Learning, 2009) and Reading (Renaissance Learning, 2010)</i></p> <p><i>Classroom instructional environment; The CLASS K-3 (Pianta et al., 2008)</i></p>
Risk of bias	<i>Moderate</i>
Author	<i>Dowling</i>
Year	<i>2019</i>
Country	<i>Ireland</i>
Ref	<i>[22]</i>
Study design	<i>Cluster Randomized controlled trial on school level</i>
Study protocol	<i>No information</i>
Setting	<i>Disadvantaged schools</i>
Inclusion criteria	<i>(i) holding the designated disadvantage status (DEIS) by the Department of Education & Skills (ii) providing education at a post-primary level; and (iii) English speaking (i.e., not Irish only speaking)</i>

<p>Follow up</p> <p>Population characteristics</p>	<p><i>schools “Gael Scoileanna”); Parents were also given an opt-out consent form which they were asked to return to the school if they did not want their son or daughter to participate in this study</i></p> <p><i>At end of intervention, 13 weeks</i></p> <p><i>School children, older adolescents 15-18 years</i></p> <p><i>Intervention group:</i></p> <p><i>Age; Mean (SD): 15.99</i></p> <p><i>Sex;(Percent girls): 46.7</i></p> <p><i>Socioeconomic/educations; Mean (SD):</i></p> <p><i>Control group:</i></p> <p><i>Age; Mean (SD): 15.75</i></p> <p><i>Sex (Percent girls): 53.3</i></p> <p><i>Socioeconomic/educations; Mean (SD):</i></p>
<p>Intervention program</p> <p>Program extent</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p><i>MindOut Program</i></p> <p><i>Number of sessions: 13</i></p> <p><i>Intensity: weekly</i></p> <p><i>Duration: 13</i></p> <p><i>Attendance:</i></p> <p><i>Implementation:</i></p> <p><i>330</i></p> <p><i>84</i></p> <p><i>Classroom teachers</i></p> <p><i>Training: Teacher’s manual, a one-day comprehensive training session, a one-day comprehensive training session, delivered by a Health Promotion Officer (HPO)</i></p>
<p>Comparison program</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p><i>Common school curriculum (no specific program)</i></p> <p><i>345</i></p> <p><i>94</i></p> <p><i>Not applicable</i></p>
<p>Outcomes</p>	<p><i>Outcome</i></p> <p><u><i>Self-esteem:</i></u></p> <p><i>Rosenberg Self-esteem Scale (Rosenberg 1965)</i></p> <p><i>SMD: 1.48, 95% CI (-0.15 to 1.14); p=0.139</i></p> <p><u><i>Social and emotional competence (CASEL 1: Self-awareness)</i></u></p> <p><i>Trait Meta-Mood Scale (TMMS), which was originally developed by Salovey et al. (1995)</i></p> <p><i>ES: 1.78 CI: -0.27 to 3.7; p=0.087</i></p> <p><u><i>Coping strategies:</i></u></p> <p><i>Coping Strategy Indicator (CSI-15; Ellis 2004)</i></p> <p><i>SMD: 0.19, 95% CI (0.00 to 0.38); p=0.04</i></p>

	<p><u>Resilience:</u></p> <p>Social self-efficacy The Self-Efficacy Questionnaire (SEQ-C; Muris 2001) ES: 0.394; CI: -0.80 to 1.17; p=0.698</p> <p><u>Social and emotional competence (CASEL 4: Relationship skills)</u></p> <p>Adolescent Interpersonal Competence Questionnaire (AICQ; Buhrmester 1990); sub scale Asserting influence och Conflict resolution CI-0.04 to 0.16; p=0.218. *d=0.06</p> <p><u>Subjective psychological wellbeing:</u></p> <p>Mental wellbeing 14-item Warwick Edinburgh Mental Wellbeing Scale (WEMWBS; Tennant et al. 2007) Cohen's d: -0.183; CI: -1.86 to 1.56; p=0.857</p>
Comments	<p>Additional outcomes:</p> <p>Attitudes toward school The Attitudes Towards School scale (Anderson 1999) was used to measure students' (12-17 years)</p> <p>School achievement motivation The School Achievement Motivation Rating Scale (SAMRS; Chiu 1997)</p>
Risk of bias	Moderate
Author	Eninger
Year	2021
Country	Sweden
Ref	[23]
Study design	Randomized controlled trial
Study protocol	No information
Setting	Preschool
Inclusion criteria	Not stated
Follow up	Post intervention, one school year
Population characteristics	<p>Preschool children, age 4-5 years</p> <p>Intervention group:</p> <p>Age, years; Mean (SD): Not stated</p> <p>Sex; (Percent girls): 47%</p> <p>Socioeconomic/educations; Mean (SD): Not stated</p> <p>Control group:</p> <p>Age, years; Mean (SD): Not stated</p> <p>Sex;(Percent girls): 52%</p>

	<p>Socioeconomic/educations; Mean (SD): Not stated</p> <p>Total population:</p> <p>Age, years; Mean (SD): 4.8 (0.5)</p> <p>Sex;(Percent girls): 49%</p> <p>Socioeconomic/educations; Mean (SD): Not stated</p>
<p>Intervention program</p> <p>Program extent</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p>Preschool/Kindergarten version of the PATHS curriculum was used as the primary intervention (Domitrovich, Greenberg, Cortes, & Kusché, 2004)</p> <p>Number of sessions: 33</p> <p>Intensity: 15-20 min per week</p> <p>Duration: 1 school year</p> <p>Attendance: Not stated</p> <p>Implementation: The average reported lesson coverage was 14.8 lessons (SD = 11.7), this amounts to 45% reported lesson coverage.</p> <p>145</p> <p>Not stated</p> <p>Classroom teachers</p> <p>Training: 2-day training led by a certified PATHS trainer, approximately 6 months into the program, a 1-day booster session was given by a certified PATHS trainer in</p>
<p>Comparison program</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p>Common school curriculum (no specific program) Wait list controll</p> <p>140</p> <p>Not stated</p> <p>Not applicable</p>
<p>Outcomes</p>	<p>Outcome</p> <p><u>Social and emotional competence (CASEL 2: Self-management):</u></p> <p>The Assessment of Children's Emotional Skills, (ACES) Schultz et al., 2004</p> <p>SMD (% CI): -0.152 (-0.377 to 0.072)</p> <p><u>S Social and emotional competence (CASEL 3: Social awareness):</u></p> <p>The Assessment of Children's Emotional Skills, (ACES) Schultz et al., 2004</p> <p>SMD (% CI): 0.226 (-0.006 to 0.458)</p> <p><u>Social and emotional competence (CASEL 5: Responsible decision making):</u></p> <p>CST, The Challenging Situations Task, Denham et al., 1994</p> <p>SMD (% CI): 0.180 (-0.104 to 0.464)</p> <p><u>Social and emotional competence (CASEL 4: Relationship skills):</u></p> <p>Social Competence Scale (SCS), Prosocial behaviour, (Sorensen and Dodge, 2016); PKBS (Preschool and Kindergarten Behavior Scales; Merrell, 1996)</p> <p>SMD (% CI): -0.172 (-0.468 to 0.125)</p>

Comments	<p><i>Additional outcomes:</i></p> <p><i>Inhibitory control 1 (EF1)—The Knock and Tap task is a sub-test of the NEPSY (Korkman et al., 1998)</i></p> <p><i>Inhibitory control 2 (EF2)—An adapted version of the Day-Night task (Gerstadt et al., 1994)</i></p> <p><i>Working memory (EF3)—The Word span task is an index of working memory (WM) which is in turn an aspect of EF (Tillman et al., 2008).</i></p> <p><i>Teacher rating—social cooperation, interaction, and independence—Preschool and Kindergarten Behavior Scales Frontiers in Psychology www.frontiersin.org 5 July 2021 Volume 12 Article 695288 Eninger et al. A Cluster Randomized (PKBS; Merrell, 1996)</i></p> <p><i>Observer rating during child assessment -Task orientation— Task Orientation Scale. A subset of items from a Task Orientation scale, adapted from Smith-Donald et al. (2007)</i></p> <p><i>Teacher rating—internalizing and externalizing behavior— Preschool and Kindergarten Behavior Scales (PKBS; Merrell, 1996)</i></p> <p><i>Teacher rating—Inattention, hyperactivity/impulsivity—ADHD Rating Scale–IV (DuPaul et al., 1998).</i></p>
Risk of bias	Moderate
Author	Fishbein
Year	2016
Country	USA
Ref	1877
Study design	Randomized controlled trial
Study protocol	No information
Setting	Elementary school, kindergarten
Inclusion criteria	Randomization of four schools, 2 intervention schools and 2 control schools.
Follow up	Children attending kindergarten in selected schools and parents' consent
Population characteristics	End of intervention, about 6 months
Population characteristics	<p>Kindergarten</p> <p>Intervention group 1, School characteristics:</p> <p>Age, years; Mean (SD): Not stated</p> <p>Sex; (Percent girls): Not stated</p> <p>Socioeconomic/educations; Mean (SD):</p> <p>Free and Reduced Meal Service (FARMS) (SY-09) School wide</p> <p>Free Lunch: 329, 84.4% (calculated)</p> <p>Reduced Lunch: 38, 9.7% (calculated)</p> <p>Paid Lunch: 23, 5.9% (calculated)</p>

	<p><i>Intervention group 2, School characteristics:</i></p> <p><i>Age, years; Mean (SD): Not stated</i></p> <p><i>Sex;(Percent girls): Not stated</i></p> <p><i>Socioeconomic/educations; Mean (SD):</i></p> <p><i>Free and Reduced Meal Service (FARMS) (SY-09) School wide</i></p> <p><i>Free Lunch: 475, 88% (calculated)</i></p> <p><i>Reduced Lunch: 55, 10% (calculated)</i></p> <p><i>Paid Lunch: 11, 2% (calculated)</i></p> <p><i>Control group 1, School characteristics:</i></p> <p><i>Age, years; Mean (SD): Not stated</i></p> <p><i>Sex;(Percent girls): Not stated</i></p> <p><i>Socioeconomic/educations; Mean (SD):</i></p> <p><i>Free and Reduced Meal Service (FARMS) (SY-09) School wide</i></p> <p><i>Free Lunch: 355, 89.4% (calculated)</i></p> <p><i>Reduced Lunch: 14, 3.5% (calculated)</i></p> <p><i>Paid Lunch: 28, 7.1% (calculated)</i></p> <p><i>Control group 2, School characteristics:</i></p> <p><i>Age, years; Mean (SD): Not stated</i></p> <p><i>Sex;(Percent girls): Not stated</i></p> <p><i>Socioeconomic/educations; Mean (SD):</i></p> <p><i>Free and Reduced Meal Service (FARMS) (SY-09) School wide</i></p> <p><i>Free Lunch 548, 86.6% (calculated)</i></p> <p><i>Reduced Lunch 40, 6.3% (calculated)</i></p> <p><i>Paid Lunch 45, 7.1% (calculated)</i></p>
<p>Intervention program</p> <p>Program extent</p> <p>Participants (n)</p> <p>Drop-outs (n)</p>	<p><i>Preschool/Kindergarten version of the PATHS curriculum was used as the primary intervention (Domitrovich, Greenberg, Cortes, & Kusché, 2004)</i></p> <p><i>Number of sessions: 44</i></p> <p><i>Intensity: 20 min 2 times/week</i></p> <p><i>Duration: 6 months</i></p> <p><i>Attendance: Not stated</i></p> <p><i>Implementation: 80 % (for both groups)</i></p> <p><u><i>Group 1:</i></u></p> <p><i>Not stated</i></p> <p><i>Not stated</i></p>

<p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p><u>Group 2:</u></p> <p>Not stated</p> <p>Not stated</p> <p>Classroom teachers</p> <p>Training two-day training workshop shortly before intervention and weekly consultation with experienced PATH coordinator.</p>
<p>Comparison program</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p>Common school curriculum (no specific program)</p> <p><u>Control group 1:</u></p> <p>Not stated</p> <p>Not stated</p> <p><u>Control group 2:</u></p> <p>Not stated</p> <p>Not stated</p> <p>Not applicable</p>
<p>Outcomes</p>	<p>Outcome</p> <p><u>Social and emotional competence (CASEL 4: Relationship skills):</u></p> <p>Social Competence Scale (SCS), sub scale: Prosocial behaviour</p> <p>Unstandardised beta (SE): 1.03 (0.13), $p < 0.001$</p> <p><u>Social and emotional competence (CASEL 2: Self-management):</u></p> <p>Emotion Regulation</p> <p>Social Competence Scale (Conduct Problems Prevention Research Group [CPPRG], 1995); sub scale emotional regulation</p> <p>Fishbein: β (SE): 0.72 (0.12), $p < 0.001$</p> <p><u>Social and emotional competence (CASEL 3: Social awareness):</u></p> <p>Faces-task (FACES)</p> <p>Unstandardised beta (SE): 1.02 (0.48), $p < 0.05$</p> <p><u>Sense of community</u></p> <p>Peer Relationship Questionnaire Total</p> <p>Unstandardized Beta (SE): -0.5(0.08), $p < 0.001$</p>
<p>Comments</p>	<p>Additional outcomes:</p> <p>Aggression</p> <p>Internalizing</p>

Risk of bias	<p><i>Child Activity Scale; Impulsivity, Inattention, Total</i></p> <p><i>Student – Teacher Relationship Scale; Closeness, Conflict, Total</i></p> <p><i>Peer Relationship Questionnaire Total</i></p> <p><i>Skill Total</i></p> <p><i>Peer nominations: Liking difference, Negative nominations, Play differences, Positive nominations</i></p> <p><i>Moderate</i></p>
Author	<i>Green</i>
Year	2021
Country	USA
Ref	[24]
Study design	<i>Randomized controlled trial</i>
Study protocol	<i>No information</i>
Setting	<i>Middle school</i>
Inclusion criteria	<i>Written informed consent for participation was obtained from parents</i>
Follow up	<i>End of intervention, 13 weeks after start</i>
Population characteristics	<p><i>School children</i></p> <p><i>Intervention group:</i></p> <p><i>Age; Mean (SD): 12.3</i></p> <p><i>Sex;(Percent girls): 32.8</i></p> <p><i>Socioeconomic/educations; Mean (SD): 49.2 % free/reduced lunch</i></p> <p><i>Control group:</i></p> <p><i>Age; Mean (SD): 12.4</i></p> <p><i>Sex (Percent girls): 35.8</i></p> <p><i>Socioeconomic/educations; Mean (SD): 54.6% free/reduced lunch</i></p>
Intervention program	<i>SPARK Speaking to the Potential, Ability, and Resilience Inside Every Kid (SPARK) Pre - Teen Mentoring Curriculum</i>
Program extent	<p><i>Number of sessions: 12</i></p> <p><i>Intensity: 1 hour sessions</i></p> <p><i>Duration: 12-13 weeks</i></p> <p><i>Attendance; Mean: 92%, 11.04 of 12 sessions</i></p> <p><i>Implementation: 3.98 out of 4 (1=not met, 4= met)</i></p>
Participants (n)	188
Drop-outs (n)	5
Program Deliverer	<p><i>Certified SPARK facilitators</i></p> <p><i>Training: Not stated</i></p>
Comparison program	<i>Common school curriculum (no specific program)</i>
Participants (n)	177

Drop-outs (n)	3
Program Deliverer	Not applicable
Outcomes	<p>Outcome</p> <p><u>Social and emotional competence (CASEL 5: Responsible decision making):</u> Communication, Decision Making and Problem Solving scale (CDP,) sub scales: Decision making and Problem solving SS: Decision making: F:42,72; p<0.0001 Hedges'g: 0.69 SS: Problem solving: F:42.93; p<0.0001; Hedges'g:0.69.</p> <p><u>Social and emotional competence (CASEL 2: Self-management):</u> Difficulties in Emotional Regulation Scale (DERS) d=0.54; CI: 0.32 to 0.74</p> <p><u>Social and emotional competence (CASEL 4: Relationship skills):</u> Communication, Decision Making and Problem-Solving scale (CDP,) sub scale: Communication F: 44.21; p<0.0001; Hedges g: 0.70. *d=0.69; CI: 0.48 to 0.91</p> <p><u>Resilience:</u> Resiliency Scales for Children and Adolescents (RSCA) Hedge's g: 0.76; p<0.0001</p>
Comments	<p>Additional outcomes: Difficulties in emotional regulation; Impulse and Clarity subscales, Difficulties in Emotional Regulation Scale (DERS - SF; Kaufman et al., 2016) Level of knowledge of the curriculum; six items from the Three Principles Inventory (3PI; Kelley, 2011).</p>
Risk of bias	Moderate
Author	Green
Year	2021
Country	USA
Ref	[25]
Study design	Randomized controlled trial
Study protocol	No information
Setting	Elementary school
Inclusion criteria	Written informed consent for participation was obtained from parents
Follow up	End of intervention, 15 weeks after start
Population characteristics	<p>School children</p> <p>Intervention group: Age; Mean (SD): 9.5</p>

	<p>Sex;(Percent girls): 44.7</p> <p>Socioeconomic/educations; Mean (SD): 91.5 % free/reduced lunch</p> <p>Control group:</p> <p>Age; Mean (SD): 9.7</p> <p>Sex (Percent girls): 48.9</p> <p>Socioeconomic/educations; Mean (SD): 83.0% free/reduced lunch</p>
<p>Intervention program</p> <p>Program extent</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p>SPARK Speaking to the Potential, Ability, and Resilience Inside Every Kid (SPARK) Pre - Teen Mentoring Curriculum</p> <p>Number of sessions: 11</p> <p>Intensity: 1-hour sessions</p> <p>Duration: 11 weeks</p> <p>Attendance; Mean: 93% (about 10 of 11 sessions)</p> <p>Implementation: 3.97 out of 4 (1=not met, 4= met)</p> <p>49</p> <p>2</p> <p>Certified SPARK facilitators</p> <p>Training: certified through a comprehensive 4-day professional training program.</p>
<p>Comparison program</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p>Common school curriculum (no specific program)</p> <p>48</p> <p>1</p> <p>Not applicable</p>
Outcomes	<p>Outcome</p> <p><u>Resilience:</u></p> <p>Resiliency Scales for Children and Adolescents (RSCA)</p> <p>$d=1.07$; $CI:0.46-1.68$</p>
<p>Comments</p> <p>Risk of bias</p>	<p>Additional outcomes:</p> <p>Difficulties in emotional regulation; Impulse and Clarity subscales, Difficulties in Emotional Regulation Scale (DERS - SF; Kaufman et al., 2016)</p> <p>Communication, decision making, and problem-solving skills; Communication, Decision Making and Problem-Solving scale (CDP-Child Version).</p> <p>Moderate</p>
<p>Author</p> <p>Year</p> <p>Country</p> <p>Ref</p>	<p>Harlacher</p> <p>2010</p> <p>USA</p> <p>[26]</p>
<p>Study design</p> <p>Study protocol</p> <p>Setting</p>	<p>Quasi-experimental design</p> <p>No information</p> <p>Elementary school</p>

Inclusion criteria	<i>Not stated</i>
Follow up	<i>Post test (12 weeks) and 2 months after end of intervention (after booster session)</i>
Population characteristics	<p><i>School children, year 3–4</i></p> <p>Intervention group:</p> <p><i>Age; Mean (SD): 27 third grade and 27 fourth grade students</i></p> <p><i>Sex;(Percent girls): 55</i></p> <p><i>Socioeconomic/educations; Mean (SD): Not stated</i></p> <p>Control group:</p> <p><i>Age; Mean (SD): 39 third year, and 13 fourth year students</i></p> <p><i>Sex (Percent girls): 52</i></p> <p><i>Socioeconomic/educations; Mean (SD): Not stated</i></p> <p>Total population:</p> <p><i>Age; Mean (SD): 8 years 5 months for third grade students and 9 years 5 months for fourth grade students</i></p> <p><i>Sex (Percent girls): 52</i></p> <p><i>Socioeconomic/educations; Mean (SD): Not stated</i></p>
Intervention program	<i>SEL Curriculum: Strong Kids</i>
Program extent	<p><i>(SK; Merrell, Carrizales, Feuerborn, Gueldner, & Tran, 2007)</i></p> <p><i>Number of sessions: 12 + 1 booster session 2 months after end of intervention</i></p> <p><i>Intensity: 1 per week, 45 minutes each</i></p> <p><i>Duration: 12 weeks</i></p> <p><i>Attendance: Not stated</i></p> <p><i>Implementation: 85%</i></p>
Participants (n)	<i>54</i>
Drop-outs (n)	<i>Not stated</i>
Program Deliverer	<p><i>Classroom teachers</i></p> <p><i>Training:1-hr training, the treatment group teachers implemented the SK curriculum once per week for 12 weeks</i></p>
Comparison program	<i>Common school curriculum (no specific program)</i>
Participants (n)	<i>52</i>
Drop-outs (n)	<i>Not stated</i>
Program Deliverer	<i>Not applicable</i>
Outcomes	<p>Outcome</p> <p><u><i>Social and emotional competence (CASEL 4: Relationship skills):</i></u></p> <p><i>School Social Behavior Scales (SSBS-2), sub scale: Peer relations</i></p> <p><i>*d=0.82, CI: 0.42 to 1.21</i></p> <p><u><i>Social and emotional competence (CASEL: Composite score):</i></u></p> <p><i>Social-Emotional Assets and Resiliency Scales-Child Self Report Version (SEARS-C)</i></p>

	<p>$F(1, 99) = 6.74, p = 0.01$ $*d=0.5044; CI: 0.1176 \text{ to } 0.8912$</p> <p><u>Coping strategies:</u> Coping scale, Coping scale indication SMD: 0.19, 95% CI (0.00 to 0.38); $p=0.04$</p> <p><u>Coping strategies:</u> SK-Knowledge test (sub scale emotional regulation) Cohen's $d: 0.73; p=0.01$</p>
Comments	Additional outcomes: SEL knowledge; SK Knowledge Test (Merrell et al., 2007)
Risk of bias	Moderate
Author	Hertzig
Year	2003
Country	USA
Ref	[27]
Study design	Randomized controlled trial
Study protocol	No information
Setting	Elementary schools
Inclusion criteria	Schools in high-risk neighborhoods/towns (estimated rates of delinquency and juvenile arrests in the neighborhoods) with faculty consent of participation. Within those children were included with parents' consent.
Follow up	End of intervention
Population characteristics	<p>School children, 1st grade</p> <p>Intervention group: Age, years; Mean (SD): Not stated Sex;(Percent girls): Not stated Socioeconomic/educations; Mean (SD): Receiving free or reduced lunch: Durham: 83.8 % (12.5) Nashville: 78.5% (12.4) Rural PA: 39.6% (16.4) Seattle: 45.4% (7.0)</p> <p>Control group: Age, years; Mean (SD): Not stated Sex;(Percent girls): Not stated Socioeconomic/educations; Mean (SD):</p>

Participants: Drop Out:	<i>Receiving free or reduced lunch:</i> <i>Durham: 75.5 % (21.2)</i> <i>Nashville: 77.0% (10.9)</i> <i>Rural PA: 39.1% (13.4)</i> <i>Seattle: 46.6% (14.2)</i> <i>7560</i> <i>Not stated</i>
Intervention program Program extent Participants (n) Drop-outs (n) Program Deliverer	<i>The Fast-Track PATHS curriculum</i> <i>Number of sessions: 57</i> <i>Intensity: 20-30 min 2-3 times/week</i> <i>Duration: 9 months (1 schoolyear)</i> <i>Attendance:</i> <i>Implementation: The mean number of lessons taught by was 48.2 (SD = 9.7, range = 13-57).</i> <i>198 classrooms</i> <i>Classroom teachers</i> <i>Training: 2.5-day training workshop and weekly consultation from project staff.</i>
Comparison program Participants (n) Drop-outs (n) Program Deliverer	<i>Common school curriculum (no specific program)</i> <i>180 classrooms</i> <i>Not applicable</i>
Outcomes	<u><i>Measurement:</i></u> <i>Emotion Regulation</i> <i>Teacher Observation of Classroom Adaptation—Revised (TOCA-R; Werthamer-Larsson, Kellam, & Wheeler, 1991)</i> <u><i>End of intervention, mean (SD)</i></u> <i>Intervention group:</i> <i>Control group:</i> <u><i>Measurement:</i></u> <i>Prosocial behavior</i> <i>Social Health Profile (SHP; CPPRG, 1999b)</i> <u><i>End of intervention, mean (SD)</i></u> <i>Intervention group:</i> <i>Control group:</i>
Comments	<i>Additional outcomes:</i> <i>Sociometric assessments through peer nominations.</i>

Risk of bias	<i>Classroom Atmosphere by independent observers.</i> <i>Moderate</i>
Author	<i>Holen</i>
Year	<i>2012</i>
Country	<i>Norway</i>
Ref	<i>[28]</i>
Study design	<i>Randomized controlled trial</i>
Study protocol	<i>No information</i>
Setting	<i>Second year schools</i>
Inclusion criteria	<i>Parental consent</i>
Follow up	<i>Post test (24 weeks)</i>
Population characteristics	<p><i>School children, aged 7–8 years</i></p> <p><i>Intervention group:</i> <i>Age; Mean (SD): Not stated</i> <i>Sex;(Percent girls): Not stated</i> <i>Socioeconomic/educations; Mean (SD): Not stated</i></p> <p><i>Control group:</i> <i>Age; Mean (SD): Not stated</i> <i>Sex (Percent girls): Not stated</i> <i>Socioeconomic/educations; Mean (SD): Not stated</i></p> <p><i>Total population:</i> <i>Age; Mean (SD): 7.3 (0.32)</i> <i>Sex (Percent girls): 49.3</i> <i>Socioeconomic/educations; Mean (SD): In 85.7% of the families, at least one of the parents had completed high school and 61.6% had received higher education. Of the total population of adults aged 25–49 years in Norway, about 74% had completed high school and about 35% had completed higher education.</i></p>
Intervention program	<i>Zippy’s Friends</i>
Program extent	<p><i>Number of sessions: 24</i></p> <p><i>Intensity: 1 session per week</i></p> <p><i>Duration: 8 months</i></p> <p><i>Attendance: Not stated</i></p> <p><i>Implementation: Nearly 85% of the teachers reported that they completed all 24 lessons</i></p>
Participants (n)	<i>686</i>
Drop-outs (n)	<i>46</i>
Program Deliverer	<p><i>Classroom teachers</i></p> <p><i>Training: 2 days of training, 3 counselling session lasting one day each during the programme</i></p>
Comparison program	<i>Common school curriculum (no specific program)</i>

Participants (n)	638
Drop-outs (n)	24
Program Deliverer	Not applicable
Outcomes	<p>Outcome</p> <p><u>Social and emotional competence (CASEL 3: Social awareness):</u> Strengths and Difficulties Questionnaire (SDQ), sub scale Prosocial behaviour Cohens'd: -0.031 (parent rating), 0.176 (teacher's rating)</p> <p><u>Coping strategies</u> Kidcope questionnaire, Spirito, Stark, and Williams (1988) Cohens'd: 0.084; $p > 0.05$ (child) Cohens'd: -0.058; $p > 0.05$ (parents)</p>
Comments	
Risk of bias	Moderate -borderline high
Author	Humphrey
Year	2016
Country	UK
Ref	[29]; associated with [30];[31]; [32]
Study design	Randomized controlled trial
Study protocol	No information
Setting	
Inclusion criteria	Mainstream, state-maintained institutions, providing education for children from the ages of 4–11 years. Consent from the schools' Head Teachers. Child assent and parental opt-out consent were also sought.
Follow up	End of intervention
Population characteristics	<p>School children, aged 7-9 years at baseline</p> <p>Intervention group: Age; Mean (SD): Not stated Sex;(Percent girls): 50.5 Socioeconomic/educations; Mean (SD): Free school meals (percentage): 31.7</p> <p>Control group: Age; Mean (SD): Not stated Sex (Percent girls): 47.1 Socioeconomic/educations; Mean (SD): Free school meals (percentage): 29.6</p>
Intervention program	PATHS
Program extent	Number of sessions: 40

Participants (n) Drop-outs (n) Program Deliverer	<i>Intensity: 30-40min 2 sessions/week</i> <i>Duration: 2 schoolyears</i> <i>Attendance % (SD): Not stated</i> <i>Implementation % (SD): Not stated</i> <i>2340 (teachers report)</i> <i>2073 (teachers report)</i> <i>Classroom teachers</i> <i>Training: 1 full day of training before program start, half day follow up four months later. On-going technical support and assistance.</i>
Comparison program Participants (n) Drop-outs (n) Program Deliverer	<i>Common school curriculum (no specific program)</i> <i>2176 (teachers report)</i> <i>1244 (teachers report)</i> <i>Not applicable</i>
Outcomes	<i>Outcome</i> <u><i>Social and emotional competence (CASEL 3: Social awareness):</i></u> <i>Strengths and Difficulties Questionnaire (SDQ) Pro-Social Behavior subscale</i> <i>Cohens´d: 0.07; CI95%: -0.12 to 0.25</i> <u><i>Social and emotional competence (CASEL: Composite score):</i></u> <i>(SSIS) total score</i> <i>Cohens´d: 0.09; CI 95%: -0.03 to 0.20</i> <u><i>Social and emotional competence (CASEL: Composite score):</i></u> <i>Social and Emotional Competence Change Index (SECCI)</i> <i>d=0.47; 95%CI: 0.97 to 0.76</i>
Comments Risk of bias	<i>Low</i>
Author Year Country Ref	<i>lalongo</i> <i>2019</i> <i>USA</i> <i>[33]</i>
Study design Study protocol Setting Inclusion criteria Follow up Population characteristics	<i>Randomized controlled trial</i> <i>No information</i> <i>Elementary schools</i> <i>Written parental consent.</i> <i>End of intervention, after 1 schoolyear.</i> <i>School children, year K–5</i> <i>Intervention group 1 (PATHS + PAX):</i>

	<p>Age; Mean (SD): Not stated</p> <p>Sex;(Percent girls): 51.0</p> <p>Socioeconomic/educations; (percentage):</p> <p>Free and reduced Lunch Status (FARMS): 87.1</p> <p>Intervention group 2 (PAX):</p> <p>Age; Mean (SD): Not stated</p> <p>Sex;(Percent girls): 49.1</p> <p>Socioeconomic/educations; (percentage):</p> <p>Free and reduced Lunch Status (FARMS): 83.4</p> <p>Control group:</p> <p>Age; Mean (SD): Not stated</p> <p>Sex (Percent girls): 49.0</p> <p>Socioeconomic/educations; (percentage):</p> <p>Free and reduced Lunch Status (FARMS): 89.0</p>
<p>Intervention program 1</p> <p>Program extent</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p>The PAX Good Behavior Game (PAX GBG) and Promoting Alternative Thinking Strategies (PATHS, Greenberg et al., 1995).</p> <p>Pax Games:</p> <p>Number of sessions: Not stated</p> <p>Intensity: Not stated</p> <p>Duration: 31 weeks (schoolyear)</p> <p>Attendance % (SD):</p> <p>Implementation number of sessions (SD): 154.22 (SD = 106.4), 1583.43 min (SD = 1482.14) total PATHS lessons:</p> <p>Number of sessions: Not stated</p> <p>Intensity: Several times a day</p> <p>Duration: 31 weeks (schoolyear)</p> <p>Attendance % (SD): Not applicable</p> <p>Implementation % (SD): 71.80% (S 0.27) .</p> <p>1562</p> <p>139</p> <p>Classroom teachers</p> <p>Training: 1 day group-based training before program start, and half a day follow up after three months, for each intervention program.</p>
<p>Intervention program 2</p> <p>Program extent</p>	<p>The PAX Good Behavior Game (PAX GBG).</p> <p>Number of sessions: Not specified</p> <p>Intensity: Several times a day</p> <p>Duration: 31 weeks (schoolyear)</p> <p>Attendance % (SD): Not applicable</p>

Participants (n)	Implementation number of sessions (SD): 150.18 (SD = 94.92), 1431.84 min (SD = 1298.38) total
Drop-outs (n)	1994
Program Deliverer	Classroom teachers Training: 1 day group-based training pre-program start, and half-day follow up after 3 months.
Comparison program	Common school curriculum (no specific program)
Participants (n)	2055
Drop-outs (n)	168
Program Deliverer	Not applicable
Outcomes	<p>Outcomes</p> <p><u>Social and emotional competence (CASEL 2: Self-management):</u> Social Health Profile (SHP), sub scale: Emotional regulation Passive control*: $d=0.08$, CI: 0.01 to 0.14; ($F=5.23$); Active control*: $d= 0.01$, CI: -0.06 to 0.07; ($F=0.05$)</p> <p><u>Social and emotional competence (CASEL 4: Relationship skills):</u> Social Health Profile (SHP), sub scale: Social competence Active control: $F=5.89$, $p<0.05$; *$d= 0.082$, CI: 0.016 to 0.15 Passive control: $F= 10.89$, $p<0.001$; *$d=0.111$, CI: 0.045 to 0.177</p>
Comments	Additional outcomes: Teacher Observation of Classroom Adaptation-Revised (TOCA-R).
Risk of bias	Low
Author	Kimber
Year	2008
Country	Sweden
Ref	[34]; associated with[35]; [36]
Study design	Mixed design, in which there is 'a mixture of between-group and repeated-measures variables'
Study protocol	No information
Setting	Public school
Inclusion criteria	Parents consent.
Follow up	Once per schoolyear, end of schoolyear, up to five years.
Population characteristics	School children, grade 4–9 Intervention group: Age; Mean (SD): Not stated Sex;(Percent girls): Not stated Socioeconomic/educations; Mean (SD): Not stated Control group: Age; Mean (SD): Not stated

	<p><i>Sex (Percent girls): Not stated</i></p> <p><i>Socioeconomic/educations; Mean (SD): Not stated</i></p>
<p>Intervention program</p> <p>Program extent</p>	<p><i>SET programme (Social and emotional training) (Kimber, 2001a, b).</i></p> <p><i>Grade 4-5</i></p> <p><i>Number of sessions: Not stated</i></p> <p><i>Intensity: 45 min twice per week</i></p> <p><i>Duration: 1-2 years (up to 5 years total)</i></p> <p><i>Attendance: Not stated</i></p> <p><i>Implementation: Not stated</i></p> <p><i>Grade 6-9</i></p> <p><i>Number of sessions: Not stated</i></p> <p><i>Intensity: 45 min once per week</i></p> <p><i>Duration: 1-3 years (up to 5 years total)</i></p> <p><i>Attendance: Not stated</i></p> <p><i>Implementation: Not stated</i></p>
<p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p><i>Classroom teachers</i></p> <p><i>Training: Prior to intervention, teachers were trained in SET during one schoolyear. Opportunity to try relevant exercises, discuss issues and with supervision.</i></p>
<p>Comparison program</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p><i>Common school curriculum (no specific program)</i></p> <p><i>Not applicable</i></p>
Outcomes	<p><i>Outcome</i></p> <p><u><i>Quality of life:</i></u></p> <p><i>'Youth self-report (YSR)' (Achenbach T, Edelbrock C. 1987)</i></p> <p><i>Efficiency difference between groups: 0.12, p=0.182</i></p> <p><u><i>Social and emotional competence (CASEL 3: Social awareness):</i></u></p> <p><i>'The Social Skills Rating System (SSRS)' (Gresham S, Elliott S. 1990) sub scale Prosocial behaviour</i></p> <p><i>No difference between groups</i></p> <p><u><i>Social and emotional competence (CASEL 2: Self-management):</i></u></p> <p><i>'The Social Skills Rating System (SSRS)' (Gresham S, Elliott S. 1990) sub scale Self control</i></p> <p><i>No difference between groups</i></p> <p><u><i>Social and emotional competence (CASEL 4: Relationship skills):</i></u></p>

	<p><i>'The Social Skills Rating System (SSRS)' (Gresham S, Elliott S. 1990) sub scale Assertion</i></p> <p><i>No difference between groups</i></p> <p><u><i>Social and emotional competence (CASEL: Composite score):</i></u></p> <p><i>'The Social Skills Rating System (SSRS)' (Gresham S, Elliott S. 1990) Total score</i></p> <p><i>No difference between groups</i></p>
Comments	<p><i>Additional outcomes:</i></p> <p><i>Feelings of self-efficacy or hopelessness; Mastery (Pearlin L, Liebman M, Menaghan E 1981)</i></p> <p><i>School satisfaction, Contentment in school and Bullying from subscales of Swedish Council for Information on Alcohol and Other Drugs. (Hibell B, Anderson B, Bjarnason T, 1990)</i></p>
Risk of bias	<i>Moderate -borderline high</i>
Author	<i>Kimber</i>
Year	<i>2008</i>
Country	<i>Sweden</i>
Ref	<i>[36]; associated with [35]; [34]</i>
Study design	<i>Quasi-experimental longitudinal design.</i>
Study protocol	<i>No information</i>
Setting	<i>Public school</i>
Inclusion criteria	<i>Not stated</i>
Follow up	<i>Once per schoolyear, end of schoolyear, three years.</i>
Population characteristics	<p><i>School children, grade 1–7 at beginning of intervention</i></p> <p><i>Intervention group:</i></p> <p><i>Age; Mean (SD): Not stated</i></p> <p><i>Sex;(Percent girls): Not stated</i></p> <p><i>Socioeconomic/educations; Mean (SD): Not stated</i></p> <p><i>Control group:</i></p> <p><i>Age; Mean (SD): Not stated</i></p> <p><i>Sex (Percent girls): Not stated</i></p> <p><i>Socioeconomic/educations; Mean (SD): Not stated</i></p>
Intervention program	<i>SET programme (Social and emotional training) (Kimber, 2001a, b).</i>
Program extent	<p><i>Grade 1-5</i></p> <p><i>Number of sessions: Not stated</i></p> <p><i>Intensity: 45 min twice per week</i></p> <p><i>Duration: 3 consecutive years (total of 5 years)</i></p> <p><i>Attendance: Not stated</i></p> <p><i>Implementation: Not stated</i></p> <p><i>Grade 6-9</i></p>

<p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p><i>Number of sessions: Not stated</i></p> <p><i>Intensity: 45 min once per week</i></p> <p><i>Duration: 3 consecutive years (total of 5 years)</i></p> <p><i>Attendance: Not stated</i></p> <p><i>Implementation: Not stated</i></p> <p><i>42 classes</i></p> <p><i>1 class</i></p> <p><i>Classroom teachers</i></p> <p><i>Training: Prior to intervention, teachers were trained in SET during one schoolyear. Opportunity to try relevant exercises, discuss issues and with supervision.</i></p>
<p>Comparison program</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p><i>Common school curriculum (no specific program)</i></p> <p><i>14 classes</i></p> <p><i>None</i></p> <p><i>Not applicable</i></p>
<p>Outcomes</p>	<p><i>Outcome</i></p> <p><u><i>Quality of life:</i></u></p> <p><i>'Youth self-report (YSR)' (Achenbach T, Edelbrock C. 1987)</i></p> <p><i>Efficiency difference between groups: 0.12, p=0.182</i></p> <p><u><i>Social and emotional competence (CASEL 3: Social awareness):</i></u></p> <p><i>'The Social Skills Rating System (SSRS)' (Gresham S, Elliott S. 1990) sub scale Prosocial behaviour</i></p> <p><i>No difference between groups</i></p> <p><u><i>Social and emotional competence (CASEL 2: Self-management):</i></u></p> <p><i>'The Social Skills Rating System (SSRS)' (Gresham S, Elliott S. 1990) sub scale Self control</i></p> <p><i>No difference between groups</i></p> <p><u><i>Social and emotional competence (CASEL 4: Relationship skills):</i></u></p> <p><i>'The Social Skills Rating System (SSRS)' (Gresham S, Elliott S. 1990) sub scale Assertion</i></p> <p><i>No difference between groups</i></p> <p><u><i>Social and emotional competence (CASEL: Composite score):</i></u></p> <p><i>'The Social Skills Rating System (SSRS)' (Gresham S, Elliott S. 1990) Total score</i></p> <p><i>No difference between groups</i></p>
<p>Comments</p>	<p><i>Additional outcomes:</i></p> <p><i>Feelings of self-efficacy or hopelessness; Mastery (Pearlin L, Liebman M, Menaghan E 1981)</i></p> <p><i>School satisfaction, Contentment in school and Bullying from subscales of Swedish Council for Information on Alcohol and Other Drugs. (Hibell B, Anderson B, Bjarnason T, 1990)</i></p>
<p>Risk of bias</p>	<p><i>Moderate -borderline high</i></p>

Author	<i>Kiviruusu</i>
Year	<i>2016</i>
Country	<i>Finland</i>
Ref	<i>[37]</i>
Study design	<i>Randomized controlled trial</i>
Study protocol	<i>No information</i>
Setting	<i>Primary schools</i>
Inclusion criteria	<i>Teacher, principals and parental consent</i>
Follow up	<i>6 months after baseline (also at 18 months past baseline to be described in future)</i>
Population characteristics	<p><i>School children, 2nd and 3rd grade</i></p> <p>Intervention group:</p> <p><i>Age, years; Mean (SD): Not stated</i></p> <p><i>Sex; (Percent girls): 50.1</i></p> <p><i>Socioeconomic/educations; Mean (SD):</i></p> <p><i>University of applied sciences or higher: 60.7 %</i></p> <p><i>Less: 49.3 %</i></p> <p>Control group:</p> <p><i>Age, years; Mean (SD): Not stated</i></p> <p><i>Sex;(Percent girls): 53.0</i></p> <p><i>Socioeconomic/educations; Mean (SD):</i></p> <p><i>University of applied sciences or higher: 59.2 %</i></p> <p><i>Less: 40.8 %</i></p> <p>Total population:</p> <p><i>Age, years; Mean (SD): 8.1</i></p> <p><i>Sex;(Percent girls): 41.4</i></p> <p><i>Socioeconomic/educations; Mean (SD):</i></p> <p><i>University of applied sciences or higher: 60.1 %</i></p> <p><i>Less: 39.9 %</i></p>
Intervention program	<i>SEL "Together at School"</i>
Program extent	<p><i>Children curriculum</i></p> <p><i>Number of sessions: Not applicable</i></p> <p><i>Intensity: 15 min daily, additional 10-40 min weekly, additionally 2 sessions weekly</i></p> <p><i>Duration: One school year</i></p> <p><i>Attendance: The dosage groups were named as "intervention below the intended intensity" (0–12.0 points; 78 %) and "intervention as intended" (12.1–15 points; 22 %).</i></p>

	<p><i>Implementation: Not stated</i></p> <p><i>Also Parent's evening once and carried out by the principal and the staff, are designed to improve the school work environment (Planning of Collaborative Time, Staff Meeting, Service Station, and Toolkit Session).</i></p>
<p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p>2090</p> <p>54</p> <p><i>Classroom teachers for children and parents</i></p> <p><i>Training: Instructors with a degree in pedagogics. Teachers received program training before starting the implementation of the intervention, and 4 modules during intervention period. Additionally teachers received a 258-page Together at School manual.</i></p>
<p>Comparison program</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p><i>Common school curriculum (no specific program)</i></p> <p>1754</p> <p>86</p> <p><i>Two 3-hour lessons given by the psychologists and child psychiatrists of the research group. Topics were children's mental health in general, emotions and development of emotional and behavioral regulation. 2nd lessons were teachers' well-being and professional development and how to establish good relationship and to cope with challenging situations with children and their parents.</i></p>
Outcomes	<p>Outcome</p> <p><u><i>Social and emotional competence (CASEL 3: Social awareness):</i></u></p> <p><i>Strengths and Difficulties Questionnaire (SDQ), sub scale Prosocial behaviour</i></p> <p><i>Beta: 0.065, Non- significant difference</i></p> <p><u><i>Social and emotional competence (CASEL 3: Social awareness):</i></u></p> <p><i>Multisource Assessment of Social Competence Scale (MASCS)</i></p> <p><i>Sub scale Cooperation: Beta: 0.146. Non-significant difference.</i></p> <p><i>Sub scale Empathy: Beta: 0.060. Non-significant difference</i></p>
Comments	<p><i>Teachers as raters</i></p> <p><i>Strengths and Difficulties Questionnaire (SDQ)</i></p> <p><i>Multisource Assessment of Social Competence Scale (MASCS).</i></p>
Risk of bias	<i>Moderate</i>
<p>Author</p> <p>Year</p> <p>Country</p> <p>Ref</p>	<p><i>Lam</i></p> <p><i>2020</i></p> <p><i>Hong Kong</i></p> <p><i>[38]</i></p>
Study design	<i>Randomized controlled trial, quasi-experimental control group</i>

Study protocol	No information
Setting	Secondary school
Inclusion criteria	Active parent/guardian consent for all participants.
Follow up	Post-test, (5 months start of intervention)
Population characteristics	School children, Grade 7 Intervention group: Age; Mean (SD): Not stated Sex;(Percent girls): 34 Socioeconomic/educations; Mean (SD): Not stated Control group: Age; Mean (SD): Not stated Sex (Percent girls): 36.5 Socioeconomic/educations; Mean (SD): Not stated Total Population: Age; Mean (SD): 12.4 Sex (Percent girls): Not stated Socioeconomic/educations; Mean (SD): low to middle SES neighborhood.
Participants:	115
Drop Out:	19
Intervention program	Learning to BREATHE (L2B; Broderick and Metz 2009)
Program extent	Number of sessions: 6 Intensity: 70 min once a month Duration: 5 months Attendance: No more than two missed sessions per participant Implementation: Not stated
Participants (n)	53
Drop-outs (n)	Not stated
Program Deliverer	Clinical and school psychologist Training: Diplomate of the Academy of Cognitive Therapy (ACT) with training in MBSR and MBCT.
Comparison program	Common school curriculum (no specific program)
Participants (n)	62
Drop-outs (n)	Not stated
Program Deliverer	Not applicable
Outcomes	Outcome <u>Measurement:</u> Emotion Regulation The Difficulties in Emotion Regulation Scale (DERS; Gratz and Roemer 2004)
Comments	Additional outcomes:

Risk of bias	<p><i>Perceived Stress; A single-item measure of perceived stress level developed by the program developer (Dr. Broderick) was back-translated to evaluate effectiveness of the L2B program (Metz et al. 2013).</i></p> <p><i>Internalizing and Attention Problems; The Youth Self-Report (YSR; Achenbach and Rescorla 2001)</i></p> <p><i>Executive Functions; The Behavior Rating Inventory of Executive Function - Self-Report version (BRIEF-SR; Guy et al. 2004)</i></p> <p><i>Rumination; The Ruminative Responses Scale (RRS; Nolen-Hoeksema and Morrow 1991)</i></p> <p><i>Process Evaluation of Acceptability, Benefits and Utility; survey developed by the program developer (Dr. Broderick) to evaluate L2B's acceptability and perceived social validity (Metz et al. 2013) + adapted from mindfulness research with children (Semple and Lee 2011)</i></p> <p><i>Moderate</i></p>
Author Year Country Ref	<p><i>Low</i></p> <p><i>2019</i></p> <p><i>United States</i></p> <p><i>[39]</i></p>
Study design Study protocol Setting Inclusion criteria Follow up Population characteristics	<p><i>cluster-randomized wait-list control trial</i></p> <p><i>No information</i></p> <p><i>Elementary school</i></p> <p><i>All participating school districts, teachers, and parents of the students in the Second Step Project provided passive consent</i></p> <p><i>End of school year 1 (6 months), Start of school year 2 (1 year), End of school year 2 (1,5 year)</i></p> <p><i>Early elementary students</i></p> <p><i>Intervention group:</i></p> <p><i>Age, years; Mean (SD): Not stated</i></p> <p><i>Sex; (Percent girls): Not stated</i></p> <p><i>Socioeconomic/educations; Mean (SD):</i></p> <p><i>In Washington (41 schools) and Arizona (20 schools), respectively, about 50% and 78% of participating students received free and reduced lunch.</i></p> <p><i>Control group:</i></p> <p><i>Age, years; Mean (SD): Not stated</i></p> <p><i>Sex;(Percent girls): Not stated</i></p> <p><i>Socioeconomic/educations; Mean (SD):</i></p> <p><i>In Washington (41 schools) and Arizona (20 schools), respectively, about 50% and 78% of participating students received free and reduced lunch.</i></p>
Intervention program Program extent	<p><i>SEL curriculum, Second Step</i></p> <p><i>Number of sessions: 22</i></p> <p><i>Intensity: 25-40 min</i></p>

<p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p><i>Duration: 2 years</i></p> <p><i>Attendance: Teachers reported that 91% of the students were engaged in Year 1 and 92% in Year 2 averaged across all lessons.</i></p> <p><i>Implementation:</i></p> <p><i>Average number of lessons completed was 17.42 (SD3.72) in Year 1 and 17.7 (SD4.92) in Year 2.</i></p> <p><i>Most teachers delivered the program with fidelity: 85% and 82% of lesson components were delivered in Year 1 and Year 2, respectively.</i></p> <p>4613</p> <p>100</p> <p>Classroom teachers</p> <p><i>Training: Two brief trainings were provided to early start schools: the Second Step curriculum (1 hr) and Proactive Classroom Management (PCM; 3 hr).</i></p>
<p>Comparison program</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p><i>Common school curriculum (no specific program)</i></p> <p>4523</p> <p>113</p> <p><i>Not applicable</i></p>
<p>Outcomes</p>	<p>Outcome</p> <p><u><i>Social and emotional competence (CASEL: Composite score):</i></u></p> <p><i>DESSA-SSE (The Devereux Student Strengths Assessment—Second Step Edition)</i></p> <p><i>No significant difference between groups</i></p> <p><u><i>Social and emotional competence (CASEL 3: Social awareness):</i></u></p> <p><i>SDQ (The Strengths Difficulties Questionnaire)</i></p> <p><i>No significant difference between groups</i></p>
<p>Comments</p> <p>Risk of bias</p>	<p><i>Additional outcomes:</i></p> <p><i>Teacher reports of student behavior.</i></p> <p><i>Devereux Student Strengths Assessment – Second Step Edition (LeBuffe, Naglieri, & Shapiro, 2011).</i></p> <p><i>Strengths Difficulties Questionnaire (SDQ; Goodman, 2001).</i></p> <p><i>Trained graduate students: Behavioral Observation of Students in Schools (Shapiro & Kratochwill, 2000),</i></p> <p><i>Aimsweb curriculum-based measures of oral reading fluency (RCBM) and math calculation (M-CBM) were collected twice per year.</i></p> <p><i>Moderate</i></p>
<p>Author</p> <p>Year</p> <p>Country</p>	<p><i>Low</i></p> <p>2015</p> <p>USA</p>

Ref	[40]
Study design	Randomized controlled trial
Study protocol	No information
Setting	State schools
Inclusion criteria	Parental, teachers' passive consent
Follow up	End of intervention, 1 school term
Population characteristics	Pre-school and school children, kindergarten to 2 nd grade Intervention group: Age; Mean (SD): Not stated Sex;(Percent girls): Not stated Socioeconomic/educations; Mean (SD): Not stated Control group: Age; Mean (SD): Not stated Sex (Percent girls): Not stated Socioeconomic/educations; Mean (SD): Not stated Total Population: Age; Mean (SD): Not stated Sex (Percent girls): Not stated Socioeconomic/educations; Mean (SD): 50% and 78% of participating students in Washington and Arizona, respectively, received free and reduced lunch.
Intervention program	Second Step® program, Committee for Children (CfC),
Program extent	Number of sessions: 22 Intensity: 25-40 min once per week Duration: 1 school term Attendance: Not stated Implementation: Average number of lessons completed 17.42 SD: 3.72. 85% of lesson components were reportedly delivered
Participants (n)	3274
Drop-outs (n)	309
Program Deliverer	Classroom teachers Training: 1 h + 3 h trainings sessions.
Comparison program	Common school curriculum (no specific program)
Participants (n)	3187
Drop-outs (n)	309
Program Deliverer	Not applicable
Outcomes	Outcome <u>Social and emotional competence (CASEL 3: Social awareness):</u> Strengths and Difficulties Questionnaire (SDQ), sub scale Prosocial behaviour Hedge's g: -0.016; p=0.80

	<p><i>Social and emotional competence (CASEL: Composite score):</i></p> <p><i>Devereux Student Strengths Assessment Second Step Edition (DESSA-SSE), composite score</i></p> <p><i>Hedge's g: 0.125; p=0.0587</i></p>
Comments	<p><i>Additional outcomes:</i></p> <p><i>Class-wide and individual student behavior; Behavioral Observation of Students in Schools (BOSS; Shapiro & Kratochwill, 2000)</i></p> <p><i>Proactive classroom management; Proactive Classroom Management Rating Form (PCM-RF Cook, 2009)</i></p>
Risk of bias	<i>Moderate</i>
Author	<i>Malhotra</i>
Year	<i>2021</i>
Country	<i>Uganda</i>
Ref	<i>[41]</i>
Study design	<i>Randomized controlled trial</i>
Study protocol	<i>No information</i>
Setting	<i>Primary school, after school sessions</i>
Inclusion criteria	<i>Girl, parental/guardian consent and written assents from participating students.</i>
Follow up	<i>End of intervention, 1 school year</i>
Population characteristics	<p><i>Grades 1 through 7, 12-17 years old</i></p> <p><i>Intervention group:</i></p> <p><i>Age; Mean (SD): Not stated</i></p> <p><i>Sex;(Percent girls): 100%</i></p> <p><i>Socioeconomic/educations; Mean (SD): Not stated</i></p> <p><i>Control group:</i></p> <p><i>Age; Mean (SD): Not stated</i></p> <p><i>Sex (Percent girls): 100%</i></p> <p><i>Socioeconomic/educations; Mean (SD): Not stated</i></p>
Intervention program	<i>Eminyeeto Social Emotional Learning (SEL) curriculum</i>
Program extent	<p><i>Number of sessions: Not stated</i></p> <p><i>Intensity: 60 min + 25-30 min once per week</i></p> <p><i>Duration: 1 school year</i></p> <p><i>Attendance:</i></p> <p><i>Implementation:</i></p>
Participants (n)	<i>214</i>
Drop-outs (n)	<i>No information (11 total drop-outs in both intervention and control group)</i>
Program Deliverer	<i>Classroom teachers</i>

	<i>Training: Not specified</i>
Comparison program	<i>Common school curriculum (no specific program)</i>
Participants (n)	<i>66</i>
Drop-outs (n)	<i>No information (11 total drop-outs in both intervention and control group)</i>
Program Deliverer	<i>Not applicable</i>
Outcomes	<p><i>Outcome</i></p> <p><u><i>Resilience:</i></u></p> <p><i>General Self-Efficacy Scale (GSES)</i></p> <p><i>$\beta = 3.25, p\text{-value} < 0.01; t = 3.60$</i></p> <p><u><i>Self-esteem:</i></u></p> <p><i>Rosenberg Self-esteem Scale (RSE)</i></p> <p><i>The Emineyeeto SEL curriculum had a significant impact on girls' social and emotional learning through improvements in self-esteem</i></p>
Comments	<p><i>Additional outcomes:</i></p> <p><i>Rights and Privileges of Men and Equity for Girls; The Gender Norm Attitudes scale from the Compendium of Gender scales</i></p> <p><i>Depressive symptoms; Patient Health Questionnaire</i></p> <p><i>Socio-emotional outcomes; Group and individual questionnaire</i></p>
Risk of bias	<i>Moderate</i>
Author	<i>Mogro-Wilson</i>
Year	<i>2020</i>
Country	<i>USA</i>
Ref	<i>[42]</i>
Study design	<i>Quasi-experimental design.</i>
Study protocol	<i>No information</i>
Setting	<i>High school</i>
Inclusion criteria	<i>Passive informed consent.</i>
Follow up	<i>End of intervention, 1 school year</i>
Population characteristics	<p><i>Freshmen high school students</i></p> <p><i>Intervention group:</i></p> <p><i>Age; Mean (SD): 14.11 (0.68)</i></p> <p><i>Sex;(Percent girls): 42</i></p> <p><i>Socioeconomic/educations; Mean (SD): Not stated</i></p> <p><i>Control group:</i></p> <p><i>Age; Mean (SD): 14.03 (0.57)</i></p> <p><i>Sex (Percent girls): 58</i></p> <p><i>Socioeconomic/educations; Mean (SD): Not stated</i></p>

Intervention program	<i>Connect with Kids, Social and emotional learning (SEL)</i>
Program extent	<i>Number of sessions: 7 Intensity: Not stated Duration: Not stated Attendance: Not stated Implementation: 85%</i>
Participants (n)	<i>143</i>
Drop-outs (n)	<i>10</i>
Program Deliverer	<i>Classroom teachers Training: four intensive two-hour trainings before implementing</i>
Comparison program	<i>Common school curriculum (no specific program)</i>
Participants (n)	<i>161</i>
Drop-outs (n)	<i>5</i>
Program Deliverer	<i>Not applicable</i>
Outcomes	<i>Outcome</i> <i><u>Social and emotional competence (CASEL 3: Social awareness):</u> Interpersonal Reactivity Index (IRI), sub scale Social awareness and empathy F=4.77; p=0.03; Eta=0.03</i>
Comments	
Risk of bias	<i>Moderate</i>
Author	<i>Novak</i>
Year	<i>2017</i>
Country	<i>Croatia</i>
Ref	<i>[43]</i>
Study design	<i>Randomized controlled trial</i>
Study protocol	<i>No information</i>
Setting	<i>Elementary school</i>
Inclusion criteria	<i>Informed consent from parents.</i>
Follow up	<i>End of intervention, after 1,5 years</i>
Population characteristics	<i>School children, mid first year to mid second year, about 7 years old at beginning of study</i> <i>Total Population:</i> <i>Age; Mean (SD): 7 years Sex;(Percent girls): 47% Socioeconomic/educations; Mean (SD): Not stated</i> <i>Intervention group:</i> <i>Age; Mean (SD): Not stated Sex;(Percent girls): Not stated Socioeconomic/educations; Mean (SD): Not stated</i>

	<p>Control group:</p> <p>Age; Mean (SD): Not stated</p> <p>Sex (Percent girls): Not stated</p> <p>Socioeconomic/educations; Mean (SD): Not stated</p>
<p>Intervention program</p> <p>Program extent</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p>PATHS (Promoting Alternative Thinking Strategies; Kusché & Greenberg, 1994)</p> <p>Number of sessions: 63</p> <p>Intensity: 2 per week</p> <p>Duration: about 1 schoolyear (mid 1st to mid 2nd grade)</p> <p>Attendance % (SD):</p> <p>Implementation % (SD):</p> <p>280</p> <p>265</p> <p>Classroom teachers</p> <p>Training: 2 days of instruction before and between first and second grades.</p>
<p>Comparison program</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p>Common school curriculum (no specific program)</p> <p>288</p> <p>281</p> <p>Not applicable</p>
Outcomes	<p>Outcome</p> <p><u>Social and emotional competence (CASEL 2: Self-management):</u></p> <p>Social Competence Scale (SCS), sub scale Emotional regulation</p> <p>ES: 0.18 ($p < 0.1$)</p> <p><u>Social and emotional competence (CASEL 4: Relationship skills):</u></p> <p>Social Competence Scale (SCS), Sub scale: Prosocial behaviour</p> <p>0.16; Not significant</p>
Comments	<p>Additional outcomes:</p> <p>Learning behavior, School Readiness Questionnaire</p> <p>Inattention, ADHD Rating Scale</p> <p>Hyperactivity, ADHD Rating Scale</p> <p>Oppositional behavior, Teacher Observation of Classroom Adaptation–Revised</p> <p>Physical aggression, Teacher Observation of Classroom Adaptation–Revised Peer problems</p> <p>Withdrawn/depressed behavior, Strengths and Difficulties Questionnaire</p>
Risk of bias	Moderate
Author	Panayiotou
Year	2020
Country	England
Ref	[32]; associated with [29-31]

Study design	<i>Randomized controlled trial</i>
Study protocol	<i>No information</i>
Setting	<i>Elementary schools</i>
Inclusion criteria	<i>Child participation required a lack of parental and child opt-out.</i>
Follow up	<i>End of intervention, after 2 schoolyears.</i>
Population characteristics	<p><i>School children year 3-5, aged 7-9 years</i></p> <p>Intervention group:</p> <p><i>Age; Mean (SD): 8.12 (0.88)</i></p> <p><i>Sex;(Percent girls): 50.1</i></p> <p><i>Socioeconomic/educations; Mean (SD):</i></p> <p><i>Not stated on group level</i></p> <p>Control group:</p> <p><i>Age; Mean (SD): 8.12 (0.86)</i></p> <p><i>Sex (Percent girls): 53</i></p> <p><i>Socioeconomic/educations; Mean (SD):</i></p> <p><i>Not stated on group level</i></p>
Intervention program	<i>Promoting Alternative Thinking Strategies [PATHS] curriculum; Kusche & Greenberg, 1994</i>
Program extent	<p><i>Number of sessions:40</i></p> <p><i>Intensity: 30-40 min 2 times/week</i></p> <p><i>Duration: 2 schoolyears</i></p> <p><i>Attendance:</i></p> <p><i>Implementation: Jag förstår ej hur det ska redovisas</i></p>
Participants (n)	<i>2294</i>
Drop-outs (n)	<i>71</i>
Program Deliverer	<p><i>Classroom teachers</i></p> <p><i>Training:.teachers received a full day of initial training with a half-day follow-up 4 months later</i></p>
Comparison program	<i>Common school curriculum (no specific program)</i>
Participants (n)	<i>2106</i>
Drop-outs (n)	<i>441</i>
Program Deliverer	<i>Not applicable</i>
Outcomes	<p>Outcome</p> <p><i>Psychological well-being (Health Related Quality of Life - HRQoL)</i></p> <p><i>Self-report version of the Kidscreen-27 (KS27)</i></p> <p><i>Cohens´d: 0.12; CI 95%: -0.02 to 0.25</i></p>
Comments	
Risk of bias	<i>Moderate</i>
Author	<i>Raimundo</i>
Year	<i>2013</i>

Country	Portugal
Ref	[44]
Study design	Quasi-experimental exploratory study
Study protocol	No information
Setting	Elementary school
Inclusion criteria	Informed or passive informed consent from parents, verbal assent from children.
Follow up	Post-test (8 monts after start) and 1 year
Population characteristics	School children, Fourth grade Intervention group: Age; Mean (SD): Not stated Sex;(Percent girls): Not stated Socioeconomic/educations; Mean (SD): Not stated Control group: Age; Mean (SD): Not stated Sex (Percent girls): Not stated Socioeconomic/educations; Mean (SD): Not stated Total polpulation: Age; Mean (SD): 9.31 (0.56) Sex (Percent girls): 45% Socioeconomic/educations; Mean (SD): Somewhat heterogeneous, but predominantly middle class.
Intervention program	SEL "Slowly but Steadily" (Durlak et al., 2011)
Program extent	Number of sessions: 21 Intensity: 45-60 min sessions, delivered weekly Duration: 1 school year Attendance: Not stated Implementation: High degree of fidelity, very high degree of dosage
Participants (n)	213
Drop-outs (n)	Not stated
Program Deliverer	Psychologist with help from Classroom teachers Training: practice in group intervention with fourth-grade children
Comparison program	Origami program
Participants (n)	105
Drop-outs (n)	Not stated
Program Deliverer	Psychologist
Outcomes	Outcome <u>Social and emotional competence (CASEL 3: Social awareness):</u> Assessment of Children's Emotions Scales (ACES; Schultz, Izard, & Bear, 2004; Portuguese adaptation by Alves, Cruz, Duarte, & Martins, 2008)

	<p>No significant difference between groups</p> <p><u>Social and emotional competence (CASEL 4: Relationship skills):</u> School Social Behavior Scales (SSBS-2), Peer relations (SSBS-2; Merrell, 2002; Portuguese adaptation by Raimundo et al., 2012) F: 2.730; *d=0.2; CI: -0.04 to 0.43</p> <p><u>Social and emotional competence (CASEL 2: Self-management):</u> School Social Behavior Scales (SSBS-2), Emotional regulation; (SSBS-2; Merrell, 2002; Portuguese adaptation by Raimundo et al., 2012) d=0.22; CI: -0.01 to 0.45</p>
Comments	<p>Additional outcomes:</p> <p>Anxiety. The State-Trait Anxiety Inventory for Children (STAI-C; Spielberger, Edwards, Lushene, Montuori, & Platzek, 1973; Portuguese adaptation by Matias et al., 2006)</p> <p>Aggressiveness, Aggressive Behaviors Questionnaire, (Raimundo & Marques-Pinto, 2007),</p> <p>Social Problems: Teachers Report Form (TRF; Achenbach, 1991; Portuguese adaptation by Fonseca, Simões, Rebelo, Ferreira, & Cardoso, 1995)</p> <p>Program Satisfaction: self-report questionnaire</p>
Risk of bias	Moderate
Author	Richard
Year	2021
Country	Switzerland
Ref	9328
Study design	Randomized controlled trial
Study protocol	No information
Setting	Public kindergarten
Inclusion criteria	Parental consent
Follow up	Four months after start of intervention
Population characteristics	<p>School children, 5-6 years old</p> <p>Intervention group:</p> <p>Age, years; Mean (SD): 6.02 (0.25)</p> <p>Sex; (Percent girls): 51.28</p> <p>Socioeconomic/educations; Mean (SD): Not stated</p> <p>Control group:</p> <p>Age, years; Mean (SD): 5.9 (0.29)</p> <p>Sex;(Percent girls): 40</p> <p>Socioeconomic/educations; Mean (SD): Not stated</p>

Intervention program	<i>The pretend play-based training</i>
Program extent	<i>Number of sessions: 11 Intensity: 1-hour weekly sessions Duration: Four months Attendance: Not stated Implementation: Not stated</i>
Participants (n)	39
Drop-outs (n)	Not stated
Program Deliverer	<i>Classroom teachers Training: twenty hours of specific training by the principal researcher before and during program.</i>
Comparison program	<i>Common school curriculum (no specific program)</i>
Participants (n)	40
Drop-outs (n)	Not stated
Program Deliverer	Not applicable
Outcomes	Outcome <i>Social and emotional competence (CASEL 3: Social awareness): 'The emotional label comprehension task' $F(1, 77) = 5.04, p = .028, \eta^2 = 0.061$ (Calculated: $d = 0.51$ (0.06 till 0.95))</i>
Comments	<i>Additional outcomes:</i>
Risk of bias	<i>Moderate</i>
Author	<i>Sandell</i>
Year	<i>2013</i>
Country	<i>Sweden</i>
Ref	<i>[35], associated with [36] and [34]</i>
Study design	<i>Mixed longitudinal and cross-sectional design</i>
Study protocol	<i>No information</i>
Setting	<i>Public school</i>
Inclusion criteria	
Follow up	<i>One time per year, after each schoolyear, for five years. Intervention time varied between 1-5 years.</i>
Population characteristics	<i>School children, year 4–9 Intervention group: Age; Mean (SD): Not stated Sex;(Percent girls): Not stated Soeconomic/educations; Mean (SD): Not stated</i>

	<p>Control group:</p> <p>Age; Mean (SD): Not stated</p> <p>Sex (Percent girls): Not stated</p> <p>Socioeconomic/educations; Mean (SD): Not stated</p>
<p>Intervention program</p> <p>Program extent</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p>SET program Kimber (2001a, b),</p> <p>Number of sessions: Not specified</p> <p>Intensity: Grade 5: 45 min 2 times per week, Grade 6-9: 45 min 1 time per week</p> <p>Duration: 1-5 school year</p> <p>Attendance: Not specified</p> <p>Implementation: Not specified</p> <p>755</p> <p>53</p> <p>Classroom teachers</p> <p>Training: Trained by author</p>
<p>Comparison program</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p>Common school curriculum (no specific program)</p> <p>226</p> <p>22</p> <p>Not applicable</p>
Outcomes	<p>Outcome</p> <p><u>Quality of life:</u></p> <p>'Youth self-report (YSR)' (Achenbach T, Edelbrock C. 1987)</p> <p>Efficiency difference between groups: 0.12, p=0.182</p>
Comments	Additional outcomes:
Risk of bias	Moderate -borderline high
<p>Author</p> <p>Year</p> <p>Country</p> <p>Ref</p>	<p>Schonert-Reichl</p> <p>2015</p> <p>Canada</p> <p>[45]</p>
<p>Study design</p> <p>Study protocol</p> <p>Setting</p> <p>Inclusion criteria</p> <p>Follow up</p> <p>Population characteristics</p>	<p>Randomized controlled trial</p> <p>No information</p> <p>Public elementary school</p> <p>Principals, teachers and parental consent and children assent.</p> <p>Not stated</p> <p>School children, year 4-5</p> <p>Intervention group:</p> <p>Age; Mean (SD): Not stated</p> <p>Sex;(Percent girls): Not stated</p> <p>Socioeconomic/educations; Mean (SD): Not stated</p>

	<p>Control group:</p> <p>Age; Mean (SD): Not stated</p> <p>Sex (Percent girls): Not stated</p> <p>Socioeconomic/educations; Mean (SD): Not stated</p> <p>Total population:</p> <p>Age; Mean (SD): 10.24 (0.53)</p> <p>Sex (Percent girls): Not stated</p> <p>Socioeconomic/educations; Mean (SD): approximated the median annual income for Canada</p>
<p>Intervention program</p> <p>Program extent</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p>Social Emotional Learning (SEL) incorporating mindfulness (MindUP; Hawn Foundation, 2008)</p> <p>Number of sessions: 12</p> <p>Intensity: 40-50 min once per week + mindfulness 3 min 3 times/day</p> <p>Duration: Not stated</p> <p>Attendance: Not stated</p> <p>Implementation: 100 %</p> <p>2 classes (99 children in total population)</p> <p>Not stated</p> <p>Classroom teachers</p> <p>Training: Not stated</p>
<p>Comparison program</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p>Regular social responsibility program, social responsibility program</p> <p>2 classes (99 children in total population)</p> <p>Not stated</p> <p>Not applicable</p>
Outcomes	<p>Outcome</p> <p><u>Social and emotional competence (CASEL 3: Social awareness):</u></p> <p>Interpersonal Reactivity Index (IRI), sub scale Empathy</p> <p>$F(1, 97) = 4.42, p = .03, d = .42; * \text{ Calculated CI: } 0.02 \text{ to } 0.8$</p> <p><u>Social and emotional competence (CASEL 3: Social awareness):</u></p> <p>SGQ Social Goals Questionnaire</p> <p>$F(1, 97) = 0.30, \text{ No significant difference}$</p> <p><u>Resilience:</u></p> <p>Self-Description Questionnaire I</p> <p>SMD: 0.46 (95% CI) 0.06-0.86</p> <p><u>Resilience:</u></p> <p>Resiliency inventory (RI)</p> <p>$F(1, 97) = 5.40, p = 0.02, d = 0.48$</p>
Comments	Additional outcomes:

Risk of bias	<p><i>Depressive symptoms, Seattle Personality Questionnaire for Children (SPQC; Kusché, Greenberg, & Beilke, 1988).</i></p> <p><i>Executive functions: flanker task and the hearts and flowers version of the dots task were administered (M. C. Davidson et al., 2006; Diamond, Barnett, Thomas, & Munro, 2007)</i></p> <p><i>Salivary cortisol; free cortisol in saliva three times within 1 day, Murray-Close, Han, Cicchetti, Crick, and Rogosch (2008)</i></p> <p><i>Child self-report measures</i></p> <p><i>Social responsibility: Social Goals Questionnaire (Wentzel, 1993)</i></p> <p><i>Peer-reported measures:</i></p> <p><i>Peer nominations of prosociality— Parkhurst and Asher (1992)</i></p> <p><i>Peer nominations of peer acceptance: (e.g., Oberle, Schonert-Reichl, & Thomson, 2010).</i></p> <p><i>Achievement measure: students' end-of-the-school-year math grades</i></p> <p><i>Moderate</i></p>
Author Year Country Ref	<p><i>Seyhan</i></p> <p><i>2019</i></p> <p><i>Turkey</i></p> <p><i>[46]</i></p>
Study design Study protocol Setting Inclusion criteria Follow up Population characteristics	<p><i>Quasi-experimental study</i></p> <p><i>No information</i></p> <p><i>Preschool</i></p> <p><i>Parental consent</i></p> <p><i>End of intervention, 9 weeks</i></p> <p><i>Preschool children, aged 48–72 months</i></p> <p><i>Intervention group:</i></p> <p><i>Age; Mean (SD): Not stated</i></p> <p><i>Sex;(Percent girls): 47</i></p> <p><i>Socioeconomic/educations; Mean (SD): Not stated</i></p> <p><i>Control group:</i></p> <p><i>Age; Mean (SD): Not stated</i></p> <p><i>Sex (Percent girls): 48</i></p> <p><i>Socioeconomic/educations; Mean (SD): Not stated</i></p>
Intervention program Program extent	<p><i>Preschool Promoting Alternative Thinking Strategies (PATHS) Curriculum (Domitrovich, Greenberg, Kusche, & Cortes, 1999)</i></p> <p><i>Number of sessions: 33</i></p> <p><i>Intensity: 15-20 min</i></p> <p><i>Duration: 9 weeks</i></p> <p><i>Attendance % (SD):</i></p> <p><i>Implementation % (SD):</i></p>

Participants (n)	285
Drop-outs (n)	N/A
Program Deliverer	Classroom teachers <i>Training: teachers had previously received training in Preschool PATHS, received retraining by the research team in the translated Turkish version of PATHS before program start. Weekly implementation support meetings.</i>
Comparison program	Common school curriculum (no specific program)
Participants (n)	280
Drop-outs (n)	N/A
Program Deliverer	Not applicable
Outcomes	Outcome <i>Social and emotional competence (CASEL: Composite score): Head Start Competence Scale (HSCS) (Domitrovich et al., 2007) $F(1,550)=24.817, p<.000$</i>
Comments	<i>Additional outcomes: Classroom atmosphere; Teaching Style Rating Scale (TSRS); (Domitrovich, Cortes, & Greenberg, 2000); Classroom Atmosphere Rating Scale (CARS); (Conduct Problems Prevention Research Group, 1999) Relationships between children and teacher; Student–Teacher Relationship Scale (STRS); (Pianta, 1996), Semi-Structured Play Interview (SSPI); (Pianta & Hamre, 2001)</i>
Risk of bias	Moderate
Author	Thayer
Year	2019
Country	United States
Ref	[47]
Study design	randomized controlled trial
Study protocol	No information
Setting	School districts ranged from rural to urban settings
Inclusion criteria	Consent to participate in the study from school districts, teachers, students, and parents.
Follow up	Fall and spring
Population characteristics	Intervention group: Age, years; Mean (SD): 6.2 (0.8) Sex; (Percent girls): 45.7 Socioeconomic/educations; Mean (SD): Not stated Control group: Age, years; Mean (SD): 6.2 (0.7) Sex;(Percent girls): 44.9

	<i>Socioeconomic/educations; Mean (SD): Not stated</i>
Intervention program	<i>Social-emotional learning (SEL) Second Step</i>
Program extent	<i>Number of sessions: Not stated Intensity: Not stated Duration: 1 school year Attendance: Not stated Implementation: Not stated</i>
Participants (n)	<i>3727</i>
Drop-outs (n)	<i>Attrition from beginning of the study to the end was approximately 3%.</i>
Program Deliverer	<i>Classroom teachers Training: Not stated</i>
Comparison program	<i>Common school curriculum (no specific program)</i>
Participants (n)	<i>3692</i>
Drop-outs (n)	<i>Attrition from beginning of the study to the end was approximately 3%.</i>
Program Deliverer	<i>Not applicable</i>
Outcomes	Outcome <i><u>Social and emotional competence (CASEL: Composite score):</u> DESSA-SSE (The Devereux Student Strengths Assessment—Second Step Edition) No significant difference between groups</i> <i><u>Social and emotional competence (CASEL 3: Social awareness):</u> TEM (The Emotion Management subscale) No significant difference between groups</i>
Comments	<i>Additional outcomes: Teacher Assessment The Devereux Student Strengths Assessment— Second Step Edition (DESSA-SSE; Devereux Center for Resilient Children, 2012; LeBuffe, Naglieri, & Shapiro, 2011) Emotion Management subscale (LeBuffe et al., 2011) The Strengths and Difficulties Questionnaire (SDQ)</i>
Risk of bias	<i>Moderate</i>
Author	<i>Turner</i>
Year	<i>2020</i>
Country	<i>UK</i>
Ref	<i>[31]; associated with [30]; [29]; [32]</i>
Study design	<i>Randomized controlled trial</i>
Study protocol	<i>No information</i>

Setting	<i>Regular classrooms in Primary Schools</i>
Inclusion criteria	<i>Parental consent</i>
Follow up	<i>12- and 24-month follow-ups.</i>
Population characteristics	<p><i>School children, year 1–5</i></p> <p>Intervention group:</p> <p><i>Age; Mean (SD): Not stated</i></p> <p><i>Sex;(Percent girls): 49.9</i></p> <p><i>Socioeconomic/educations; Mean (SD):</i></p> <p><i>% of pupils eligible for free school meals: 32.4</i></p> <p>Control group:</p> <p><i>Age; Mean (SD): Not stated</i></p> <p><i>Sex (Percent girls): 53</i></p> <p><i>Socioeconomic/educations; Mean (SD):</i></p> <p><i>% of pupils eligible for free school meals: 28.5</i></p>
Intervention program	<i>Promoting Alternative Thinking Strategies (PATHS) curriculum.</i>
Program extent	<p><i>Number of sessions: 40 lessons</i></p> <p><i>Intensity: 30-40 min 2 times/week</i></p> <p><i>Duration: 2 schoolyears</i></p> <p><i>Attendance % (SD):</i></p> <p><i>Implementation % (SD):</i></p>
Participants (n)	2676
Drop-outs (n)	<i>Not stated</i>
Program Deliverer	<p><i>Classroom teachers</i></p> <p><i>Training: Full day of initial group training prior to the schoolyear, with a half-day follow-up 4 months later.</i></p>
Comparison program	<i>Common school curriculum (no specific program)</i>
Participants (n)	2542
Drop-outs (n)	<i>Not stated</i>
Program Deliverer	<i>Not applicable</i>
Outcomes	<p>Outcome</p> <p><u><i>Quality of Life:</i></u></p> <p><i>Child Health Utility 9 Dimensions (CHU-9D)</i></p> <p><i>Adjusted mean incremental QALYs: 0.0019 (95% CI 0.0009 to 0.0029; p < 0.05)</i></p>
Comments	<i>Additional outcomes:</i>
Risk of bias	<i>Intervention Costs</i>
	<i>Moderate</i>
Author	<i>Upshur</i>
Year	2013

Country	USA
Ref	[48]
Study design	Cluster randomized pilot study
Study protocol	No information
Setting	Community preschool
Inclusion criteria	If siblings, one was excluded. Informed consent process with families.
Follow up	Twice per year, fall and spring, for one school year.
Population characteristics	<p>Preschool children aged 2 years 9 months through 5 years</p> <p>Intervention group:</p> <p>Age; Mean (SD):</p> <p>Year 1: 46.78 (8.26) months</p> <p>Year 2: 50.72 (8.81) months</p> <p>Sex;(Percent girls):</p> <p>Year 1: 41.9</p> <p>Year 2: 54.0</p> <p>Socioeconomic/educations; Mean (SD): Annual family income < 20 000 dollars (Percent)</p> <p>Year 1: 45.6</p> <p>Year 2: 43.8</p> <p>Control group:</p> <p>Age; Mean (SD):</p> <p>Year 1: 44.65</p> <p>Year 2: 48.34</p> <p>Sex (Percent girls):</p> <p>Year 1: 35.1</p> <p>Year 2: 50.8</p> <p>Socioeconomic/educations; Mean (SD):</p> <p>Year 1: 46.7</p> <p>Year 2: 56.1</p>
Intervention program	Social Emotional Learning - The Second Step Preschool/Kindergarten Kit (Committee for Children, 2002)
Program extent	<p>Number of sessions: 89</p> <p>Intensity: 15 min per session 4 times per week</p> <p>Duration: 1 school years program, study over 2 school years.</p> <p>Attendance:</p> <p>Implementation:</p> <p>Year 1: 87% (74-99%)</p> <p>Year 2: 86% (49-99%)</p>
Participants (n)	<p>Year 1: 96</p> <p>Year 2: 88</p>

Drop-outs (n)	<i>Year 1: 79</i> <i>Year 2:64</i>
Program Deliverer	<i>Classroom teachers</i> <i>Training: 2-day train-the-trainer workshop. Seven monthly 2-h evening training sessions to Intervention teachers during Year 1, and five bi-monthly sessions in Year 2.</i>
Comparison program	<i>Control classrooms used the Creative Curriculum (Dodge, Colker, & Heroman, 2002).</i>
Participants (n)	<i>Year 1: 71</i> <i>Year 2: 60</i>
Drop-outs (n)	<i>Year 1: 58</i> <i>Year 2: 53</i>
Program Deliverer	<i>Classroom teachers</i> <i>Training: Not stated</i>
Outcomes	<i>Outcome</i> <i>Social and emotional competence (CASEL: Composite score):</i> <i>Prosocial Skills</i> <i>Adaptive Social Behavior Inventory (ASBI, Hogan, Scott, & Bauer, 1992)</i> <i>Year 1: Cohen's d: 0.17. Year 2: Cohen's d: 0.02 No significant differences</i>
Comments	<i>Additional outcomes:</i> <i>Teacher Burnout; The Maslach Burnout Inventory (Maslach, Jackson, & Leiter, 1996)</i> <i>Classroom Quality; Early Childhood Environmental Rating Scale-Revised (ECERS-R, Harms, Clifford, & Cryer, 1998)</i> <i>Classroom Climate; Interaction scale of the ECERS-R (ECERS-R, Harms et al., 1998), disruptive behavior counts, disruptiveness rating</i> <i>Teacher Interaction Skills, The Caregiver Interaction Scale (CIS, Arnett, 1989)</i> <i>Teacher-Rated Behavior Problems; Sutter-Eyberg Student Behavior Inventory-Revised (Eyberg & Pincus, 1999)</i> <i>Teacher Satisfaction with Second Step</i> <i>Parent Engagement with the Curriculum</i>
Risk of bias	<i>Moderate</i>
Author	<i>Upshur</i>
Year	<i>2019</i>
Country	<i>USA</i>
Ref	<i>[49]</i>
Study design	<i>Randomized controlled trial</i>
Study protocol	<i>No information</i>
Setting	<i>Community preschools</i>
Inclusion criteria	<i>Parental consent.</i>
Follow up	<i>End of intervention, spring term.</i>

Population characteristics	<p><i>Preschool children, 4 years old</i></p> <p>Intervention group:</p> <p><i>Age; Mean (SD): 53.2 (3.91)</i></p> <p><i>Sex;(Percent girls): 49.2</i></p> <p><i>Socioeconomic/educations; Mean (SD):</i></p> <p><i>Family income (%)</i></p> <p><i>< \$10,000: 27.0</i></p> <p><i>\$10,000–\$19,999: 26.5</i></p> <p><i>\$20,000–\$29,999: 23.4</i></p> <p><i>\$30,000–\$39,999: 9.7</i></p> <p><i>\$40,000–\$49,999: 5.1</i></p> <p><i>\$50,000+: 8.4</i></p> <p>Control group:</p> <p><i>Age; Mean (SD): 52.7 (4.03)</i></p> <p><i>Sex (Percent girls): 41.1</i></p> <p><i>Socioeconomic/educations; Mean (SD):</i></p> <p><i>Family income (%)</i></p> <p><i>< \$10,000: 26.2</i></p> <p><i>\$10,000–\$19,999: 27.9</i></p> <p><i>\$20,000–\$29,999: 24.7</i></p> <p><i>\$30,000–\$39,999: 10.6</i></p> <p><i>\$40,000–\$49,999: 5.0</i></p> <p><i>\$50,000+: 5.6</i></p>
Intervention program	<p><i>Second Step Early Learning Curriculum, or SSEL, Committee for Children, 2011a</i></p> <p><i>Some of the classrooms also followed Head start program</i></p> <p>Program extent</p> <p><i>Number of sessions: 25</i></p> <p><i>Intensity: weekly</i></p> <p><i>Duration: 2 School years</i></p> <p><i>Attendance: Not stated</i></p> <p><i>Implementation: 90% of curriculum activities each week</i></p> <p>Participants (n)</p> <p><i>393</i></p> <p>Drop-outs (n)</p> <p><i>Not stated</i></p> <p>Program Deliverer</p> <p><i>Classroom teachers</i></p> <p><i>Training: curriculum kits and a group training to use the curriculum</i></p>
Comparison program	<p><i>Common school curriculum (no specific program) or Head start programs</i></p> <p>Participants (n)</p> <p><i>377</i></p> <p>Drop-outs (n)</p> <p><i>Not stated</i></p> <p>Program Deliverer</p> <p><i>Not applicable</i></p>
Outcomes	Outcome

	<p><u>Social and emotional competence (CASEL 5: Responsible decision making):</u></p> <p>Challenging Situations Task (CST)</p> <p>$d=0.04$. Not significant</p>														
Comments	<p>Additional outcomes:</p> <p>Cognitive ability; Peabody Picture Vocabulary Test, 4th edition, (PPVT-4, Dunn & Dunn, 2007)</p> <p>Head-Toes-Knees-Shoulders (HTKS); HTKS task (McClelland et al., 2007)</p> <p>Backward Digit Span; working memory (Davis & Pratt, 1996)</p> <p>Measures of preacademic skills; Woodcock-Johnson Tests of Achievement III (WJ III, Woodcock, McGrew, & Mather, 2001/2007)</p>														
Risk of bias	Low														
Author	Upshur														
Year	2017														
Country	United States														
Ref	[50]														
Study design	Cluster Randomized controlled trial														
Study protocol	No information														
Setting	Head Start and community preschools														
Inclusion criteria	Informed consent by parents														
Follow up	6 months														
Population characteristics	<p>Preschool children from age 3–5</p> <p>Intervention group:</p> <p>Age, months; Mean (SD): 53.5 (3.96)</p> <p>Sex; (Percent girls): 50.4</p> <p>Socioeconomic/educations; Mean (SD):</p> <p>Family income</p> <table> <tr> <td>$b\\$10,000$</td> <td>31.8 %</td> </tr> <tr> <td>\$10,000–\$19,999</td> <td>28.6</td> </tr> <tr> <td>\$20,000–\$29,999</td> <td>18.0</td> </tr> <tr> <td>\$30,000–\$39,999</td> <td>11.0</td> </tr> <tr> <td>\$40,000–\$4</td> <td>3.7</td> </tr> <tr> <td>\$50,000+</td> <td>6.9%</td> </tr> </table> <p>Control group:</p> <p>Age, months; Mean (SD): 53.3</p> <p>Sex;(Percent girls): 49.2 (3.96)</p> <p>Socioeconomic/educations; Mean (SD):</p> <p>Family income</p> <table> <tr> <td>$b\\$10,000$</td> <td>29.4 %</td> </tr> </table>	$b\$10,000$	31.8 %	\$10,000–\$19,999	28.6	\$20,000–\$29,999	18.0	\$30,000–\$39,999	11.0	\$40,000–\$4	3.7	\$50,000+	6.9%	$b\$10,000$	29.4 %
$b\$10,000$	31.8 %														
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\$20,000–\$29,999	18.0														
\$30,000–\$39,999	11.0														
\$40,000–\$4	3.7														
\$50,000+	6.9%														
$b\$10,000$	29.4 %														

	<p>\$10,000–\$19,999 31.9</p> <p>\$20,000–\$29,999 23.0</p> <p>\$30,000–\$39,999 8.9</p> <p>\$40,000–\$4 3.4</p> <p>\$50,000+ 3.4%</p>
<p>Intervention program</p> <p>Program extent</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p><i>Second Step Early Learning Curriculum (SSEL)</i></p> <p><i>Number of sessions: 28 weekly themes</i></p> <p><i>Intensity: Daily activities</i></p> <p><i>Duration: 1 school year</i></p> <p><i>Attendance: Not stated</i></p> <p><i>Implementation: The mean independently observed fidelity rating for Year 1 was 3.58 (SD = 0.60, 2.74– 4.51), and for Year 2 was 3.46 (SD=0.45, range 2.48–4.21).</i></p> <p><i>Fall, Sample size vary across measures: 243–262</i></p> <p><i>Spring, Sample size vary across measures: 219–221</i></p> <p><i>Classroom teachers</i></p> <p><i>Training: RAs received 12 h of group training, several additional practice hours, and then 3–6 h of field-based training supervised by a trained staff member before being allowed to conduct assessments independently.</i></p>
<p>Comparison program</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p><i>Common school curriculum (no specific program)</i></p> <p><i>Fall, Sample size vary across measures: 210–226</i></p> <p><i>Spring, Sample size vary across measures: 192–195</i></p> <p><i>Not applicable</i></p>
Outcomes	<p>Outcome</p> <p><i><u>Social and emotional competence (CASEL 5: Responsible decision making):</u></i></p> <p><i>Challenging Situations Task (CST) (Denham, Bouril, & Belouad, 1994).</i></p> <p><i>Cohen's d: 0,16; Significant difference between groups</i></p> <p> </p> <p><i><u>Social and emotional competence (CASEL 3: Social awareness):</u></i></p> <p><i>Emotion Matching Scale (Izard, Haskins, Schultz, Trentacosta, & King, 2003)</i></p> <p><i>Cohen's d: 0,03; Significant difference between groups</i></p>
<p>Comments</p> <p>Risk of bias</p>	<p><i>Additional outcomes:</i></p> <p><i>Head-Toes-Knees-Shoulders Task (HTKS) (McClelland et al., 2007)</i></p> <p><i>Backward Digit Span of working memory (Davis & Pratt, 1996).</i></p> <p><i>Emotion Matching Scale (Izard, Haskins, Schultz, Trentacosta, & King, 2003)</i></p> <p><i>Moderate</i></p>
Author	<i>Vassilopoulos</i>

Year	2018
Country	Greece
Ref	[51]
Study design	Non-randomized controlled trial
Study protocol	No information
Setting	Elementary schools
Inclusion criteria	Parental consent
Follow up	End of intervention
Population characteristics	<p>First grade students</p> <p>Intervention group:</p> <p>Age, months; Mean (SD): 77.66 (3.33)</p> <p>Sex; (Percent girls): 45,5</p> <p>Socioeconomic/educations; Mean (SD): mainly attended by children from middle socioeconomic background</p> <p>Control group:</p> <p>Age, months; Mean (SD): 76.83 (3.31)</p> <p>Sex;(Percent girls): 36.2</p> <p>Socioeconomic/educations; Mean (SD): mainly attended by children from middle socioeconomic background</p>
Intervention program	Preschool/Kindergarten version of the PATHS curriculum was used as the primary intervention (Domitrovich, Greenberg, Cortes, & Kusché, 2004)
Program extent	<p>Number of sessions: 7</p> <p>Intensity: 45 min sessions weekly</p> <p>Duration: 7 weeks</p> <p>Attendance:</p> <p>Implementation:</p>
Participants (n)	56
Drop-outs (n)	1
Program Deliverer	<p>Classroom teachers and group co-leaders</p> <p>Training: Not stated</p>
Comparison program	Common school curriculum (no specific program)
Participants (n)	58
Drop-outs (n)	0
Program Deliverer	Not applicable
Outcomes	<p>Outcome</p> <p><u>Self-esteem:</u></p> <p>Teacher Checklist of Peer Relations</p> <p>post test: $F(2, 224) = 42.00; p < 0.001; \eta^2 = 0.27$,</p> <p>Follow-up 3 months: $F(1, 112) = 26.29, p < 0.001, \eta^2 = 0.19$;</p>

	<p>(Calculated: $d = 0.96$ (0.57 till 1.35))</p> <p><u>Self-esteem:</u></p> <p>Teacher Assessment of Social Behavior questionnaire</p> <p>post test: $F(2, 224) = 5.29$; $p = 0.023$; $\eta^2 = 0.05$,</p> <p>Follow-up 3 months: $F(1, 112) = 146.56$, $p < 0.001$, $\eta^2 = 0.12$</p> <p>(Calculated: $d = 2.27$ (1.80 till 2.74))</p>
Comments	Additional outcomes:
Risk of bias	Moderate
Author	Wigelsworth
Year	2012
Country	UK
Ref	[52]
Study design	Quantitative, quasi-experimental pre-test–post-test control group design
Study protocol	No information
Setting	Secondary schools
Inclusion criteria	
Follow up	Post-test, 2 years after start of study.
Population characteristics	<p>School children, year 7 age 11-12</p> <p>Intervention group:</p> <p>Age; Mean (SD): Not stated</p> <p>Sex;(Percent girls): 52</p> <p>Socioeconomic/educations; Mean (SD):</p> <p>Free School Meal: 14.5%</p> <p>Control group:</p> <p>Age; Mean (SD): Not stated</p> <p>Sex (Percent girls):52</p> <p>Socioeconomic/educations; Mean (SD):</p> <p>Free School Meal: 11.6%</p>
Intervention program	The social and emotional aspects of learning (SEAL) programme (DCSF, 2007)
Program extent	<p>Number of sessions: Not applicable</p> <p>Intensity: Not applicable</p> <p>Duration: 1 year</p> <p>Attendance: Not stated</p> <p>Implementation: Not stated</p>
Participants (n)	26 schools, average 1079 students
Drop-outs (n)	4 Schools

Program Deliverer	<p><i>Classroom teachers</i></p> <p><i>Training: basic training about the secondary SEAL programme, a variety of additional opportunities for professional development that school staff might undertake</i></p>
Comparison program	<i>Common school curriculum (no specific program)</i>
Participants (n)	<i>23 Schools, average 1043 students</i>
Drop-outs (n)	<i>4 Schools</i>
Program Deliverer	<i>Not applicable</i>
Outcomes	<p><i>Outcome</i></p> <p><u><i>Social and emotional competence (CASEL 2: Self-management):</i></u></p> <p><i>The Emotional Literacy Assessment and Intervention (ELAI) battery (Southampton Psychology Service, 2003)</i></p> <p><i>d= 1.2, CI: 1.1 to 1.3</i></p> <p><u><i>Social and emotional competence (CASEL 3: Social awareness):</i></u></p> <p><i>The strength and difficulties questionnaire (SDQ), sub scale Prosocial behavior (Goodman, 1997)</i></p> <p><i>Beta: -0.047, p=0.25</i></p>
Comments	<i>Additional outcomes:</i>
Risk of bias	<i>Moderate</i>

Experiences of SEL-based programs (11 studies)

Author	Clarke
Year	2015
Country	Ireland
Ref	[53]
Study design	Participatory approaches, part of an RCT
Aim of study	Evaluate the implementation of Zippy's Friends
Setting for the intervention	44 primary schools in a disadvantaged part of Ireland (n=717)
Population of children Characteristics	children from 9 classes, Age: 7-9 years
Program	Zippy's Friends
Program class	SEL
Program deliverer	Classroom teachers
Sampling method	Random
Respondents (n)	N = 161 children
Dropout from study (n)	NR
Characteristics	Mean age: 7 years 2 months
Theoretical perspective of the study	Not described
Method for data collection	Group brainstorming as part of a semi-structured workshop conducted by the researcher
Method for analysis	Inductive thematic analysis (Braun & Clarke 2006) [54]
Method for validation	Cross-checking of codes with a second researcher
Researchers (n)	3
Researcher background	Health promotion researchers
Author	Clarke
Year	2010
Country	Ireland
Ref	[55]
Study design	Case study/ Interviews and group discussions
Aim of study	Evaluate the implementation of Zippy's Friends
Setting for the intervention	2 primary schools, one rural, state school under protestant management, close to the border with Northern Ireland (170 pupils) and one large, urban Catholic state school in the west of Ireland (482 pupils)
Population of children Characteristics	Children in first class (urban school) and first and second class (rural school) Age: six years and nine months to nine years Sex;(Percent girls): NR

	<i>Socioeconomic/educations: disadvantaged areas</i>
Program	<i>Zippy's Friends</i>
Program class	<i>SEL</i>
Program deliverer	<i>Classroom teachers</i>
Sampling method	<i>Open request and self- selection</i>
Respondents (n)	<i>42 pupils, 16 school staff, 7 parents, 12 other staff and community members</i>
Dropout from study (n)	<i>NR</i>
Characteristics	<i>NR</i>
Theoretical perspective of the study	<i>Not described</i>
Method for data collection	<i>Participatory workshops for the children, questionnaires for the teachers, interviews with teachers, parents and other stake holders</i>
Method for analysis	<i>Thematic analysis</i>
Method for validation	<i>Not described</i>
Researchers (n)	<i>3</i>
Researcher background	<i>One primary school teacher with MA degree, one researcher in Health Promotion and one Professor of Health Promotion and Public Health</i>
Author	<i>Drolet</i>
Year	<i>2013</i>
Country	<i>Canada</i>
Ref	<i>[56]</i>
Study design	<i>Qualitative</i>
Aim of study	<i>Explore how actors involved in Lions Quest perceive the program and its implementation</i>
Setting for the intervention	<i>3 schools in Eastern Ontario</i>
Population of children Characteristics	<i>School children, 12-14 years See below</i>
Program	<i>Lions Quest</i>
Program class	<i>SEL</i>
Program deliverer	<i>Classroom teachers</i>
Sampling method	<i>A voluntary sample, first 26 students participating in the program</i>
Respondents (n)	<i>26 students and 5 teachers</i>
Dropout from study (n)	<i>Not described</i>
Characteristics	<i>Students in general came from two-parent families with both parents in paid employment. Parent's level of education ranged from high school to a master's degree. All were residing in equal proportion of countryside, suburbs, village or city. Students self-identified as Caucasian. The participating teachers overviewed the implementation.</i>
Theoretical perspective of the study	<i>Not described</i>
Method for data collection	<i>Semi-structured interviews</i>
Method for analysis	

Method for validation	Coding into themes and categories with the N-Vivo 8 program according to Huberman and Miles 1991 Inter-judge method where several researchers created the grid of categories and the grid was agreed upon by consensus
Researchers (n) Researcher background	7 Three researchers, three graduated students from diverse disciplines and one additional author not described further
Author Year Country Ref	Ferreira 2021 Portugal [57]
Study design Aim of study Setting for the intervention Population of children Characteristics	Qualitative Explore teachers' experiences Lisbon Preschool children Age: between 3 and 5 years
Program Program class Program deliverer	Not described SEL Classroom teachers
Sampling method Respondents (n) Dropout from study (n) Characteristics	Snowball sampling. Teachers should have at least 5 years teaching experiences N = 13 Preschool teachers Not stated All female, with teaching experience between 8 and 41 years and having integrated SEL in their practices
Theoretical perspective of the study Method for data collection Method for analysis Method for validation	Not stated In-depth interviews carried out by one of the authors Thematic analysis (Braun & Clarke 2006) conducted by 3 authors Interviewees read and confirmed the transcripts, investigation triangulation
Researchers (n) Researcher background	3 At least one with long experience in the field
Author Year Country Ref	Honess 2014 UK [58]
Study design	Case study

Aim of study	<i>Explore teachers' perceptions of working with the curriculum and whether it has had any effect on behavior</i>
Setting for the intervention	<i>Convenience sample of one school (the only school that had been running PATHS for more than one term)</i>
Population of children Characteristics	<i>Not described</i> <i>Not described</i>
Program	<i>PATHS</i>
Program class	<i>SEL</i>
Program deliverer	<i>Classroom teachers</i>
Sampling method	<i>e-mail to all teachers in the school, self-selection</i>
Respondents (n)	<i>7 teachers</i>
Dropout from study (n)	<i>Not described</i>
Characteristics	<i>Not described</i>
Theoretical perspective of the study	<i>Hybrid critical realist/social constructionist paradigm</i>
Method for data collection	<i>Semi-structured interviews</i>
Method for analysis	<i>Inductive thematic analysis (Thomas 2003)</i> <i>A social scientist researcher, familiar with the analysis method, was asked to review the relevant data to ascertain that whether they were in agreement with the themes arising.</i>
Method for validation	
Researchers (n)	<i>2</i>
Researcher background	<i>psychologists</i>
Author	<i>Haymowitz</i>
Year	<i>2017</i>
Country	<i>USA</i>
Ref	<i>[59]</i>
Study design	<i>Mixed methods with concept mapping including brainstorming</i>
Aim of study	<i>Explore the impact of a SEL-program</i>
Setting for the intervention	<i>One small, independent, secular school guided by the Waldorf philosophy. The school had 150 students.</i>
Population of children Characteristics	<i>Children from birth through 8th grade</i> <i>Not described</i>
Program	<i>Social Harmony</i>
Program class	<i>SEL</i>
Program deliverer	<i>School staff and 10 rotating parents</i>
Sampling method	<i>Invitation to the entire school community</i>
Respondents (n)	<i>32 students, alumni, faculty members, parents, colleagues and administrators</i>
Dropout from study (n)	<i>Not relevant</i>
Characteristics	<i>Not described</i>

Theoretical perspective of the study	<i>Not described</i>
Method for data collection	<i>Ideas were generated anonymously on the internet in response to a prompt</i>
Method for analysis	<i>Concept mapping</i>
Method for validation	<i>Not described</i>
Researchers (n)	4
Researcher background	<i>Two doctoral candidates, one independent educator and one assistant professor in social work</i>
Author	<i>Kramer</i>
Year	<i>2014</i>
Country	<i>US</i>
Ref	<i>[60]</i>
Study design	<i>Controlled study</i>
Aim of study	<i>Evaluate Strong Kids in the school-wide setting</i>
Setting for the intervention	<i>Two suburban Title 1 elementary schools in the intermountain west region of the US. Several SWPBS practices were being implemented concurrently in the intervention school</i>
Population of children Characteristics	<i>Students in kindergarten to 6th grade Around 80 % of the students qualified for free or reduced-price lunch. Around 50 % Hispanics.</i>
Program	<i>Strong Kids</i>
Program class	<i>SEL</i>
Program deliverer	<i>Classroom teachers</i>
Sampling method	<i>Random selection from n = 17 teachers</i>
Respondents (n)	<i>7 teachers</i>
Dropout from study (n)	<i>Not described</i>
Characteristics	<i>Average 8.4 years of teaching experience (SD = 7,38)</i>
Theoretical perspective of the study	<i>None</i>
Method for data collection	<i>Focus group where topics identified from four open-ended questions in a questionnaire were addressed</i>
Method for analysis	<i>Check coding (Miles & Huberman 1994) [61]</i>
Method for validation	<i>Independent coding following by consensus</i>
Researchers (n)	5
Researcher background	<i>Not described</i>
Author	<i>Larsen</i>
Year	<i>2012</i>
Country	<i>Norway</i>
Ref	<i>[62]</i>

Study design	<i>Qualitative</i>
Aim of study	<i>Explore teachers' experience with the Second Step program</i>
Setting for the intervention	<i>Four primary schools located in different areas of Norway</i>
Population of children Characteristics	<i>Students in grades 1 to 7 Not described</i>
Program	<i>Second Step</i>
Program class	<i>SEL</i>
Program deliverer	<i>Classroom teachers</i>
Sampling method	<i>Purposive sampling of schools from a list of schools that had purchased the program. One school per each of four regions was randomly selected. Two schools had partly formalized policies in use of the program and two had firmly formalized procedures. More than four years' experience with the program</i>
Respondents (n)	<i>17 teachers, selected by their principals</i>
Dropout from study (n)	<i>0</i>
Characteristics	<i>2 males; 15 females</i>
Theoretical perspective of the study	<i>Not described</i>
Method for data collection	<i>Semi-structured interviews</i>
Method for analysis	<i>Framework analysis</i>
Method for validation	<i>Separately analysed and coded by both authors followed by consensus</i>
Researchers (n)	<i>2</i>
Researcher background	<i>One professor and one associate professor in health promotion and development, with experience in evaluation research</i>
Author	<i>Medin</i>
Year	<i>2020</i>
Country	<i>Sweden</i>
Ref	<i>[63]</i>
Study design	<i>Qualitative/Focus groups</i>
Aim of study	<i>Explore children's perspectives on knowledge about and experience of participation in the program</i>
Setting for the intervention	<i>One urban elementary school in south-western Sweden</i>
Population of children Characteristics	<i>All students in grades 2 and 3 (n = 132) Not described</i>
Program	<i>Livskunskap Förskoleklass till åk 3 (eng. Life Skills Training from Kindergarten to 3rd grade)</i>
Program class	<i>SEL</i>
Program deliverer	<i>Two social workers (bachelor's level, Swe: socionom) with decades of experience in leading group-based SEL programs</i>

Sampling method	<i>Randomly nominated by their teaches by selecting the first five to six children in each class list</i>
Respondents (n)	<i>23 students</i>
Dropout from study (n)	<i>Not described</i>
Characteristics	<i>11 girls and 12 boys, ages between 8 and 10 years; 85 % born in Sweden; 60 % had one or both parents born in another country. All were fluent in Swedish</i>
Theoretical perspective of the study	<i>Not described</i>
Method for data collection	<i>Four focus groups</i>
Method for analysis	<i>Thematic analyses (Braun & Clarke 2006) [54]</i> <i>Not described</i>
Method for validation	
Researchers (n)	<i>2</i>
Researcher background	<i>One associate professor and one MA working as a coordinator at the university</i>
Author	<i>Schiepe-Tiska</i>
Year	<i>2021</i>
Country	<i>Germany and Kyrgyzstan</i>
Ref	<i>[64]</i>
Study design	<i>Mixed methods with convergent parallel design (questionnaire and interviews)</i>
Aim of study	<i>Explore secondary school teachers' SEL familiarity, beliefs, training and perceived school culture</i>
Setting for the intervention	<i>Research</i>
Population of children Characteristics	<i>Emphasis on 9th grade students</i> <i>Not relevant</i>
Program	<i>Several</i>
Program class	<i>SEL</i>
Program deliverer	<i>Classroom teachers</i>
Sampling method	<i>Face-to face recruitment from a convenience sample of classmates and former classmates of the second author</i>
Respondents (n)	<i>13 teachers</i>
Dropout from study (n)	<i>1 teacher who only had experience from preschool children was excluded</i>
Characteristics	<i>10 from Germany and 4 from Kyrgyzstan (who had not participated in a SEL program yet)</i>
Theoretical perspective of the study	<i>Not described</i>
Method for data collection	<i>Interviews, mostly face-to face (one via Skype and one through telephone)</i>
Method for analysis	<i>Manifest content analysis (deductive and inductive steps)</i>
Method for validation	<i>Not described</i>
Researchers (n)	<i>n = 3. One researcher conducted interviews and analyzed the interviews</i>

Researcher background	<i>not described</i>
Author	<i>Voith</i>
Year	<i>2020</i>
Country	<i>USA</i>
Ref	<i>[65]</i>
Study design	<i>Mixed methods (quantitative with an intervention group only)</i>
Aim of study	<i>Explore feasibility of the program</i>
Setting for the intervention	<i>All contracted schools with the Peace program, n = 3 with 32 classrooms)</i>
Population of children Characteristics	<i>Students in grades 1–5 At least 97 % children of colour and 92 % eligible for free lunch, half girls and half boys.</i>
Program	<i>Peace</i>
Program class	<i>SEL</i>
Program deliverer	<i>Outside facilitators</i>
Sampling method	<i>All teachers and the principals were approached</i>
Respondents (n)	<i>22 teachers and two principals</i>
Dropout from study (n)	<i>Not described</i>
Characteristics	<i>10 African American; 10 Caucasian, one Asian American and one Hispanic/Latino teacher; n = 17 women (77 %); Of principals one was an African American woman and one a Caucasian man.</i>
Theoretical perspective of the study	<i>Not described</i>
Method for data collection	<i>3 focus groups with teachers (4-10 participants in each) and semi-structured interviews with principals</i>
Method for analysis	<i>Thematic analysis (Braun & Clarke 2006), coding and provisional themes by one of the researchers.</i>
Method for validation	<i>Two doctoral-level trained researchers audited the codes to enhance confirmability. Consensus and final themes by the whole evaluation team</i>
Researchers (n)	<i>4</i>
Researcher background	<i>Not described</i>

Mindfulness and Yoga-programs (16 studier)

Author	<i>Daly</i>
Year	<i>2015</i>
Country	<i>United States</i>
Ref	<i>[66]</i>
Study design	<i>Randomized controll trial</i>
Study protocol	<i>No information</i>
Setting	<i>public high school</i>
Inclusion criteria	<i>being in good general health, as evidenced by permission to attend physical education (PE) class, and the ability to understand and answer questionnaires written in English. Parents returned signed consent forms.</i>
Follow up	<i>Mid intervention (8 weeks) and end of intervention (16 weeks)</i>
Population characteristics	<p><i>Middle adolescents (15–17 years old)</i></p> <p>Intervention group:</p> <p><i>Age, years; Mean (SD): 15.82</i></p> <p><i>Sex; (Percent girls): 42.1</i></p> <p><i>Socioeconomic/educations; Mean (SD): Income</i></p> <p><i>Below \$10,000 = 2</i></p> <p><i>\$10–25,000 = 4</i></p> <p><i>\$25–50,000 = 3</i></p> <p><i>\$50–75,000 = 2</i></p> <p><i>\$75–100,000 = 3</i></p> <p><i>\$100–125,000 = 1</i></p> <p><i>\$125–150,000 = 0</i></p> <p><i>Missing = 4</i></p> <p>Control group:</p> <p><i>Age, years; Mean (SD): 15.75</i></p> <p><i>Sex;(Percent girls): 33.3</i></p> <p><i>Socioeconomic/educations; Mean (SD): Income</i></p> <p><i>Below \$10,000 = 2</i></p> <p><i>\$10–25,000 = 1</i></p> <p><i>\$25–50,000 = 1</i></p> <p><i>\$50–75,000 = 3</i></p> <p><i>\$75–100,000 = 1</i></p> <p><i>\$100–125,000 = 0</i></p> <p><i>\$125–150,000 = 1</i></p> <p><i>Missing = 9</i></p>

Intervention program	<i>Bent on Learning (BOL), Yoga and Emotion Regulation</i>
Program extent	<i>Number of sessions: 48 Intensity: 3 times per week, 40 min per class Duration: 16 weeks Attendance: Sessions attended Intervention: M = 24.11 Control: M = 22.61 Implementation: 42 of 48 sessions were held</i>
Participants (n)	19
Drop-outs (n)	0
Program Deliverer	<i>Yoga instructors Training: BOL teachers are required to have a 200-hour yoga certification and two years of teaching experience.</i>
Comparison program	<i>Common school PE curriculum (no specific program)</i>
Participants (n)	19
Drop-outs (n)	1
Program Deliverer	<i>Not applicable</i>
Outcomes	
Comments	<i>Additional outcomes: Emotion regulation, Emotion Regulation Index for Children and adolescents (ERICA) Emotion regulation, Emotion Regulation Checklist (ERC), Mindful Attention Awareness Scale in Adolescents (MAASA) Self-Compassion Scale (SCS) Multidimensional Assessment of Interoceptive Awareness (MAIA)</i>
Risk of bias	<i>Moderate</i>
Author	<i>Dvořáková</i>
Year	<i>2017</i>
Country	<i>USA</i>
Ref	<i>[67]</i>
Study design	<i>Pilot randomized controlled trial,</i>
Study protocol	<i>No information</i>
Setting	<i>Public university</i>
Inclusion criteria	<i>First-year students residing in on-campus residence halls, and at least 18 years of age.</i>
Follow up	<i>2 months after baseline</i>
Population characteristics	<i>First-year undergraduate students Intervention group: Age; Mean (SD): Not stated</i>

	<p>Sex;(Percent girls): 64%</p> <p>Socioeconomic/educations; Mean (SD): Not stated</p> <p>Control group:</p> <p>Age; Mean (SD): Not stated</p> <p>Sex (Percent girls): 69%</p> <p>Socioeconomic/educations; Mean (SD): Not stated</p> <p>Total population:</p> <p>Age; Mean (SD): 18.2 (0.4)</p> <p>Sex (Percent girls): 66%</p> <p>Socioeconomic/educations; Mean (SD): Not stated</p>
<p>Intervention program</p> <p>Program extent</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p>Learn to breathe (L2B)</p> <p>Number of sessions: 8</p> <p>Intensity: Two 80 min sessions first 2 weeks, then one 80 min session per week for 6 weeks</p> <p>Duration: 6 weeks</p> <p>Attendance: Not stated</p> <p>Implementation: 99%</p> <p>55</p> <p>3</p> <p>Trained facilitators</p> <p>Training: Not stated</p>
<p>Comparison program</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p>Common school curriculum (no specific program)</p> <p>54</p> <p>1</p> <p>Not applicable</p>
Outcomes	<p>Outcome</p> <p><u>Measurement:</u></p> <p>Satisfaction with life</p> <p>Satisfaction with life scale (SWL)</p> <p><u>Measurement:</u></p> <p>Self-compassion</p> <p>Self-Compassion Scale (SCS)</p> <p><u>Measurement:</u></p> <p>Social connectedness</p> <p>Social Connectedness Scale (SCC-R)</p> <p><u>Measurement:</u></p> <p>Compassion</p>

	<i>Compassion Scale (CS)</i>
Comments	<p><i>Additional outcomes:</i></p> <p><i>Depression; The Primary Health Questionnaire (PHQ)</i></p> <p><i>Anxiety; The 7-item Generalized Anxiety Disorder Scale (GAD)</i></p> <p><i>Mindfulness; The mindfulness attention awareness scale (MAAS)</i></p> <p><i>Sleep; Subjective sleep quality was assessed using the Pittsburgh Sleep Quality Index (PSQI)</i></p> <p><i>Alcohol use; To obtain an assessment of peak drinking, participants reported the number of drinks they consumed during an occasion on which they drank the most during the past 30 days.</i></p> <p><i>Alcohol consequences; Alcohol-related consequences were obtained using the Young Adult Alcohol Problems Screening Test (YAAPST)</i></p> <p><i>The L2B acceptability questionnaire (LAQ); To evaluate acceptability of the program, students in the intervention group answered 10 questions</i></p>
Risk of bias	<i>Moderate</i>
Author	<i>Flook</i>
Year	<i>2015</i>
Country	<i>USA</i>
Ref	<i>[68]</i>
Study design	<i>Randomized controlled design</i>
Study protocol	<i>No information</i>
Setting	<i>Public elementary schools</i>
Inclusion criteria	<i>Parental consent</i>
Follow up	<i>Post intervention, 12 weeks</i>
Population characteristics	<p><i>Pre-School children,</i></p> <p><i>Intervention group:</i></p> <p><i>Age; Mean (SD): Not stated</i></p> <p><i>Sex;(Percent girls): Not stated</i></p> <p><i>Socioeconomic/educations; Mean (SD): Not stated</i></p> <p><i>Control group:</i></p> <p><i>Age; Mean (SD): Not stated</i></p> <p><i>Sex (Percent girls): Not stated</i></p> <p><i>Socioeconomic/educations; Mean (SD): Not stated</i></p> <p><i>Total population:</i></p> <p><i>Age; Mean (SD): 4.67 (0.27)</i></p> <p><i>Sex (Percent girls): 50.0</i></p> <p><i>Socioeconomic/educations; Mean (SD):</i></p> <p><i>Socioeconomically disadvantaged: 37.9%</i></p>
Intervention program	<i>Mindfulness-based Kindness Curriculum (KC)</i>
Program extent	<i>Number of sessions: 24</i>

<p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p><i>Intensity: Two 20-30 min sessions per week</i></p> <p><i>Duration: 12 weeks</i></p> <p><i>Attendance: Not stated</i></p> <p><i>Implementation: Not stated</i></p> <p><i>30</i></p> <p><i>Not stated</i></p> <p><i>Experienced mindfulness instructors</i></p> <p><i>Training: Not stated</i></p>
<p>Comparison program</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p><i>Common school curriculum (no specific program)</i></p> <p><i>38</i></p> <p><i>Not stated</i></p> <p><i>Not applicable</i></p>
<p>Outcomes</p>	<p><i>Outcome</i></p> <p><u><i>Measurement:</i></u></p> <p><i>Prosocial behavior and Emotion Regulation</i></p> <p><i>Teacher Social Competence Scale (Conduct Problems Prevention Research Group, 1995)</i></p>
<p>Comments</p> <p>Risk of bias</p>	<p><i>Additional outcomes:</i></p> <p><i>Sharing; Sharing task</i></p> <p><i>Delay of gratification; Prencipe and Zelazo's (2005) procedure</i></p> <p><i>Cognitive flexibility; dimensional change card sort (DCCS); National Institute of Health (NIH) Toolbox Cognitive Function Battery (Zelazo et al., 2013).</i></p> <p><i>Inhibitory control and Executive function; Flanker task, also from the NIH Toolbox Cognitive Function Battery (Zelazo et al., 2013)</i></p> <p><i>School grades</i></p> <p><i>Moderate</i></p>
<p>Author</p> <p>Year</p> <p>Country</p> <p>Ref</p>	<p><i>Frank</i></p> <p><i>2021</i></p> <p><i>USA</i></p> <p><i>[69]</i></p>
<p>Study design</p> <p>Study protocol</p> <p>Setting</p> <p>Inclusion criteria</p> <p>Follow up</p> <p>Population characteristics</p>	<p><i>Randomized controlled trial</i></p> <p><i>No information</i></p> <p><i>Urban school district</i></p> <p><i>Informed consent was obtained from all participants.</i></p> <p><i>1 week after program end</i></p> <p><i>High-School children,</i></p> <p><i>Intervention group:</i></p> <p><i>Age; Mean (SD): Not stated</i></p> <p><i>Sex;(Percent girls): Not stated</i></p>

	<p>Socioeconomic/educations; Mean (SD): Not stated</p> <p>Control group:</p> <p>Age; Mean (SD): Not stated</p> <p>Sex (Percent girls): Not stated</p> <p>Socioeconomic/educations; Mean (SD): Not stated</p> <p>Total population:</p> <p>Age; Mean (SD): 16</p> <p>Sex (Percent girls): 43%</p> <p>Socioeconomic/educations; Mean (SD):</p> <p>Free lunch: 23%</p>
<p>Intervention program</p> <p>Program extent</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p>Learn to breathe (L2B)</p> <p>Number of sessions: 12</p> <p>Intensity: Not stated</p> <p>Duration: 6 weeks</p> <p>Attendance: Not stated</p> <p>Implementation: 78.6%</p> <p>122</p> <p>2</p> <p>Classroom teachers</p> <p>Training: four weekly individual training sessions (6 h total), followed by 2-day training (14 h total), led by the program developer, five weekly coaching calls (60 min)</p>
<p>Comparison program</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p>Common school curriculum (no specific program)</p> <p>112</p> <p>2</p> <p>Not applicable</p>
<p>Outcomes</p>	<p>Outcome</p> <p><u>Measurement:</u></p> <p>Self-Compassion</p> <p>Self-Compassion Scale - Short Form (SCS-SF; Raes et al. 2011)</p> <p><u>Measurement:</u></p> <p>Emotion Regulation</p> <p>Difficulties in Emotion Regulation Scale (DERS; Gratz and Roemer 2004).</p> <p><u>Measurement:</u></p> <p>Social Connectedness</p> <p>Social Connectedness Scale- Revised (SCC-R; Lee et al. 2001)</p>
<p>Comments</p>	<p>Additional outcomes:</p> <p>Mindfulness; Child and Adolescent Mindfulness Measure (CAMM; Greco et al. 2011)</p>

<p>Risk of bias</p>	<p><i>Self-compassion; Self-Compassion Scale - Short Form (SCS-SF; Raes et al. 2011)</i> <i>Depression; Patient Health Questionnaire (PHQ-8; Kroenke et al. 2009).</i> <i>Anxiety; Generalized Anxiety Disorder Scale (GAD-7; Spitzer et al. 2006).</i> <i>Rumination; Rumination and Reflection Questionnaire(RRQ; Trapnell and Campbell 1999).</i> <i>Stress; Adolescent Stress Questionnaire (ASQ; Caballero et al. 2016)</i> <i>Somatization; Children’s Somatization Inventory (CSI; Walker et al.2008)</i> <i>Sleep; The Adolescent Sleep-Wake Scale (ASWS; LeBourgeois et al. 2005)</i> <i>Mind Wandering; The Mind Wandering Questionnaire (MWQ; Mrazek et al. 2013)</i> <i>Growth Mindset; Implicit Theories of Intelligence Scale for Children (IT; Dweck 1999).</i> <i>Substance Use; Substance Initiation Index (Spath et al. 2007).</i> <i>Negative Substance Use Consequences; Young Adult Alcohol Problems Screening Test (YAAPST; Hurlbut and Sher 1992)</i> <i>Inhibitory Control and Attention A modified, computerized version of the Stroop Task (Siegrist 1995; MacLeod 1991)</i> <i>Risk Taking; Balloon Analogue Risk Task (BART; Lejuez et al. 2002)</i> <i>Working Memory, Attention, and Emotion Regulation; Emotional Faces N-back Task (EFN-back), (Ladouceur et al. 2005)</i> <i>Engagement in Practice At post-test, students in the L2B condition were asked how often they practiced each of the seven program components since the beginning of the L2B program</i></p> <p>Moderate - borderline high</p>
<p>Author Year Country Ref</p>	<p><i>Frank</i> <i>2017</i> <i>USA</i> <i>[70]</i></p>
<p>Study design Study protocol Setting Inclusion criteria Follow up Population characteristics</p>	<p><i>Randomized Controlled Trial</i> <i>No information</i> <i>inner-city school district</i></p> <p><i>Sixth ninth grade students</i></p> <p>Intervention group: <i>Age, years; Mean (SD): Not stated</i> <i>Sex; (Percent girls): Not stated</i> <i>Socioeconomic/educations; Mean (SD): Not stated</i></p> <p>Control group: <i>Age, years; Mean (SD): Not stated</i> <i>Sex;(Percent girls): Not stated</i></p>

	<p>Socioeconomic/educations; Mean (SD): Not stated</p> <p>Total population:</p> <p>Age, years; Mean (SD): 53.5% 6th year students and 44.7% 9th year students</p> <p>Sex;(Percent girls): 46.5</p> <p>Socioeconomic/educations; Mean (SD): Academically, the mean GPA among participating students was 2.90 (SD = 0.99).</p> <p>Participants: 159 sixth (53.3 %) and ninth grade (44.7 %) students.</p>
<p>Intervention program</p> <p>Program extent</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p>Transformative Life Skills (TLS)</p> <p>Number of sessions: 4 units with 12 lessons per unit</p> <p>Intensity: 30 min 3-4 days per week</p> <p>Duration: One school term</p> <p>Attendance: Not stated</p> <p>Implementation: On average, 92% of intervention components were implemented with fidelity.</p> <p>Not stated</p> <p>4</p> <p>Yoga instructor</p> <p>Training: specialized training and certification in TLS administration from program developers, and had 2 or more years of experience implementing TLS in similar settings.</p>
<p>Comparison program</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p>Common school curriculum (no specific program)</p> <p>Not stated</p> <p>6</p> <p>Not applicable</p>
Outcomes	<p>Outcome</p> <p><u>Measurement:</u></p> <p>School Engagement Scale, Cernkovich and Giordano (1992).</p> <p><u>Measurement:</u></p> <p>he Responses to Stress Questionnaire (RSQ) (Connor-Smith et al. 2000).</p> <p><u>Measurement:</u></p> <p>Positive and Negative Affect Schedule for Children (PANAS-C)</p>
Comments	<p>Additional outcomes:</p> <p>Student Academic and Behavioral Records</p> <p>The Attitudes toward Violence scale (Bosworth and Espelage 1995)</p> <p>Child- Behavior Checklist (CBCL; Achenbach and Edelbrock 1983)</p>
Risk of bias	Moderate

Author	<i>Gould</i>
Year	2012
Country	USA
Ref	1238, connected with 7772
Study design	<i>Randomized controlled trial</i>
Study protocol	<i>No information</i>
Setting	<i>Public elementary schools</i>
Inclusion criteria	<i>Parental consent and student assent. First 25 students to produce these per school.</i>
Follow up	<i>Within two weeks post test, 12 weeks</i>
Population characteristics	<p><i>School children, year 4–5</i></p> <p><i>Intervention group:</i></p> <p><i>Age; Mean (SD): Not stated</i></p> <p><i>Sex;(Percent girls): Not stated</i></p> <p><i>Socioeconomic/educations; Mean (SD): Not stated</i></p> <p><i>Control group:</i></p> <p><i>Age; Mean (SD): Not stated</i></p> <p><i>Sex (Percent girls): Not stated</i></p> <p><i>Socioeconomic/educations; Mean (SD): Not stated</i></p> <p><i>Total population:</i></p> <p><i>Age; Mean (SD):</i></p> <p><i>4th grade: 9.7 (0.7)</i></p> <p><i>5th grade: 10.6 (0.7)</i></p> <p><i>Sex (Percent girls): 60.8</i></p> <p><i>Socioeconomic/educations; Mean (SD): Free and Reduced-Price Lunch (FRLP; 94% in two schools vs. 81% and 82% in the other two schools)</i></p>
Intervention program	<i>Mindfulness and yoga program, Holistic Life Foundation (HLF)</i>
Program extent	<p><i>Number of sessions: 48</i></p> <p><i>Intensity: 4 days a week, 45 min per session</i></p> <p><i>Duration: 12</i></p> <p><i>Attendance: Not stated</i></p> <p><i>Implementation: Not stated</i></p>
Participants (n)	51
Drop-outs (n)	3
Program Deliverer	<p><i>Instructors (not classroom teachers)</i></p> <p><i>Training: Not stated</i></p>
Comparison program	<i>Common school curriculum (no specific program)</i>
Participants (n)	46
Drop-outs (n)	2
Program Deliverer	<i>Not applicable</i>

Outcomes	<p>Outcome</p> <p><u>Measurement:</u></p> <p>Positive and negative emotions</p> <p>The Emotion Profile Inventory (EP; Benn, 2003)</p>
Comments	<p>Additional outcomes:</p> <p>Depressive symptom;. The Short Mood and Feelings Questionnaire – Child Version (SMFQC; Angold et al., 1995)</p> <p>Stress response;. The Responses to Stress Questionnaire (RSQ; Connor-Smith, Compas, Wadsworth, Tomsen, & Saltzman, 2000)</p>
Risk of bias	Moderate
Author	Jackman
Year	2019
Country	USA
Ref	[71]
Study design	Randomized controlled trial
Study protocol	No information
Setting	Preschool
Inclusion criteria	Permission and ethical approval were obtained to include all classrooms
Follow up	End of pre-school year
Population characteristics	<p>3–5-year-old children</p> <p>Intervention group:</p> <p>Age; Mean (SD): Not stated</p> <p>Sex;(Percent girls): Not stated</p> <p>Socioeconomic/educations; Mean (SD): Not stated</p> <p>Control group:</p> <p>Age; Mean (SD): Not stated</p> <p>Sex (Percent girls): Not stated</p> <p>Socioeconomic/educations; Mean (SD): Not stated</p> <p>Total population:</p> <p>Age; Mean (SD): 3 years 8 months (6 months)</p> <p>Sex (Percent girls): 52</p> <p>Socioeconomic/educations; Mean (SD): Not stated</p>
Participants:	283
Drop Out:	21
Intervention program	OpenMind (OM; Jackman 2016a)
Program extent	<p>Number of sessions:</p> <p>Intensity: 7 daily practices</p> <p>Duration: 1 school year</p>

Participants (n)	<i>Attendance: Not stated</i>
Drop-outs (n)	<i>Implementation: Not stated</i>
Program Deliverer	<i>143</i>
	<i>Not stated</i>
	<i>Classroom teachers</i>
	<i>Training: 5-day mindfulness training course, and 20 min per day meditation per school day.</i>
Comparison program	<i>High Scope curriculum, with aspects of Trust-Based Relational Intervention and social emotional learning interventions administered by mental health professionals</i>
Participants (n)	<i>119</i>
Drop-outs (n)	<i>Not stated</i>
Program Deliverer	<i>Teachers and mental health professionals</i>
	<i>Training: 5-day course of relationship building, and 20 min of teacher-child bonding activities during each school day.</i>
Outcomes	<p><i>Outcome</i></p> <p><u><i>Measurement:</i></u></p> <p><i>Executive functioning</i></p> <p><i>Behavior rating inventory of executive function—preschool version (BRIEF-P) (Gioia et al. 2003)</i></p> <p><u><i>Measurement:</i></u></p> <p><i>Inhibitory control</i></p> <p><i>Go/No-Go (GNG) (Dowsett and Livesey 2000; Müller et al. 2012; Wiebe et al. 2012)</i></p> <p><u><i>Measurement:</i></u></p> <p><i>Inhibitory control, working memory, and attention focusing</i></p> <p><i>Head toes knees shoulders (HTKS) (Ponitz et al. 2008)</i></p>
Comments	<p><i>Additional outcomes:</i></p> <p><i>Perceived stress scale-10 (PSS-10) (Cohen et al. 1983)</i></p> <p><i>Five facet mindfulness questionnaires (FFMQ) (Baer et al. 2006)</i></p> <p><i>Psychological well-being scale (Ryff 1989)</i></p>
Risk of bias	<i>Moderate</i>
Author	<i>Khalsa</i>
Year	<i>2012</i>
Country	<i>United States</i>
Ref	<i>[72]</i>
Study design	<i>Preliminary Randomized Controlled Trial</i>
Study protocol	<i>No information</i>
Setting	<i>Secondary school</i>
Inclusion criteria	<i>Passive consent from students</i>

<p>Follow up</p> <p>Population characteristics</p>	<p><i>Post intervention, 3 months after start</i></p> <p><i>Adolescents in grade 11 and 12</i></p> <p>Intervention group:</p> <p><i>Age, years; Mean (SD): 16.8 (0.6)</i></p> <p><i>Sex; (Percent girls): 46.0</i></p> <p><i>Socioeconomic/educations; Mean (SD): The school had a 17% low-income population. (Total)</i></p> <p>Control group:</p> <p><i>Age, years; Mean (SD): 16.9 (0.8)</i></p> <p><i>Sex;(Percent girls): 36.2</i></p> <p><i>Socioeconomic/educations; Mean (SD): The school had a 17% low-income population. (Total)</i></p>
<p>Intervention program</p> <p>Program extent</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p><i>Yoga Ed program</i></p> <p><i>Number of sessions: 23, 25, 31, or 32 sessions</i></p> <p><i>Intensity: two to three yoga sessions per week</i></p> <p><i>Duration: 11 weeks</i></p> <p><i>Attendance: The average number of sessions attended for all 73 students was 20.5 (SD=7.7)</i></p> <p><i>The average number of missed sessions for all students was 7.4 (SD=6.0), and the percentage of available sessions attended was 73.4% (SD=0.2%).</i></p> <p><i>Implementation: Not stated</i></p> <p>74</p> <p>4</p> <p><i>Yoga instructors</i></p> <p><i>Training; formal Yoga Ed training course and 200 h teacher training program in the Kripalu yoga style</i></p>
<p>Comparison program</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p><i>Common school curriculum (no specific program)</i></p> <p>47</p> <p>8</p> <p><i>Not applicable</i></p>
<p>Outcomes</p>	
<p>Comments</p>	<p><i>Additional outcomes:</i></p> <p><i>The Self-Report of Personality (SRP) version of the Behavior Assessment Survey for Children Version 2 (BASC-2)</i></p> <p><i>Profile of Mood States short form (POMS-SF)</i></p> <p><i>Resilience Scale (RS)</i></p> <p><i>Perceived Stress Scale (PSS)</i></p> <p><i>The Inventory of Positive Psychological Attitudes-32R (IPPA)</i></p>

Risk of bias	<i>Moderate</i>
Author	<i>Lassander</i>
Year	<i>2021</i>
Country	<i>Finland</i>
Ref	<i>[73]</i>
Study design	<i>Cluster randomized controlled trial</i>
Study protocol	<i>No information</i>
Setting	<i>Comprehensive school</i>
Inclusion criteria	<i>consent to participate from all headteachers, written informed consent was requested from all students and their parents</i>
Follow up	<i>At 9 weeks (end of intervention), and at 26 weeks (post start of intervention)</i>
Population characteristics	<p><i>Students aged 12-15 years, 6-8 grade</i></p> <p>Intervention group:</p> <p><i>Age, years; Mean (SD): Not stated</i></p> <p><i>Sex; (Percent girls): Not stated</i></p> <p><i>Socioeconomic/educations; Mean (SD): Not stated</i></p> <p>Control group:</p> <p><i>Age, years; Mean (SD): Not stated</i></p> <p><i>Sex;(Percent girls): Not stated</i></p> <p><i>Socioeconomic/educations; Mean (SD): Not stated</i></p> <p>Total population</p> <p><i>Age, years; Mean (SD): Not stated</i></p> <p><i>Sex;(Percent girls): 50%</i></p> <p><i>Socioeconomic/educations; Mean (SD): Not stated</i></p>
Intervention program	<i>Skills for Wellbeing, Mindfulness program Stop and Breathe</i>
Program extent	<p><i>Number of sessions: 9</i></p> <p><i>Intensity: One 45 min weekly sessions, short home practices (the recommended amount of practice being 5–6 times per week, approx. 3–15 min at a time)</i></p> <p><i>Duration: 9 weeks</i></p> <p><i>Attendance: Not stated</i></p> <p><i>Implementation: Not stated</i></p>
Participants (n)	<i>1 220</i>
Drop-outs (n)	<i>Not stated</i>
Program Deliverer	<i>trained facilitators</i>

	<i>Training: Not stated</i>
Active control program	<i>Skills for Wellbeing, Standardized relaxation program "Relax."</i>
Program extent	<i>Number of sessions: 9</i> <i>Intensity: One 45 min weekly sessions, short home practices (the recommended amount of practice being 5–6 times per week, approx. 3–15 min at a time)</i> <i>Duration: 9 weeks</i> <i>Attendance:</i> <i>Implementation:</i>
Participants (n)	<i>1181</i>
Drop-outs (n)	<i>Not stated</i>
Program Deliverer	<i>trained facilitators</i> <i>Training: Not stated</i>
Comparison program	<i>Common school curriculum (no specific program)</i>
Participants (n)	<i>353</i>
Drop-outs (n)	<i>Not stated</i>
Program Deliverer	<i>Not applicable</i>
Outcomes	Outcome <u>Measurement:</u> <i>Health-Related Quality of Life</i> <i>KINDL-R</i>
Comments	<i>Additional outcomes:</i> <i>Health-Related Quality of Life we chose KINDL-R</i>
Risk of bias	<i>Moderate</i>
Author	<i>Kuyken</i>
Year	<i>2022</i>
Country	<i>United Kingdom</i>
Ref	<i>[74]</i>
Study design	<i>Cluster-randomised controlled trial</i>
Study protocol	<i>No information</i>
Setting	<i>Secondary schools</i>
Inclusion criteria	<i>Parents not opt their children out, then assenting the young people themselves</i>
Follow up	<i>Post intervention (one term) and 1 year after pre-intervention measures</i>
Population characteristics	<i>Secondary school students, 10 to 14 years</i> Intervention group: <i>Age, years; Mean (SD): 12.2 (0.6)</i> <i>Sex; (Percent girls): 56.5</i> <i>Socioeconomic/educations; Mean (SD):</i>

	<p>Above median percentage eligible for free school meals, n (%) 15 (35) Below median percentage for eligible for free school meals, n (%) 28 (65)</p> <p>Control group: Age, years; Mean (SD): 12.2 (0.6) Sex;(Percent girls): 53.1 Socioeconomic/educations; Mean (SD): Above median percentage eligible for free school meals, n (%) 15 (37) Below median percentage for eligible for free school meals, n (%) 26 (63)</p>
<p>Intervention program</p> <p>Participants (n)</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p>School-based mindfulness training (SBMT) The My Resilience in Adolescence (MYRIAD)</p> <p>Number of sessions: 10 Intensity: 30-50minutes Duration: One school term Attendance: students received an average of 9.0 (SD 2.1) out of a possible 10 SBMT sessions Implementation: average, teachers were rated as delivering the intervention competently and adhered to 83% of the standardised curriculum</p> <p>4 144 466 Classroom teachers Training: Participating in an 8-week personal mindfulnessbased cognitive therapy for life (MBCT-L) programme, followed by a 4-day training workshop to learn how to deliver the SBMT curriculum to students. Participating teachers taught at least one complete SBMT curriculum to students, re going on to teach the study students.</p>
<p>Comparison program</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p>Common school curriculum (no specific program)</p> <p>4232 660 Not applicable</p>
Outcomes	
Comments	<p>Additional outcomes: self-reported risk for depression [Center for Epidemiologic Studies for Depression Scale; CES-D self-reported social-emotional behavioural functioning [Strengths and Difficulties Questionnaire, SDQ, Youth Self-Report Version, total difficulties score] reported well-being [Warwick-Edinburgh Mental Well-being Scale; WEMWBS] Behaviour Rating Inventory of Executive Function, Second Edition, self and teacher-rated versions, BRIEF-2 anxiety subscales from the Revised Child Anxiety and Depression Scale, RCADS teacher-reported social-emotional-behavioural functioning (SDQ, teacher version)</p>

Risk of bias	<p><i>self-reported self-harm and suicidal ideation (measures devised for study)</i></p> <p><i>school climate (subscales from the School Climate and Connectedness Survey, SCCS)</i></p> <p><i>self-reported mindfulness skills (Child-Adolescent Mindfulness Measure, CAMM).</i></p> <p><i>Moderate</i></p>
Author	<i>Mendelson</i>
Year	<i>2010</i>
Country	<i>USA</i>
Ref	<i>[75], connected with [76]</i>
Study design	<i>Pilot randomized controlled trial</i>
Study protocol	<i>No information</i>
Setting	<i>Urban public elementary schools</i>
Inclusion criteria	<i>Parental consent and student assent. First 25 students to produce these per school.</i>
Follow up	<i>Within two weeks post test, 12 weeks</i>
Population characteristics	<p><i>School children, year 4–5</i></p> <p><i>Intervention group:</i></p> <p><i>Age; Mean (SD): Not stated</i></p> <p><i>Sex;(Percent girls): Not stated</i></p> <p><i>Socioeconomic/educations; Mean (SD): Not stated</i></p> <p><i>Control group:</i></p> <p><i>Age; Mean (SD): Not stated</i></p> <p><i>Sex (Percent girls): Not stated</i></p> <p><i>Socioeconomic/educations; Mean (SD): Not stated</i></p> <p><i>Total population:</i></p> <p><i>Age; Mean (SD):</i></p> <p><i>4th grade: 9.7 (0.7)</i></p> <p><i>5th grade: 10.6 (0.7)</i></p> <p><i>Sex (Percent girls): 60.8%</i></p> <p><i>Socioeconomic/educations; Mean (SD): Not stated</i></p>
Intervention program	<i>Mindfulness and yoga program, Holistic Life Foundation (HLF)</i>
Program extent	<p><i>Number of sessions: 48</i></p> <p><i>Intensity: 4 days a week, 45 min per session</i></p> <p><i>Duration: 12 weeks</i></p> <p><i>Attendance: 73.5% of students at one intervention school completed at least 75% of the intervention classes, with most absences the result of students missing school on that day. By contrast, slightly under 40% of students attended three quarters of the class sessions at the other intervention school. While school absence contributed to those missed classes, teacher focus group data indicated that some teachers at that school had prevented students from attending the intervention classes as a punishment for poor behavior in class.</i></p>

Participants (n)	Implementation: Not stated 51
Drop-outs (n)	3
Program Deliverer	Instructors (not classroom teachers) Training: Not stated
Comparison program	Common school curriculum (no specific program)
Participants (n)	46
Drop-outs (n)	2
Program Deliverer	Not applicable
Outcomes	<p>Outcome</p> <p><u>Measurement:</u> Positive and negative emotions The Emotion Profile Inventory (EP; Benn, 2003)</p> <p><u>Measurement:</u> Trust in Friends People in My Life (PIML; Cook et al. 1995; Murray and Greenberg 2000)</p> <p><u>Measurement:</u> Communication with friends People in My Life (PIML; Cook et al. 1995; Murray and Greenberg 2000)</p>
Comments	<p>Additional outcomes:</p> <p>Involuntary Stress Responses; Responses to Stress Questionnaire (RSQ; Connor-Smith et al. 2000)</p> <p>Depressive Symptoms; The Short Mood and Feelings Questionnaire—Child Version (SMFQ-C; Angold et al. 1995)</p> <p>Teacher Affiliation, and Dissatisfaction with Teachers; People in My Life (PIML Cook et al. 1995; Murray and Greenberg 2000)</p>
Risk of bias	Moderate
Author	Noggle
Year	2012
Country	United States
Ref	[77]
Study design	Preliminary Randomized Controlled Trial
Study protocol	No information
Setting	High school
Inclusion criteria	Student and parental passive consent
Follow up	Post intervention, 3 months after start

Population characteristics	<p>Grade 11 or 12 students</p> <p>Intervention group:</p> <p>Age, years; Mean (SD): 17.1 (0.6)</p> <p>Sex; (Percent girls): 61</p> <p>Socioeconomic/educations; Mean (SD): Of total population 16.4% of students were considered low income (students eligible for free/reduced price lunch or food stamps, or receiving Transitional Aid to Families benefits).</p> <p>Control group:</p> <p>Age, years; Mean (SD): 17.3 (0.8)</p> <p>Sex;(Percent girls): 47</p> <p>Socioeconomic/educations; Mean (SD): Of total population 16.4% of students were considered low income (students eligible for free/reduced price lunch or food stamps, or receiving Transitional Aid to Families benefits).</p>
Intervention program Program extent Participants (n) Drop-outs (n) Program Deliverer	<p>Yoga Ed program</p> <p>Number of sessions: 28</p> <p>Intensity: 2-3 times a week</p> <p>Duration: 10 weeks</p> <p>Attendance:</p> <p>Implementation:</p> <p>34</p> <p>1</p> <p>yoga instructors</p> <p>Training: completed 500-hour advanced yoga teacher training programs and the Yoga Ed training program</p>
Comparison program Participants (n) Drop-outs (n) Program Deliverer	<p>Common school curriculum (no specific program)</p> <p>17</p> <p>0</p> <p>Not applicable</p>
Outcomes	
Comments	<p>Additional outcomes:</p> <p>The Profile of Mood States-Short Form (POMS-SF)</p> <p>The Positive and Negative Affect Schedule for Children (PANAS-C)</p> <p>Perceived Stress Scale (PSS)</p> <p>Inventory of Positive Psychological Attitudes-32R (IPPA)</p> <p>Resilience Scale (RS)</p> <p>The State-Trait Anger Expression Inventory-2™ (STAXI-2)</p> <p>The Child Acceptance and Mindfulness Measure (CAMM)</p>

Risk of bias	<i>Moderate</i>
Author	<i>Telles</i>
Year	<i>2013</i>
Country	<i>India</i>
Ref	<i>9471</i>
Study design	<i>randomized controlled trial</i>
Study protocol	<i>No information</i>
Setting	<i>primary school</i>
Inclusion criteria	<i>i) participants of both sexes, studying in a school near the yoga center, (ii) those who were willing to follow the study conditions and (iii) those who were studying in grades 3 to 7 (age range 8 to 13 years for these grades).</i>
Follow up	<i>End of intervention, 3 months</i>
Population characteristics	<p><i>school children between 8 to 13 years</i></p> <p>Intervention group:</p> <p><i>Age, years; Mean (SD): 10.4 (1.2)</i></p> <p><i>Sex; (Percent girls): 30.6</i></p> <p><i>Socioeconomic/educations; Mean (SD): their socio-economic status was categorized as lower middle class [22], with an average annual income of Indian Rupees 3,40,000 and</i></p> <p>Control group:</p> <p><i>Age, years; Mean (SD): 10.5 (1.3)</i></p> <p><i>Sex;(Percent girls): 46.9</i></p> <p><i>Socioeconomic/educations; Mean (SD): their socio-economic status was categorized as lower middle class [22], with an average annual income of Indian Rupees 3,40,000 and</i></p>
Intervention program	<i>Yoga practice</i>
Program extent	<p><i>Number of sessions: Not stated</i></p> <p><i>Intensity: 45 min per day, 5 days per week</i></p> <p><i>Duration: 3 months</i></p> <p><i>Attendance: Not stated</i></p> <p><i>Implementation: Not stated</i></p>
Participants (n)	<i>49</i>
Drop-outs (n)	<i>0</i>
Program Deliverer	<p><i>Trained instructors</i></p> <p><i>Training: approximately two years training in yoga and six months in teaching yoga.</i></p>
Comparison program	<i>Physical exercise group involved jogging in place, rapid bending forward and backward, bending sideways, spinal twisting and relay races or games.</i>

Participants (n)	49
Drop-outs (n)	0
Program Deliverer	Trained instructors + schoolteacher Training: approximately two years training in yoga and six months in teaching yoga.
Outcomes	
Comments	Additional outcomes: physical fitness, the Eurofit physical fitness test the Stroop task, Stroop color-word naming task self-esteem, Indian adaptation of Battle's self-esteem questionnaire (i) obedience, (ii) academic performance, (iii) attention, (iv) punctuality, (v) behavior with friends, and (vi) behavior with teachers were assessed for each participant using six separate visual analog scales.
Risk of bias	Moderate
Author	Viglas
Year	2018
Country	Canada
Ref	[78]
Study design	Randomized control trial
Study protocol	No information
Setting	Public schools kindergarten
Inclusion criteria	Parental consent to participate
Follow up	After of intervention (6 weeks)
Population characteristics	Junior to Senior Kindergarten, between ages 3 years, 9 and 6 years, 5 months Intervention group: Age, months; Mean (SD): 62.32 (7.5) Sex; (Percent girls): 43 Socioeconomic/educations; Mean (SD): all three schools in this study experienced somewhat higher levels of external challenges (e.g., parents' education and income, poverty and proportion of lone-parent families) affecting student success than the general population of schools in the Toronto District School Board. Control group: Age, months; Mean (SD): 61.36 (7.1) Sex;(Percent girls): 40 Socioeconomic/educations; Mean (SD): all three schools in this study experienced somewhat higher levels of external challenges (e.g., parents' education and income, poverty and proportion of lone-parent families) affecting student success than the general population of schools in the Toronto District School Board.

Intervention program	<i>Mindfulness-based program</i>
Participants (n)	<i>Number of sessions: 18</i> <i>Intensity: 20 minutes 3 times per week</i> <i>Duration: 6 weeks</i> <i>Attendance: Not stated</i> <i>Implementation: Not stated</i>
Participants (n)	72
Drop-outs (n)	Not stated
Program Deliverer	<i>Mindfulness teacher (the primary researcher)</i> <i>Training The primary researcher was trained and certified to implement the program and received permission from the program developers</i>
Comparison program	<i>Common school curriculum (no specific program)</i>
Participants (n)	55
Drop-outs (n)	Not stated
Program Deliverer	Not applicable
Outcomes	Outcome <u>Measurement:</u> <i>Head-Toes-Knees-Shoulders (HTKS)</i> <u>Measurement:</u> <i>The Strengths and Difficulties Questionnaire (SDQ)</i>
Comments	<i>Additional outcomes:</i>
Risk of bias	<i>Moderate</i>
Author	<i>Volanen</i>
Year	2020
Country	<i>Finland</i>
Ref	9529
Study design	<i>Cluster-randomised controlled trial</i>
Study protocol	<i>No information</i>
Setting	<i>Comprehensive school</i>
Inclusion criteria	<i>A written informed consent was requested from all participants and their parents.</i>
Follow up	<i>Completion of the programs at 9 weeks (T9), and at follow-up at 26 weeks (T26) from baseline</i>
Population characteristics	<i>sixth, seventh and eighth graders (age 12–15)</i> Intervention group 1: <i>Age, years; Mean (SD): Not stated</i> <i>Sex; (Percent girls): 49</i>

	<p><i>Socioeconomic/educations; Mean (SD): Not stated</i></p> <p>Intervention group 2: <i>Age, years; Mean (SD): Not stated</i> <i>Sex; (Percent girls): 50.9</i> <i>Socioeconomic/educations; Mean (SD): Not stated</i></p> <p>Control group: <i>Age, years; Mean (SD): Not stated</i> <i>Sex;(Percent girls): 50.3</i> <i>Socioeconomic/educations; Mean (SD): Not stated</i></p>
<p>Intervention program 1</p> <p>Program extent</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p><i>Mindfulness-Based Interventions (MBIs), .b (Stop and Breathe/Be)</i></p> <p><i>Number of sessions: 9</i> <i>Intensity: weekly sessions of 45 min group sessions and recommended short home practices.</i> <i>Duration: 9 weeks</i> <i>Attendance: 90% of students took part in 7–9 lessons, 5% took part in 6 lessons, and 5% took part in 1–5 lessons.</i> <i>Implementation: Not stated</i></p> <p><i>1334</i></p> <p><i>364</i></p> <p><i>Trained and certified mindfulness facilitators with years of established mindfulness meditation practice delivered the .b-intervention in classes.</i> <i>Training: Not specified</i></p>
<p>Intervention program 2</p> <p>Program extent</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p><i>standardized relaxation program ‘Relax’</i></p> <p><i>Number of sessions: 9</i> <i>Intensity: weekly sessions of 45 min group sessions and recommended short home practices</i> <i>Duration: 9 weeks</i> <i>Attendance: Not stated</i> <i>Implementation: Not stated</i></p> <p><i>1291</i></p> <p><i>257</i></p> <p><i>Relax facilitators were either certified school teachers, or experienced leaders of well-being groups among this age group.</i> <i>Training: Not specified</i></p>
<p>Comparison program</p> <p>Participants (n)</p> <p>Drop-outs (n)</p>	<p><i>Common school curriculum (no specific program)</i></p> <p><i>371</i></p> <p><i>63</i></p>

Program Deliverer	<i>Not applicable</i>
Outcomes	<p>Outcome</p> <p><u>Measurement:</u> <i>The Resilience scale (RS14) was employed to measure resilience (Wagnild and Young, 1993).</i></p> <p><u>Measurement:</u> <i>The Beck Depression Inventory (RBDI) (Beck et al., 1988; Raitasalo, 2007)</i></p> <p><u>Measurement:</u> <i>The Strengths and difficulties questionnaire (SDQ) (Goodman, 1997, 2001)</i></p>
Comments	<i>Additional outcomes:</i>
Risk of bias	<i>Moderate</i>
Author	<i>Waldemar</i>
Year	<i>2016</i>
Country	<i>Brazil</i>
Ref	<i>4846</i>
Study design	<i>Nonrandomized controlled group</i>
Study protocol	<i>No information</i>
Setting	<i>Elementary public schools</i>
Inclusion criteria	<i>Parental consent</i>
Follow up	<i>End of intervention (5 months)</i>
Population characteristics	<p><i>Fifth graders</i></p> <p>Intervention group:</p> <p><i>Age, years; Mean (SD): 11.1 (1.28)</i></p> <p><i>Sex; (Percent girls): 43.8</i></p> <p><i>Socioeconomic/educations; Mean (SD):</i></p> <p><i>Social Class</i></p> <p><i>Middle class (B)d 10 (16.4)</i></p> <p><i>Low middle class (C)e 48 (78.7)</i></p> <p><i>Poor (D)f 3 (4.9)</i></p> <p>Control group:</p> <p><i>Age, years; Mean (SD): 10.9 (1.10)</i></p> <p><i>Sex;(Percent girls): 51.5</i></p> <p><i>Socioeconomic/educations; Mean (SD):</i></p> <p><i>Social Class</i></p> <p><i>Middle class (B)d 10 (16.7)</i></p> <p><i>Low middle class (C)e 46 (76.7)</i></p>

	<i>Poor (D)f 4 (6.7)</i>
Intervention program	<i>Mindfulness and Social–Emotional Learning Program (M-SEL)</i>
Participants (n)	<i>Number of sessions: 8-12</i>
	<i>Intensity: 1 hour</i>
	<i>Duration: 5 months</i>
	<i>Attendance: Not stated</i>
	<i>Implementation: Not stated</i>
Participants (n)	<i>64</i>
Drop-outs (n)	<i>2</i>
Program Deliverer	<i>Classroom teachers</i>
	<i>Training: Not specified</i>
Comparison program	<i>Common school curriculum (no specific program)</i>
Participants (n)	<i>68</i>
Drop-outs (n)	<i>10</i>
Program Deliverer	<i>Not applicable</i>
Outcomes	
Comments	<i>Additional outcomes:</i> <i>The Sociodemographic Questionnaire was created for the present study</i> <i>Strengths and Difficulties Questionnaire–Child Version (SDQ-C; Flettlich, Cortazar, & Goodman, 2000)</i> <i>The Youth Quality of Life Instrument (YQOL-R; Salum et al., 2012)</i> <i>Swanson, Nolan and Pelham Questionnaire–IV (SNAP-IV; Mattos, Serra- Pinheiro, Rohde, & Pinto, 2006)</i>
Risk of bias	<i>Moderate</i>

Experiences of Mindfulness and Yoga-programs (6 studies)

Author	<i>Ceballos</i>
Year	<i>2021</i>
Country	<i>USA</i>
Ref	<i>[79]</i>
Study design	<i>Part of a quantitative study</i>
Aim of study	<i>Explore students' perceptions about L2B</i>
Setting for the intervention	<i>Two middle schools in one public title one district in the Southern region of the US</i>
Population of children Characteristics	<i>N = 116 middle school students 98,6 % qualified for free or reduced-price lunch, 58 % females, 95 % minorities, mostly Hispanics</i>
Program	<i>L2B, modified</i>
Program class	<i>Mindfulness + SEL</i>
Program deliverer	<i>Classroom teachers</i>
Sampling method	<i>Purposeful sampling, including requirement that the student should have attended at least 5 classroom guidance lessons and being in the treatment group n = 57</i>
Respondents (n)	<i>not described</i>
Dropout from study (n)	<i>not described</i>
Characteristics	
Theoretical perspective of the study	<i>Phenomenology</i>
Method for data collection	<i>Open-ended questions in the study questionnaire</i>
Method for analysis	<i>Recurrent qualitative longitudinal analysis [80]</i>
Method for validation	<i>External auditor, consensus process</i>
Researchers (n)	<i>3</i>
Researcher background	<i>Not described</i>
Author	<i>Conboy</i>
Year	<i>2013</i>
Country	<i>USA</i>
Ref	<i>[81]</i>
Study design	<i>Qualitative, part of an RCT</i>
Aim of study	<i>Deeper understanding of student perspectives</i>
Setting for the intervention	<i>A rural public high school in Western Massachusetts</i>
Population of children Characteristics	<i>Children in grades 9-10 Not described</i>
Program	<i>Yoga in the Schools, based on Kripalu yoga, 32 lessons manualized curriculum</i>
Program class	<i>Yoga</i>
Program deliverer	<i>Classroom teachers</i>

Sampling method	<i>Stratified randomization with gender and grade, 50 % of the students</i>
Respondents (n)	<i>n = 28</i>
Dropout from study (n)	<i>None from the interviews but n=2 boys did not complete the program</i>
Characteristics	<i>61 % girls, mean age 15 years (+-1), Caucasian 86%</i>
Theoretical perspective of the study	<i>Not described</i>
Method for data collection	<i>Interviews by four trained interviewers familiar with yoga, written notes</i>
Method for analysis	<i>Thematic analysis conducted independently by two authors</i>
Method for validation	<i>Not described</i>
Researchers (n)	<i>N = 5</i>
Researcher background	<i>Not described</i>
Author	<i>Dariotis</i>
Year	<i>2016</i>
Country	<i>USA</i>
Ref	<i>[82]</i>
Study design	<i>Qualitative, part of a controlled trial</i>
Aim of study	<i>Gain understanding of mindfulness skills that students learned and applied</i>
Setting for the intervention	<i>3 middle schools in disadvantaged areas of Baltimore</i>
Population of children Characteristics	<i>School children in grades 5 and 6, n = 130 in the intervention group Age; Median 11 years; range 10-13 years > 90 % Afro Americans; twice the unemployment rate and half the median income for the state</i>
Program	<i>Mindful Yoga, twice per week for 16 weeks, 45 min each</i>
Program class	<i>Yoga</i>
Program deliverer	<i>Led by instructors from an external nonprofit organization</i>
Sampling method	<i>Nomination of students by teachers, with respect to varying sex, program attendance and program engagement. All classroom teachers except 2 due to scheduling conflicts</i>
Respondents (n)	<i>22 students and nine classroom teachers</i>
Dropout from study (n)	<i>Not described</i>
Characteristics of respondents	<i>Not described</i>
Theoretical perspective of the study	<i>Not described</i>
Method for data collection	<i>Focus groups for children and either focus groups or interviews with teachers</i>
Method for analysis	<i>Independent coding and thematic analysis independently by three authors</i>
Method for validation	<i>Consensus</i>
Researchers (n)	<i>N = 6</i>
Researcher background	<i>Not described</i>
Author	<i>Rashedi</i>

Year	2019
Country	USA
Ref	[83]
Study design	Qualitative, part of an RCT
Aim of study	Explore perceptions of children including aspects of yoga that they enjoyed
Setting for the intervention	Six schools in three districts in the Western USA
Population of children Characteristics	Children 1 primary school Age; 4-6 years
Program	8 weeks, 6 times weekly yoga intervention, 18 videotaped lessons 10 min each
Program class	Yoga based
Program deliverer	Classroom teachers
Sampling method	All participants in the RCT
Respondents (n)	n = 154 children
Dropout from study (n)	not described
Characteristics	Ethnicity: Hispanic 43 %, > 50 % were eligible for free or reduced-price lunch
Theoretical perspective of the study	Children are the experts of their experiences and contribute to the research process [84]
Method for data collection	Structured interview with two questions by research assistants after four assessments relating to the RCT
Method for analysis	Grounded theory, analysis conducted independently by the authors
Method for validation	consensus
Researchers (n)	N = 3
Researcher background	Not described
Author	Reindl
Year	2020
Country	USA
Ref	[81]
Study design	Qualitative
Aim of study	Explore insights and perspectives of youth and teachers
Setting for the intervention	15 elementary schools in a county in South Carolina
Population of children Characteristics	Students Not described
Program	Health and Wellness
Program class	Mindfulness and yoga
Program deliverer	Classroom teachers
Sampling method	Convenience sample of three elementary schools

Respondents (n)	40 students and 23 teachers
Dropout from study (n)	Not described
Characteristics	Not described
Theoretical perspective of the study	Not described
Method for data collection	Nine focus groups
Method for analysis	Thematic analysis
Method for validation	Not described
Researchers (n)	4
Researcher background	Not described
Author	Stapp
Year	2019
Country	USA
Ref	[85]
Study design	Qualitative
Aim of study	Explore childrens' perceptions of how yoga influenced their feelings and self-regulations
Setting for the intervention	Two classrooms in one Kindergarten in Mississippi
Population of children Characteristics	Children 3-5 years Not described
Program	Not named
Program class	Mindfulness-based yoga promoting breathing, attention, focus and behavior
Program deliverer	One certified children's yoga instructor
Sampling method	All children were eligible
Respondents (n)	N = 34 children
Dropout from study (n)	Not stated
Characteristics	Not described
Theoretical perspective of the study	Children are the experts and capable of contributing to research [84]
Method for data collection	Several, including group interviews with art materials as support, conducted by the two authors and memos
Method for analysis	Constant comparison
Method for validation	Consensus
Researchers (n)	2
Researcher background	Not described

PAX/GBG-programs (3 studies)

Author	Ashworth
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Year	2019
Country	United Kingdom
Ref	[86]
Study design	Cluster randomized controlled trial
Study protocol	No information
Setting	mainstream, state-maintained primary schools
Inclusion criteria	Child assent and parental opt-out consent
Follow up	Post test (two school years)
Population characteristics	primary schools (children aged 6–7 years) Intervention group: Age, years; Mean (SD): Not stated Sex; (Percent girls): 49-.6 Socioeconomic/educations; Mean (SD): Eligible for FSM 27.4% Control group: Age, years; Mean (SD): Not stated Sex;(Percent girls): 45.1 Socioeconomic/educations; Mean (SD): Eligible for FSM 22.8%
Intervention program	Good Behavior Game (GBG)
Participants (n)	Number of sessions: Not applicable Intensity: 3-5 times a week, 10-30 min per session Duration: 2 years Attendance: participant reach (2015/16: 95.26%; 2016/17: 95.98%), Implementation: fidelity/quality (2015/16: 69.79%; 2016/17: 70.11%) implementation (2015/16: 1.93 games per week) second year (2016/17: 1.55 games per week);
Participants (n)	1560
Drop-outs (n)	150
Program Deliverer	Classroom teachers Training: All teachers attended 2 days of training prior to implementation, in the September or October of their delivery year, with a further day of top-up training a few months later. Trained GBG coaches visited schools approximately once per month throughout the trial.
Comparison program	Common school curriculum (no specific program)
Participants (n)	1524
Drop-outs (n)	165

Program Deliverer	<i>Not applicable</i>
Outcomes	Outcome <i>Measurement:</i> <i>Teacher Observation of Classroom Adaptation</i>
Comments	<i>Additional outcomes:</i>
Risk of bias	<i>Moderate</i>
Author	<i>Smith</i>
Year	<i>2018</i>
Country	<i>USA</i>
Ref	<i>[87]</i>
Study design	<i>Cluster Randomized controll trial</i>
Study protocol	<i>No information</i>
Setting	<i>Afterschool programs in public elementary schools</i>
Inclusion criteria	<i>Agencies offering programs for the age group in the school districts, consent from parents grade 2-5.</i>
Follow up	<i>One school year</i>
Population characteristics	<i>Kindergarten and School children, year 1–5 (Only grade 2-5 evaluations included).</i> Intervention group: <i>Age; Mean (SD): Not stated</i> <i>Sex;(Percent girls): 50.90</i> <i>Socioeconomic/educations; Mean (SD):</i> <i>Less than 25%: 29.70%</i> <i>25~50%: 21.60%</i> <i>51~75% 21.60%</i> <i>More than 75% 27.00%</i> Control group: <i>Age; Mean (SD): Not stated</i> <i>Sex (Percent girls): 49.30</i> <i>Socioeconomic/educations; Mean (SD):</i> <i>Free/reduced lunch eligible</i> <i>Less than 25%: 30.60%</i> <i>25~50%: 27.80%</i> <i>51~75% 19.40%</i> <i>More than 75% 22.20%</i>
Intervention program	<i>PAXIS Institute’s version of the Good Behavior Game (PAX GBG)</i> <i>(Domitrovich et al. 2010; Embry et al. 2010; Kellam et al. 2008).</i>
Program extent	<i>Number of sessions: Not stated</i>

Participants (n) Drop-outs (n) Program Deliverer	<i>Intensity: 1-30 min</i> <i>Duration: 20-24 weeks</i> <i>Attendance: Not stated</i> <i>Implementation: Not stated</i> <i>37 schools, 381 students</i> <i>Not stated</i> <i>Classroom teachers</i> <i>Training: received four trainings sessions in PAX GBG lasting 3–4 h, each comprised of didactic instruction and interactive activities for staff that facilitated opportunities to apply their learning and plan for implementation in their own sites.</i>
Comparison program Participants (n) Drop-outs (n) Program Deliverer	<i>Common school curriculum (no specific program)</i> <i>36 Schools, 430 students</i> <i>Not stated</i> <i>Not applicable</i>
Outcomes	<i>Outcome</i> <u><i>Measurement:</i></u> <i>Emotional symptoms and pro-social behavior</i> <i>Strengths and Difficulties Questionnaire (SDQ; Goodman et al. 2003; Mellor 2004).</i>
Comments	<i>Additional outcomes:</i> <i>Implementation Quality: the Afterschool Climate Assessment (ACA)</i> <i>Afterschool program quality and practices; Promising Practices Rating Scale (PPRS) Vandell et al. (2004)</i> <i>Interactions of caregiving staff with children; Arnett’s Caretaker Interaction Scale (CIS) Developed by Arnett (1989)</i> <i>Afterschool program quality.; Setting Quality Measures (Pianta and Hamre 2009; Yohalem and Wilson-Ahlstrom 2010)</i> <i>Program quality; The Youth Program Quality Assessment (YPQA)</i>
Risk of bias	<i>Moderate</i>
Author	<i>Streimann</i>
Year	<i>2019</i>
Country	<i>Estonia</i>
Ref	<i>[88]</i>
Study design Study protocol Setting Inclusion criteria Follow up	<i>Cluster randomized controlled trial</i> <i>No information</i> <i>Mainstream primary schools</i> <i>All-encompassing opt-in consent form for parents. Minimum of 13 students in classroom.</i> <i>7 and 19 months post baseline</i>

Population characteristics	<p>School children, year 1</p> <p>Intervention group:</p> <p>Age; Mean (SD): 7.1 (0.3)</p> <p>Sex;(Percent girls): 50.8</p> <p>Socioeconomic/educations; Mean (SD):</p> <p>Financial situation of the household</p> <table> <tr> <td>Very good or good</td> <td>70.9%</td> </tr> <tr> <td>Average</td> <td>27.1%</td> </tr> <tr> <td>Bad or very bad</td> <td>2.0%</td> </tr> </table> <p>Control group:</p> <p>Age; Mean (SD): 7.1 (0.3)</p> <p>Sex (Percent girls): 49.4</p> <p>Socioeconomic/educations; Mean (SD):</p> <p>Financial situation of the household</p> <table> <tr> <td>Very good or good</td> <td>65.1%</td> </tr> <tr> <td>Average</td> <td>31.0%</td> </tr> <tr> <td>Bad or very bad</td> <td>3.9%</td> </tr> </table>	Very good or good	70.9%	Average	27.1%	Bad or very bad	2.0%	Very good or good	65.1%	Average	31.0%	Bad or very bad	3.9%
Very good or good	70.9%												
Average	27.1%												
Bad or very bad	2.0%												
Very good or good	65.1%												
Average	31.0%												
Bad or very bad	3.9%												
Intervention program	<i>PAX Good Behavior Game (PAX GBG)</i>												
Program extent	<p>Number of sessions: Not stated</p> <p>Intensity: Daily</p> <p>Duration: 2 school year</p> <p>Attendance: Not stated</p> <p>Implementation: 27.8 (min 15, max 32)</p>												
Participants (n)	362 student, 21 schools												
Drop-outs (n)	<p>Follow up 1: 4</p> <p>Follow up 2: 23</p>												
Program Deliverer	<p>Classroom teachers</p> <p>Training: 3 days of training and were regularly supported by mentors over a 1-year period.</p>												
Comparison program	<i>Common school curriculum (no specific program)</i>												
Participants (n)	381 students, 21 schools												
Drop-outs (n)	<p>Follow up 1: 3</p> <p>Follow up 2: 21</p>												
Program Deliverer	Not applicable												
Outcomes	<p>Outcome</p> <p><u>Measurement:</u></p> <p>Prosocial behavior</p> <p>Strengths and Difficulties Questionnaire (SDQ) (Goodman 1999)</p>												
Comments	<p>Additional outcomes:</p> <p>ADHD; Swanson, Nolan, and Pelham – IV Questionnaire (SNAP-IV) (Bussing et al. 2008).</p>												

Risk of bias	<i>Teacher's self-efficacy; Teachers Sense of Efficacy Scale (TSES) (Tschannen-Moran and Hoy 2001). Classroom behavior; Teaching and Learning International Survey (TALIS) 2013 teacher's questionnaire (Organization for Economic Cooperation and Development 2013)</i> <i>Moderate – Borderline high</i>
Author	<i>O'Keeffe</i>
Year	<i>2021</i>
Country	<i>UK</i>
Ref	<i>[89]</i>
Study design	<i>Cluster randomised controlled trial</i>
Study protocol	<i>SPIRIT (2015) guidelines and is published in the International Journal of Educational Research (O'Keeffe et al., 2017)</i>
Setting	<i>Elementary school</i>
Inclusion criteria	<i>The elementary schools in the sample were targeted to ensure recruitment from schools with a minimum class size of 15, a minimum enrolment of 140 for the year group undertaking the intervention, higher than 47% FSME, and within a 10 - mile radius of Belfast city centre. Consent from teachers, principals and parents.</i>
Follow up	<i>Post intervention, 12 weeks</i>
Population characteristics	<i>School children, age 6-8 years</i> Intervention group: <i>Age, years; Mean (SD):</i> <i>Sex; (Percent girls): 51.9</i> <i>Socioeconomic/educations; Mean (SD):</i> <i>Northern Ireland Multiple Deprivation Measure (NIMDM): 4.54 (0.96)</i> <i>Free school meals (FSME): 61 %</i> Control group: <i>Age, years; Mean (SD):</i> <i>Sex;(Percent girls): 53.2</i> <i>Socioeconomic/educations; Mean (SD):</i> <i>Northern Ireland Multiple Deprivation Measure (NIMDM): 4.50 (0.84)</i> <i>Free school meals (FSME): 67 %</i> Total population: <i>Age, years; Mean (SD): 7.40 (0.30)</i> <i>Sex;(Percent girls): Not stated</i> <i>Socioeconomic/educations; Mean (SD): Not stated</i>
Intervention program	<i>Preschool/Kindergarten version of the PATHS curriculum was used as the primary intervention (Domitrovich, Greenberg, Cortes, & Kusché, 2004)</i>
Program extent	<i>Number of sessions: 36</i> <i>Intensity: 3 times per day for 10 - 40 minutes</i>

Participants (n)	<i>Duration: 12 weeks</i>
Drop-outs (n)	<i>Attendance:</i>
Program Deliverer	<i>Implementation:</i>
	<i>268</i>
	<i>Not stated (Available in complementary information)</i>
	<i>Classroom teachers</i>
	<i>Training: 2-day training and were provided with a PAX GBG kit.</i>
Comparison program	<i>Common school curriculum (no specific program)</i>
Participants (n)	<i>156</i>
Drop-outs (n)	<i>Not stated (Available in complementary information)</i>
Program Deliverer	<i>Not applicable</i>
Outcomes	
Comments	<i>Additional outcomes:</i>
Risk of bias	<i>Moderate</i>

Parental support programs (2 studies)

Author	<i>Jespersen</i>
Year	<i>2021</i>
Country	<i>USA</i>
Ref	<i>[90]</i>
Study design	<i>Randomized Controlled Trial</i>
Study protocol	<i>No information</i>
Setting	<i>Not stated</i>
Inclusion criteria	<i>Informed consent</i>
Follow up	<i>One month prior to program start, program start and end of program</i>
Population characteristics	<p><i>Parents and caregivers of children between ages 0-5 years</i></p> <p>Intervention group:</p> <p><i>Age; Mean (SD): Not stated</i></p> <p><i>Sex;(Percent girls): Not stated</i></p> <p><i>Socioeconomic/educations; Mean (SD): Not stated</i></p> <p>Control group:</p> <p><i>Age; Mean (SD): Not stated</i></p> <p><i>Sex (Percent girls): Not stated</i></p> <p><i>Socioeconomic/educations; Mean (SD): Not stated</i></p> <p>Total population:</p> <p><i>Age; Mean (SD): 2.48 (1.35)</i></p> <p><i>Sex (Percent girls): 40</i></p> <p><i>Socioeconomic/educations; Mean (SD): Forty-six percent reported receiving a high school diploma/GED or less, 81% reported earning less than \$40,000 per year, and 31% reported receiving government assistance in the past year.</i></p>
Intervention program	<i>Active Parenting First Five Years (FFY) program</i>
Program extent	<p><i>Number of sessions: 4</i></p> <p><i>Intensity: 2 h sessions</i></p> <p><i>Duration: 4 consecutive weeks</i></p> <p><i>Attendance:100 % (213 participants but only the 132 who participated in full were included)</i></p> <p><i>Implementation: Not stated</i></p>
Participants (n)	<i>66</i>
Drop-outs (n)	<i>0</i>
Program Deliverer	<p><i>Trained and certified group leader</i></p> <p><i>Training: Trained and certified through Active Parenting. Not further stated.</i></p>
Comparison program	<i>Waitlist (no specific program)</i>

Participants (n)	66
Drop-outs (n)	0
Program Deliverer	Not applicable
Outcomes	<p>Outcome</p> <p><u>Measurement:</u></p> <p>Emotional problems and prosocial behavior</p> <p>Strengths and Difficulties Questionnaire (SDQ; Goodman 1997).</p>
Comments	<p>Additional outcomes:</p> <p>Responsive Parenting; Parenting Young Children self-report parenting measure (McEachern, Dishion, Weaver, Shaw, Wilson, and Gardner 2012)</p> <p>Developmental Knowledge; Infant Mental Health and Development Survey (Huffer et al. 2016).</p> <p>Parenting Efficacy; Parenting Self-Agency Measure (Dumka et al. 1996)</p> <p>Mindfulness; Cognitive and Affective Mindfulness Scale (Feldman, Hayes, Kumar, Greeson, and Laurenceau 2007)</p> <p>Perceived Parenting Stress; Parental Stress Scale (Berry and Jones 1995)</p> <p>Conduct problems and hyperactivity; Strengths and Difficulties Questionnaire (SDQ; Goodman 1997).</p>
Risk of bias	Moderate
Author	Ulfsdotter
Year	2014
Country	Sweden
Ref	[91]
Study design	Randomized waitlist-controlled trial
Study protocol	No information
Setting	Schools, preschools, family centres, community facilities
Inclusion criteria	Parent consent
Follow up	Two weeks after intervention, and 6 months post baseline.
Population characteristics	<p>Parents with children aged 3–12</p> <p>Intervention group:</p> <p>Age of child; Mean (SD): 6.09 (2.6)</p> <p>Sex of child;(Percent girls): 42.7</p> <p>Socioeconomic/educations:</p> <p>Higher education (completed a university education): 55.5%</p> <p>Control group:</p> <p>Age; Mean (SD): 6.26 (2.6)</p> <p>Sex (Percent girls): 45.2</p> <p>Socioeconomic/educations; Mean (SD):</p> <p>Higher education (completed a university education): 60.2%</p>

Intervention program	<i>All children in focus</i>
Program extent	<i>Number of sessions: 4 + 1 offered booster session six-months post baseline</i> <i>Intensity: 2.5 hour structured sessions, every other week</i> <i>Duration: 8 weeks</i> <i>Attendance:</i> <i>Implementation:</i>
Participants (n)	323
Drop-outs (n)	<i>Post intervention: 69</i> <i>6 month follow up: 67</i>
Program Deliverer	<i>Trained ABC Group leaders</i> <i>Training: Not stated</i>
Comparison program	<i>No intervention</i>
Participants (n)	298
Drop-outs (n)	<i>Post intervention: 19</i> <i>6 month follow up: 45</i>
Program Deliverer	<i>Not applicable</i>
Outcomes	<i>Outcome</i> <i>Measurement:</i> <i>Child Health and Development</i> <i>Child Health and Development (CHD)</i>
cComments	<i>Additional outcomes:</i> <i>Parental Self-Efficacy (PSE)</i> <i>Parent's mental health was measured using the General Health Questionnaire (GHQ)</i>
Risk of bias	<i>Moderate</i>

Other programs (21 studies)

Author	<i>Acosta</i>
Year	<i>2019</i>
Country	<i>USA</i>
Ref	<i>[92]</i>
Study design	<i>Randomized controlled trial</i>
Study protocol	<i>No information</i>
Setting	<i>Middle school</i>
Inclusion criteria	<i>Not stated</i>
Follow up	<i>2 years</i>
Population characteristics	<i>School children, year 6–7, age 12-13</i> <i>Intervention group:</i> <i>Age; Mean (SD):</i>

	<p>6th grade (percent of total): 49</p> <p>7th grade (percent of total): 51</p> <p>Sex;(Percent girls): 48</p> <p>Socioeconomic/educations: 48 percent of all students received free and reduced lunches</p> <p>Control group:</p> <p>Age; Mean (SD):</p> <p>6th grade (percent of total): 48</p> <p>7th grade (percent of total): 52</p> <p>Sex (Percent girls): 50</p> <p>Socioeconomic/educations: 48 percent of all students received free and reduced lunches</p>
<p>Intervention program</p> <p>Program extent</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p>Restorative Practices Intervention (Acosta et al. 2016)</p> <p>Number of sessions: Not applicable</p> <p>Intensity: Not applicable</p> <p>Duration: 2 years</p> <p>Attendance: Not applicable</p> <p>Implementation: Not stated</p> <p>7 schools, 2824 total participants (intervention + control)</p> <p>53 participants in total (intervention + control)</p> <p>All school staff that interacts with students</p> <p>Training: Staff receive typically four days of training over two school years, monthly consultation, and ongoing participatory learning groups are used</p>
<p>Comparison program</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p>Common school curriculum (no specific program)</p> <p>6 schools, 2824 total participants (intervention + control)</p> <p>53 participants in total (intervention + control)</p> <p>Not applicable</p>
Outcomes	<p>Outcome</p> <p><u>Measurement:</u></p> <p>Prosocial behavior in assertiveness and empathy</p> <p>The Social Skills Improvement System-Rating Scale (SSISRS; Gresham et al. 2010)</p>
Comments	<p>Additional outcomes:</p> <p>School Climate; Four select scales from the Inventory of School Climate (Brand et al. 2003)</p> <p>School Connectedness; A five-item scale (1 = strongly disagree to 5 = strongly agree) from the National Adolescent Health Study</p> <p>Peer Attachment; A three-item scale developed by Acosta (2003)</p> <p>Bullying Victimization; Three items from the Communities That Care Survey (Arthur et al. 2007)</p> <p>Student Report of Restorative Practices; 17 questions about their experience of restorative practices at school</p>
Risk of bias	Moderate

Author	<i>Berger</i>
Year	<i>2018</i>
Country	<i>Tanzania</i>
Ref	<i>8481</i>
Study design	<i>Randomized controlled trial</i>
Study protocol	<i>No information</i>
Setting	<i>public primary school</i>
Inclusion criteria	<i>Informed consent from guardian</i>
Follow up	<i>End of program (16 weeks), and 8 months</i>
Population characteristics	<p><i>grade 4-6 students (age range 11-14)</i></p> <p>Intervention group:</p> <p><i>Age, years; Mean (SD): 12.44 (0.89)</i></p> <p><i>Sex; (Percent girls): 50.5</i></p> <p><i>Socioeconomic/educations; Mean (SD): Not stated</i></p> <p>Control group:</p> <p><i>Age, years; Mean (SD): 12.48 (0.93)</i></p> <p><i>Sex;(Percent girls): 51.1</i></p> <p><i>Socioeconomic/educations; Mean (SD): Not stated</i></p>
Intervention program	<i>ERSAE-Stress-Prosocal (ESPS) intervention</i>
Program extent	<p><i>Number of sessions: 16 sessions, divided into two lessons each, 32 lessons in total</i></p> <p><i>Intensity: 45 minutes two times a week</i></p> <p><i>Duration: 16 weeks</i></p> <p><i>Attendance: Not stated</i></p> <p><i>Implementation: Each of the three participating homeroom teachers was rated eight times on 6-point Likert-type scales ranging from 0 (not at all, as stipulated in the manual) to 5 (exactly as stipulated). Most assessments were scored either 4 or 5 on all domains and in all classes, and the interrater reliability Kappa value was .76.</i></p>
Participants (n)	<i>105</i>
Drop-outs (n)	<i>10</i>
Program Deliverer	<p><i>Classroom teachers</i></p> <p><i>Training: 4-day workshop (24 hours) by the first author in collaboration with two Tanzanian mental-health professionals</i></p>
Comparison program	<i>Social Study curriculum (SS) active control group</i>
Participants (n)	<i>101</i>
Drop-outs (n)	<i>13</i>
Program Deliverer	<i>Not applicable</i>

Outcomes	<p>Outcome</p> <p><u>Measurement:</u> Functional impairment Child Diagnostic Interview Schedule (social relationships, school performance, family relationships, chores at home, and after-school activities; Lucas et al., 2001)</p> <p><u>Measurement:</u> Somatic complaints Diagnostic Predictive Scales (DISC/DPS; Lucas et al, 2001)</p> <p><u>Measurement:</u> Hyperactivity Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997).</p> <p><u>Measurement:</u> Prosocial behavior Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997).</p> <p><u>Measurement:</u> Social Difficulties Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997).</p> <p><u>Measurement:</u> Social Difficulties Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997).</p>
Comments	<p>Additional outcomes: Academic achievement Disciplinary problems Adversity</p>
Risk of bias	Moderate
Author	Blair
Year	2018
Country	United States
Ref	[93]
Study design	Cluster randomized controlled trial
Study protocol	No information
Setting	Kindergarten

<p>Inclusion criteria</p> <p>Follow up</p> <p>Population characteristics</p>	<p><i>Schools signed a memorandum of understanding. Parents provided written consent for children to participate, and children provided verbal assent.</i></p> <p><i>End of intervention (end of schoolyear) and 1 year after half a schoolyear after end of intervention.</i></p> <p><i>Kindergarten children</i></p> <p>Intervention group:</p> <p><i>Age, years; Mean (SD): Total sample 5 years, 9 months of age (M = 69 months, SD = 4months)</i></p> <p><i>Sex; (Percent girls): 52</i></p> <p><i>Socioeconomic/educations; Mean (SD): Parental Ed %</i></p> <p><i>Less than HS 4</i></p> <p><i>HS degree 10</i></p> <p><i>Associate's 8</i></p> <p><i>Some College 17</i></p> <p><i>Bachelor's 30</i></p> <p><i>Graduate Degree 31</i></p> <p>Control group:</p> <p><i>Age, years; Mean (SD): Total sample 5 years, 9 months of age (M = 69 months, SD = 4months)</i></p> <p><i>Sex;(Percent girls): 51</i></p> <p><i>Socioeconomic/educations; Mean (SD): Parental Ed %</i></p> <p><i>Less than HS 9</i></p> <p><i>HS degree 11</i></p> <p><i>Associate's 8</i></p> <p><i>Some College 20</i></p> <p><i>Bachelor's 27</i></p> <p><i>Graduate Degree 26</i></p>
<p>Intervention program</p> <p>Program extent</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p><i>Tools of the Mind</i></p> <p><i>Number of sessions: Not applicable</i></p> <p><i>Intensity: Every day</i></p> <p><i>Duration: 1 school year</i></p> <p><i>Attendance: Not stated</i></p> <p><i>Implementation: Not stated</i></p> <p><i>418</i></p> <p><i>Not applicable (Children who dropped out where replaced with new children from a wait-list)</i></p> <p><i>Classroom teachers</i></p> <p><i>Training: Teachers and teaching assistants in the Tools of the Mind class-rooms were trained in a 2-year professional development cycle. Year 1 had 4 workshops and year 2 had 3 workshops.</i></p> <p><i>Tools coach trainer to provide in-classroom coaching once every other week.</i></p>

Comparison program	<i>Common school curriculum (no specific program)</i>
Participants (n)	297
Drop-outs (n)	<i>Not applicable (Children who dropped out were replaced with new children from a wait-list)</i>
Program Deliverer	<i>Not applicable</i>
Outcomes	<p>Outcome</p> <p><u>Measurement:</u></p> <p><i>The Teacher Social Competence Rating Scale (TSCRS; Kam & Greenberg, 1998)</i></p>
Comments	<p><i>Additional outcomes:</i></p> <p><i>The Aggression and Conduct Problems score is comprised of the 5 items from the aggressive behavior subscale</i></p> <p><i>The Strengths and Difficulties Questionnaire (SDQ; Goodman, 2001)</i></p> <p><i>The Emotion Regulation Checklist (ERC; Shields & Cicchetti, 1997)</i></p> <p><i>The Student-Teacher Relationship Scale-Short Form (STRS; Pianta, 2001)</i></p> <p><i>The Social Skills Rating System (SSRS; Gresham & Elliott, 1990)</i></p>
Risk of bias	<i>Moderate</i>
Author	<i>Bradshaw</i>
Year	2012
Country	<i>USA</i>
Ref	<i>[94]</i>
Study design	<i>Randomized controlled trial</i>
Study protocol	<i>No information</i>
Setting	<i>Elementary school</i>
Inclusion criteria	<i>Only public elementary schools were eligible for inclusion, and all schools approached about participation agreed to enroll.</i>
Follow up	<i>Fall and spring year 1, spring years 2-4, total of 4 school years.</i>
Population characteristics	<p><i>School children, year 1-5</i></p> <p>Intervention group:</p> <p><i>Age; Mean (SD): Not stated</i></p> <p><i>Sex; (Percent girls): Not stated</i></p> <p><i>Socioeconomic/educations; Mean (SD): Not stated</i></p> <p>Control group:</p> <p><i>Age; Mean (SD): Not stated</i></p> <p><i>Sex (Percent girls): Not stated</i></p> <p><i>Socioeconomic/educations; Mean (SD): Not stated</i></p> <p>Total population:</p> <p><i>Age; Mean (SD): Not stated</i></p> <p><i>Sex (Percent girls): 47.1</i></p> <p><i>Socioeconomic/educations; Mean (SD): 49.4</i></p>

Intervention program	<i>School-Wide Positive Behavioral Interventions and Supports (SWPBIS)</i>
Program extent	<i>Number of sessions: Not applicable</i> <i>Intensity: Not applicable</i> <i>Duration: 1-4 years</i> <i>Attendance:</i> <i>Implementation: 80% (within first year)</i>
Participants (n)	<i>21 Schools, 7241 participants</i>
Drop-outs (n)	<i>0 Schools, 230 participants</i>
Program Deliverer	<i>Classroom teachers, administrators</i> <i>Training: initial 2-day summer training, annual 2-day booster training events, monthly on-site support</i>
Comparison program	<i>Common school curriculum (no specific program)</i>
Participants (n)	<i>16 Schools, 5594 participants</i>
Drop-outs (n)	<i>0 Schools, 174 Participants</i>
Program Deliverer	<i>Not applicable</i>
Outcomes	<i>Outcome</i> <i>Measurement:</i> <i>Pro-social behavior</i> <i>Teacher Observation of Classroom Adaptation—Checklist (TOCA-C)</i> <i>Measurement:</i> <i>Emotion regulation</i> <i>Teacher Observation of Classroom Adaptation—Checklist (TOCA-C)</i>
Comments	<i>Additional outcomes:</i> <i>Concentration problems, Aggressive and disruptive behaviors; Teacher Observation of Classroom Adaptation—Checklist (TOCA-C)</i>
Risk of bias	<i>Moderate</i>
Author	<i>Burckhardt</i>
Year	<i>2015</i>
Country	<i>Australia</i>
Ref	<i>[95]</i>
Study design	<i>Randomized Controlled Trial</i>
Study protocol	
Setting	<i>Non-governmental High school (Anglican girls' schools, Catholic boys' school, Jewish co-educational school)</i>
Inclusion criteria	<i>Parental and student self-consent were obtained for all participants under the age of 16 years, and student self-consent only was obtained for participants aged 16 years and over</i>
Follow up	<i>Post intervention (6 weeks)</i>

Population characteristics	<p>Grades 7 through 12</p> <p>Intervention group:</p> <p>Age, years; Mean (SD): Not stated</p> <p>Sex; (Percent girls): Not stated</p> <p>Socioeconomic/educations; Mean (SD): These four schools were among the highest in terms of socioeconomic status compared to other schools in Australia.</p> <p>Control group:</p> <p>Age, years; Mean (SD): Not stated</p> <p>Sex;(Percent girls): Not stated</p> <p>Socioeconomic/educations; Mean (SD): These four schools were among the highest in terms of socioeconomic status compared to other schools in Australia.</p>
Intervention program Participants (n) Participants (n) Drop-outs (n) Program Deliverer	<p>positive psychology condition, "Bite Back"</p> <p>Number of sessions: Not applicable</p> <p>Intensity: No information</p> <p>Duration: 6 weeks</p> <p>Attendance: Not stated</p> <p>Implementation: Not stated</p> <p>177</p> <p>66</p> <p>Not applicable (Online program)</p> <p>Not applicable</p>
Comparison program Participants (n) Drop-outs (n) Program Deliverer	<p>Common school curriculum (no specific program)</p> <p>161</p> <p>83</p> <p>Not applicable</p>
Outcomes	<p>Outcome</p> <p><u>Measurement:</u></p> <p>Depression, Anxiety, and Stress Scale—Short form (DASS-21)</p> <p><u>Measurement:</u></p> <p>Student Life Satisfaction Scale (SLSS)</p> <p><u>Measurement:</u></p> <p>The Short Warwick-Edinburgh Mental Well-Being Scale (SWEMWBS)</p>
Comments	<p>Additional outcomes:</p>

Risk of bias	<i>Moderate</i>
Author	<i>Fraser</i>
Year	<i>2013</i>
Country	<i>USA</i>
Ref	<i>[96]</i>
Study design	<i>Sequential cohort-control design</i>
Study protocol	<i>No information</i>
Setting	<i>Elementary school</i>
Inclusion criteria	<i>Not stated</i>
Follow up	<i>Post test</i>
Population characteristics	<p><i>School children, third grade</i></p> <p><i>Intervention group 1:</i> <i>Age; Mean (SD): The average age of all students was 8.7 years (0.63)</i> <i>Sex;(Percent girls): 48.0</i> <i>Socioeconomic/educations; Mean (SD): Not stated</i></p> <p><i>Intervention group 2:</i> <i>Age; Mean (SD): The average age of all students was 8.7 years (0.63)</i> <i>Sex;(Percent girls): 48.0</i> <i>Socioeconomic/educations; Mean (SD): Not stated</i></p> <p><i>Control group 1:</i> <i>Age; Mean (SD): The average age of all students was 8.7 years (0.63)</i> <i>Sex (Percent girls): 51.4</i> <i>Socioeconomic/educations; Mean (SD): Not stated</i></p> <p><i>Control group 2:</i> <i>Age; Mean (SD): The average age of all students was 8.7 years (0.63)</i> <i>Sex (Percent girls): 52.9</i> <i>Socioeconomic/educations; Mean (SD): Not stated</i></p>
Intervention program 1	<i>Making Choices</i>
Program extent	<p><i>Number of sessions: Not stated</i></p> <p><i>Intensity: Weekly sessions</i></p> <p><i>Duration: 1 school year</i></p> <p><i>Attendance: Not stated</i></p> <p><i>Implementation: For both intervention groups: sessions (M 22.3, SD 0.7), average of 18.4 (SD 0.8) hours of classroom instruction</i></p>
Participants (n)	<i>192</i>
Drop-outs (n)	<i>19</i>
Program Deliverer	<i>Program specialists</i>

	<i>Training: Not stated</i>
Intervention program 2	<i>Making Choices Plus</i>
Program extent	<i>Included modest supplemental teacher and parent involvement activities.</i> <i>Number of sessions: Not stated</i> <i>Intensity: Weekly sessions</i> <i>Duration: 1 school year</i> <i>Attendance: Not stated</i> <i>Implementation: For both intervention groups: sessions (M 22.3, SD 0.7), average of 18.4 (SD 0.8) hours of classroom instruction</i>
Participants (n)	219
Drop-outs (n)	21
Program Deliverer	<i>Program specialists</i> <i>Training: Not stated</i>
Comparison program 1	<i>Common school curriculum (no specific program)</i>
Participants (n)	192
Drop-outs (n)	15
Program Deliverer	<i>Not applicable</i>
Comparison program 2	<i>Common school curriculum (no specific program)</i>
Participants (n)	148
Drop-outs (n)	8
Program Deliverer	<i>Not applicable</i>
Outcomes	<i>Outcome</i> <u><i>Measurement:</i></u> <i>Social competence</i> <i>The Carolina Child Checklist—Teacher Form (CCC-TF; Macgowan, Nash, & Fraser, 2002)</i>
Comments	<i>Additional outcomes:</i> <i>Overt aggression, teacher perception that a student was liked by classroom peers; The Carolina Child Checklist—Teacher Form (CCC-TF; Macgowan, Nash, & Fraser, 2002)</i>
Risk of bias	<i>Moderate</i>
Author	<i>Freire</i>
Year	2018
Country	<i>Portugal</i>
Ref	[97]
Study design	<i>quasi-experimental controlled design</i>
Study protocol	<i>No information</i>
Setting	<i>School</i>

Inclusion criteria	<i>Parental and participants consent</i>
Follow up	<i>Post intervention (2 months)</i>
Population characteristics	<i>School children aged 13-17</i> Intervention group: <i>Age, years; Mean (SD): 14.36 (0.732)</i> <i>Sex; (Percent girls): 59.5</i> <i>Socioeconomic/educations; Mean (SD): Not stated</i> Control group: <i>Age, years; Mean (SD): 14.28 (0.542)</i> <i>Sex;(Percent girls): 44</i> <i>Socioeconomic/educations; Mean (SD): Not stated</i>
Intervention program	<i>“Challenge: To Be+”</i>
Program extent	<i>Number of sessions: 8</i> <i>Intensity: One session pe week</i> <i>Duration: 2 months</i> <i>Attendance: Not stated</i> <i>Implementation: Not stated</i>
Participants (n)	78
Drop-outs (n)	4
Program Deliverer	<i>Psychology master students</i> <i>Training: not specified (received prior training on “Challenge: To Be+”.)</i>
Comparison program	<i>Common school curriculum (no specific program)</i>
Participants (n)	26
Drop-outs (n)	1
Program Deliverer	<i>Not applicable</i>
Outcomes	
Comments	<i>Additional outcomes:</i> <i>Sociodemographic characteristics, a sociodemographic questionnaire</i> <i>Quantitative measures for program evaluation, Four instruments i.e., self-concept, self-esteem, psychological well-being, and satisfaction with life.</i> <i>Children's self-concept, Piers-Harris children's self-concept scale. (Piers & Harris, 1986; Portuguese validation of Veiga, 1989).</i> <i>Positive and negative feelings about the self, Rosenberg self-esteem scale. (Rosenberg, 1965; Portuguese validation of Romano, Negreiros, & Martins, 2007).</i> <i>Psychological well-being, Psychological well-being scale for adolescents. (Bizarro, 1999).</i> <i>Life satisfaction, isfaction scale. (Diener, Emmons, Larsen, & Griffin, 1985; Portuguese validation of Neto, 1993).</i> <i>Participant evaluation of sessions and program</i>

	<p><i>Qualitative measures for program evaluation</i></p> <p><i>Evaluation of the sessions</i></p> <p><i>Evaluation of the program.</i></p>
Risk of bias	<i>Moderate</i>
Author	<i>Karasimopoulou</i>
Year	<i>2012</i>
Country	<i>Greece</i>
Ref	<i>303</i>
Study design	<i>Cluster randomized controlled study</i>
Study protocol	<i>No information</i>
Setting	<i>Primary school</i>
Inclusion criteria	<i>School and parental consent</i>
Follow up	<i>Post intervention (23 weeks)</i>
Population characteristics	<p><i>School children, aged 10-12</i></p> <p><i>Intervention group:</i></p> <p><i>Age; Mean (SD): Not stated, participants per grade:</i></p> <p><i>5th grade: 73</i></p> <p><i>6th grade: 55</i></p> <p><i>Sex;(Percent girls):</i></p> <p><i>5th grade: 58</i></p> <p><i>6th grade: 49</i></p> <p><i>Socioeconomic/educations; Mean (SD): Not stated</i></p> <p><i>Control group:</i></p> <p><i>Age; Mean (SD): Not stated, participants per grade:</i></p> <p><i>5th grade: 41</i></p> <p><i>6th grade: 117</i></p> <p><i>Sex (Percent girls):</i></p> <p><i>5th grade: 46</i></p> <p><i>6th grade: 50</i></p> <p><i>Socioeconomic/educations; Mean (SD): Not stated</i></p>
Intervention program	<i>'Skills for primary school children' (KE.TH.E.A.-Ministry of Education of Greece. 1998.)</i>
Program extent	<p><i>Number of sessions: 23</i></p> <p><i>Intensity: one 45 min lesson/week</i></p> <p><i>Duration: 23 weeks</i></p> <p><i>Attendance:</i></p> <p><i>Implementation:</i></p>
Participants (n)	<i>128</i>

Drop-outs (n)	0
Program Deliverer	Already trained teachers Training: Not stated
Comparison program	Common school curriculum (no specific program)
Participants (n)	158
Drop-outs (n)	0
Program Deliverer	Not applicable
Outcomes	Outcome <u>Measurement:</u> Psychological well-being, Mood and feelings, Self-perception The Kidscreen Questionnaire (Kim S, Laird M, 1993)
Comments	Additional outcomes: Social acceptance, Social acceptance, Social acceptance, Financial resources, Friends, School environment, Social acceptance, (Kim S, Laird M, 1993)
Risk of bias	Moderate
Author	Katz
Year	2020
Country	Canada
Ref	[98]
Study design	Randomized controlled trial
Study protocol	No information
Setting	Elementary and Secondary school
Inclusion criteria	Parent consent and student assent
Follow up	End of intervention (4 months) and 4 months after intervention ended.
Population characteristics	3rd–12th grade students' Intervention group: Age, years; Mean (SD): 9.6 in secondary and 4.4 for elementary Sex; (Percent girls): 49 Socioeconomic/educations; Mean (SD): Not stated. Control group: Age, years; Mean (SD): 9.4 in secondary and 4.9 for elementary Sex;(Percent girls): 56 Socioeconomic/educations; Mean (SD): Not stated.
Intervention program	SEL - a combined mental health literacy and dialectical behavior therapy skills program
Program extent	Number of sessions: 21 (9 MHL + 12 DBT) Intensity: Not stated Duration: 4 months

Participants (n)	<i>Attendance: Not stated</i>
Drop-outs (n)	<i>Implementation: average of 98 and 99% of lessons in MHL and DBT skills, respectively</i>
Program Deliverer	<i>513</i>
	<i>5</i>
	<i>Classroom teachers</i>
	<i>Training: initial 2-day workshop (10 h total) and two post intervention follow-up half-days (6 h total) to discuss intervention implementation</i>
Comparison program	<i>Common school curriculum (no specific program)</i>
Participants (n)	<i>419</i>
Drop-outs (n)	<i>4</i>
Program Deliverer	<i>Not applicable</i>
Outcomes	
Comments	<i>Additional outcomes: Self-concept, Self-Description Questionnaire–General Subscale (Marsh, Ellis, Parada, Richards, & Heubeck, 2005) Coping Skills, self-efficacy subscale from the Resilience Inventory (Song, 2004)</i>
Risk of bias	<i>Moderate</i>
Author	<i>Landry</i>
Year	<i>2014</i>
Country	<i>USA</i>
Ref	<i>[99]</i>
Study design	<i>Randomized Controlled Trial</i>
Study protocol	<i>No information</i>
Setting	<i>Child care centers</i>
Inclusion criteria	<i>(a) a full-day, 2- and/or 3-year-old classroom and (b) at least 50% of children receiving child care Subsidies, informed consent.</i>
Follow up	<i>Teachers questionnaires about children: Before, ¼, half and ¾ Direct child assessment: 30-45 min three times. 2-3 weeks in to intervention, 2-3 weeks after start, midyear and end-of year.</i>
Population characteristics	<i>Intervention group 1:</i> <i>Age, years; Mean (SD): Not stated Sex; (Percent girls): Not stated Socioeconomic/educations; Mean (SD): Not stated</i> <i>Intervention group 2:</i> <i>Age, years; Mean (SD): Not stated Sex; (Percent girls): Not stated Socioeconomic/educations; Mean (SD): Not stated</i> <i>Control group:</i>

	<p>Age, years; Mean (SD): Not stated</p> <p>Sex;(Percent girls): Not stated</p> <p>Socioeconomic/educations; Mean (SD): Not stated</p> <p>Total population:</p> <p>Age, years; Mean (SD): 2.90 (0.59)</p> <p>Sex;(Percent girls): 51</p> <p>Socioeconomic/educations; Mean (SD): Free/reduced price lunch: 82.5 %</p>
<p>Intervention program 1</p> <p>Program extent</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p>Responsive Early Childhood Curriculum (RECC)</p> <p>Number of sessions: Every day for one school year</p> <p>Intensity: 2 2.5 hours per day</p> <p>Duration: One schoolyear</p> <p>Attendance: Not stated</p> <p>Implementation (1= minimal, 5=high) SD (Mean), Range: 3.40 (0.65); 2.14 – 4.71</p> <p>21 classrooms, 188 children</p> <p>8 classroom, 53 children</p> <p>Classroom teachers</p> <p>Training: A 6-week “priming” training phase, including a 7-hour group training, a few months before the intervention. Two more 7-hour trainings occurred directly before the intervention, and a fourth training session lasting 6 hours about half a year into the intervention. 20 in-class coaching sessions and 19 didactic naptime sessions to help child care teachers enhance instruction.</p>
<p>Intervention program 2</p> <p>Program extent</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p>Responsive Early Childhood Curriculum plus an explicit set of activities to build social– emotional skills (RECC+)</p> <p>Number of sessions: Every day for one school year</p> <p>Intensity: 2 2.5 hours per day</p> <p>Duration: One schoolyear, 9 months</p> <p>Attendance: Not stated</p> <p>Implementation (1= minimal, 5=high) SD (Mean), Range: 3.23 (0.90); 1.00 – 4.86</p> <p>20 classrooms, 180 children</p> <p>7 classrooms, 39</p> <p>Classroom teachers</p> <p>Training: A 6-week “priming” training phase, including a 7-hour group training, a few months before the intervention. Two more 7-hour trainings occurred directly before the intervention, and a fourth training session lasting 6 hours about half a year into the intervention. 20 in-class coaching sessions and 19 didactic naptime sessions to help child care teachers enhance instruction. Additional training and materials to provide explicit instruction related to children’s social and emotional development.</p>
Control group	Common school curriculum (no specific program)

Participants (n)	19 classrooms, 176 children
Drop-outs (n)	10 classrooms, 48 children
Program Deliverer	Classroom teachers Training
Outcomes	
Comments	<p><i>Additional outcomes:</i></p> <p><i>Child care teacher behaviors. The Teacher Behavior Rating Scale (TBRS; Landry et al., 2000)</i></p> <p><i>Child emotional understanding, Knowledge of emotion was assessed with procedures originally designed by Izard (1971). However, Izard's procedures were adapted by Bullock and Russell (1985).</i></p> <p><i>Child social– emotional functioning; Social competence, Social Competence and Behavior Evaluation (SCBE–30; LaFreniere & Dumas, 1996); Child behavioral inhibition due to anxiety, The Behavioral Inhibition Scale–Anxiety (BIS; Carver & White, 1994);</i></p> <p><i>Child cognitive performance: Expressive vocabulary skill,s The Expressive One-Word Picture Vocabulary Test (EOWPVT; Brownell, 2000); Early literacy skills, The Print Knowledge subtest from the Preschool Comprehensive Test of Phonological and Print Processing (Pre-CTOPPP; Lonigan, Wagner, Torgesen, & Rashotte, 2002);Mmathematical knowledge, (CMA–DE; Starkey et al., 2004)</i></p> <p><i>Children's relationship with teacher; Adult–Child Relationship Scale (Pianta, Nimetz, & Bennett, 1997)</i></p>
Risk of bias	Moderate
Author	Larose
Year	2020
Country	Canada
Ref	[100]
Study design	Cluster-randomized controlled trial
Study protocol	No information
Setting	Public Child Care Centers
Inclusion criteria	Schools providing services to a minimum of 25% of children from low-income families and being in low-SES neighborhoods. Written consent to participate in the study were obtained from parents, educators and directors of the schools.
Follow up	End of intervention (one schoolyear, 8 months)
Population characteristics	<p>Preschoolers</p> <p>Intervention group:</p> <p>Age, months; Mean (SD): 54.5 (4.5)</p> <p>Sex; (Percent girls): 47.3</p> <p>Socioeconomic/educations; Mean (SD):</p>

	<p>Low socio-economic status: 15 (10.1%) Middle-high socio-economic status: 133 (89.9%)</p> <p>Control group: Age, months; Mean (SD): 52.8 (5.0) Sex;(Percent girls): 50.9 Socioeconomic/educations; Mean (SD): Low socio-economic status: 28 (18.7%) Middle-high socio-economic status: 122 (81.3%)</p>
Intervention program	<i>The Minipally program</i>
Program extent	<p>Number of sessions: 16 Intensity: one session every 2 weeks Duration: 8 months (1 school year) Attendance: Not stated Implementation: educators performed 12 or more of the 16 workshops during the implementation year</p>
Participants (n)	185
Drop-outs (n)	38
Program Deliverer	<p>Classroom teachers Training: 2-day training delivered by trained professionals(i.e., psychoeducators). 12 h (i.e., 4 × 3-h supervision; week 6, 12, 18 and 24 of the trial) of group supervision</p>
Comparison program	<i>Common school curriculum (no specific program)</i>
Participants (n)	176
Drop-outs (n)	20
Program Deliverer	<i>Not applicable</i>
Outcomes	
Comments	<p>Additional outcomes: Disruptive Behaviors, Social Behavior Questionnaire Prosocial Behaviors, Social Behavior Questionnaire</p>
Risk of bias	<i>Moderate</i>
Author	<i>Murray</i>
Year	<i>2018</i>
Country	<i>United States</i>
Ref	<i>[101]</i>
Study design	<i>Cluster randomized controlled trial</i>
Study protocol	<i>No information</i>
Setting	<i>Rural and semi-rural schools</i>

<p>Inclusion criteria</p> <p>Follow up</p> <p>Population characteristics</p>	<p><i>Parental consent</i></p> <p><i>Teachers: Post intervention (1 school year) and 6 months after end of intervention</i></p> <p><i>Students: Post intervention</i></p> <p><i>Intervention population: Teachers in kindergarten year 2</i></p> <p>Student characteristics</p> <p>Intervention group:</p> <p><i>Kindergarten</i></p> <p><i>Age, years; Mean (SD): 5.2 in kindergarten: 5.2</i></p> <p><i>Sex; (Percent girls): 47.8</i></p> <p><i>Socioeconomic/educations; Mean (SD): 45.26</i></p> <p><i>Year 1</i></p> <p><i>Age, years; Mean (SD): For all students in 1st: 6.2</i></p> <p><i>Sex; (Percent girls): 45.45</i></p> <p><i>Socioeconomic/educations; Mean (SD): 61.76</i></p> <p><i>Year 2</i></p> <p><i>Age, years; Mean (SD): For all students 2nd year: 7.1</i></p> <p><i>Sex; (Percent girls): 49.26</i></p> <p><i>Socioeconomic/educations; Mean (SD): 42.59</i></p> <p>Control group:</p> <p><i>Kindergarten</i></p> <p><i>Age, years; Mean (SD): 5.2 in kindergarten: 5.2</i></p> <p><i>Sex; (Percent girls): 49.5</i></p> <p><i>Socioeconomic/educations; Mean (SD): 48.58</i></p> <p><i>Kindergarten</i></p> <p><i>Age, years; Mean (SD): 5.2 in kindergarten: 6.2</i></p> <p><i>Sex; (Percent girls): 49.32</i></p> <p><i>Socioeconomic/educations; Mean (SD): 53.19</i></p> <p><i>Kindergarten</i></p> <p><i>Age, years; Mean (SD): 5.2 in kindergarten: 7.1</i></p> <p><i>Sex; (Percent girls): 47.76</i></p> <p><i>Socioeconomic/educations; Mean (SD): 44.88</i></p>
<p>Intervention program</p> <p>Program extent</p>	<p><i>Incredible Years® Teacher Classroom Management Program (IY-TCM)</i></p> <p><i>Training aimed at teachers</i></p> <p><i>Number of sessions: 5</i></p> <p><i>Intensity: Full day (7 hours) workshops once per month</i></p> <p><i>Duration: 6 months</i></p>

Participants (n)	<i>Attendance: Not stated</i>
Drop-outs (n)	<i>Implementation: 85.2% of workshop content objectives being met according to group leader self-report (range= 81.1% -95.6% across workshops) on the standard IY fidelity measure.</i>
Program Deliverer	<i>608</i>
	<i>Not stated</i>
	<i>Classroom teachers</i>
	<i>Training</i>
Comparison program	<i>Common school curriculum (no specific program)</i>
Participants (n)	<i>584</i>
Drop-outs (n)	<i>Not stated</i>
Program Deliverer	<i>two group leaders trained by the developer; the majority of groups were led by a PhD clinical psychologist certified as an IY-TCM group leader.</i>
Outcomes	<p>Outcome</p> <p><u>Measurement:</u> <i>Classroom Assessment Scoring System (CLASS;Pianta et al., 2008)</i></p> <p><u>Measurement:</u> <i>Teacher Coder Impressions Inventory (TCI; Webster-Stratton et al., 2001)</i></p> <p><u>Measurement:</u> <i>Teacher Satisfaction Questionnaire (TSQ; Incredible Years®)</i></p> <p><u>Measurement:</u> <i>Revised Teacher Social Competence Scale (R-TSCS; Conduct Problems Prevention Research Group, 1995)</i></p> <p><u>Measurement:</u> <i>Social-behavioral risk</i></p> <p><u>Measurement:</u> <i>Conners' Teacher Rating Scale (CTRS-R:L), DSM-IV Inattention scale (Conners, 2001)</i></p>
Comments	<i>Additional outcomes:</i>
Risk of bias	<i>Moderate</i>
Author	<i>Pannebakker</i>
Year	<i>2019</i>
Country	<i>Netherlands</i>
Ref	<i>[102]</i>

Study design	<i>Cluster randomized controlled study</i>
Study protocol	<i>No information</i>
Setting	<i>Secondary schools</i>
Inclusion criteria	<i>School acceptance</i>
Follow up	<i>1 year and 20 months follow up</i>
Population characteristics	<p><i>Students grades 7 to 9 (age 13-16 years)</i></p> <p><i>Intervention group:</i></p> <p><i>Age; Mean (SD): 14.5 (0.97)</i></p> <p><i>Sex;(Percent girls): 47</i></p> <p><i>Socioeconomic/educations; Mean (%):</i></p> <p><i>Educational level</i></p> <p><i>Lower education: 71</i></p> <p><i>Higher education: 29</i></p> <p><i>Control group:</i></p> <p><i>Age; Mean (SD): 14.1 (0.87)</i></p> <p><i>Sex (Percent girls): 47</i></p> <p><i>Socioeconomic/educations; Mean (%):</i></p> <p><i>Educational level</i></p> <p><i>Lower education: 55</i></p> <p><i>Higher education: 45</i></p>
Intervention program	<i>Skills 4 Life (S4L)</i>
Program extent	<p><i>Number of sessions: 17</i></p> <p><i>Intensity: 1 hour weekly sessions</i></p> <p><i>Duration: one school year</i></p> <p><i>Attendance:</i></p> <p><i>Implementation:</i></p>
Participants (n)	<i>994</i>
Drop-outs (n)	<p><i>1 year (end of intervention): 301</i></p> <p><i>20 months: 380</i></p>
Program Deliverer	<p><i>Classroom teachers</i></p> <p><i>Training: 3-day training course before program start, teachers used an instruction manual</i></p>
Comparison program	<i>Common school curriculum (no specific program)</i>
Participants (n)	<i>541</i>
Drop-outs (n)	<p><i>1 year (end of intervention): 209</i></p> <p><i>20 months: 103</i></p>
Program Deliverer	<i>Not applicable</i>
Outcomes	<p><i>Outcome</i></p> <p><i>Measurement:</i></p>

	<p><i>Self-esteem</i></p> <p><i>Rosenberg Self-Esteem Scale (RSE; 30 items).</i></p> <p><u>Measurement:</u></p> <p><i>Social interaction</i></p> <p><i>Scale for Interpersonal Behavior for Adolescents (SIG-A)</i></p> <p><u>Measurement:</u></p> <p><i>Self-efficacy</i></p> <p><i>Generalized Self-Efficacy Scale (GSES)</i></p>
Comments	<p><i>Additional outcomes:</i></p> <p><i>Student self-report:</i></p> <p><i>Psychological problem behavior; Strengths and Difficulties Questionnaire (SDQ, 25 items)</i></p> <p><i>Depressive symptoms; Beck Depression Inventory (BDI, 22 items)</i></p> <p><i>Teacher reports:</i></p> <p><i>Psychological problem behavior; 25-item Dutch teachers' version of the SDQ</i></p>
Risk of bias	<i>Moderate</i>
Author	<i>Oorloff</i>
Year	<i>2021</i>
Country	<i>Australia</i>
Ref	<i>[103]</i>
Study design	<i>Cluster randomized controlled trial</i>
Study protocol	
Setting	<i>Catholic primary schools</i>
Inclusion criteria	<i>Parental Consent</i>
Follow up	<i>Post intervention (five weeks)</i>
Population characteristics	<p><i>5- to 6-Year-Old</i></p> <p>Intervention group:</p> <p><i>Age, years; Mean (SD): 5.19</i></p> <p><i>Sex; (Percent girls): 66.7</i></p> <p><i>Socioeconomic/educations; Mean (SD):</i></p> <p><i>Financial situation at home</i></p> <p><i>Low income 9.1%</i></p> <p><i>Medium income 66.6%</i></p> <p><i>High income 21.2%</i></p> <p>Control group:</p> <p><i>Age, years; Mean (SD): 5.31</i></p>

	<p><i>Sex;(Percent girls): 35</i></p> <p><i>Socioeconomic/educations; Mean (SD):</i></p> <p><i>Financial situation at home</i></p> <p><i>Low income 7.5%</i></p> <p><i>Medium income 57.5%</i></p> <p><i>High income 32.5%</i></p>
<p>Intervention program</p> <p>Participants (n)</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p><i>Aussie Optimism: I Spy Feelings Program</i></p> <p><i>Number of sessions: 10</i></p> <p><i>Intensity: 40 minutes, 2 lessons per week</i></p> <p><i>Duration: 5 weeks</i></p> <p><i>Attendance: Teachers from two of the three classes reported student attendance. From these teacher reports, 44% of students attended all sessions, 20% attended nine, 85% attended eight, 24% attended seven, and 4% attended six.</i></p> <p><i>Implementation: All intervention teachers completed all ten modules of the program. Across all three teachers and ten modules, there were five times that an activity was missed due to time constraints.</i></p> <p><i>33</i></p> <p><i>3</i></p> <p><i>Classroom teachers</i></p> <p><i>Training: 4-hour training workshop conducted by the program developers.</i></p>
<p>Comparison program</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p><i>Common school curriculum (no specific program)</i></p> <p><i>40</i></p> <p><i>2</i></p> <p><i>Not applicable</i></p>
Outcomes	<p>Outcome</p> <p><u><i>Measurement:</i></u></p> <p><i>emotion regulation (anger, sadness, and worry) coping subscales from the Children's Emotional Management Scale (CEMS; Zeman et al., 2002, 2010)</i></p>
Comments	<i>Additional outcomes:</i>
Risk of bias	<i>Moderate</i>
<p>Author</p> <p>Year</p> <p>Country</p> <p>Ref</p>	<p><i>Proctor</i></p> <p><i>2011</i></p> <p><i>UK</i></p> <p><i>[104]</i></p>
<p>Study design</p> <p>Study protocol</p>	<p><i>Quasi-experimental treatment-control condition design</i></p> <p><i>No information</i></p>

Setting	Secondary schools
Inclusion criteria	Not stated
Follow up	End of term (24 weeks)
Population characteristics	School children, year 8–9 Intervention group: Age; Mean (SD): Not stated Sex;(Percent girls): 54 Socioeconomic/educations; Mean (SD): Not stated Control group: Age; Mean (SD): Not stated Sex (Percent girls): 51 Socioeconomic/educations; Mean (SD): Not stated Total population: Age; Mean (SD): 12.98 (0.50) Sex (Percent girls): 53 Socioeconomic/educations; Mean (SD): Not stated
Intervention program	Strengths Gym
Program extent	Number of sessions: 24 Intensity: Weekly Duration: One school year Attendance: Not stated Implementation: Participating teachers completed on average 23.25% (M = 5.58 lessons, range 3–12 lessons [12.50%–50%], SD =3.51 lessons [14.63%]) of the 24 lessons.
Participants (n)	218
Drop-outs (n)	There was no differential attrition by condition
Program Deliverer	Classroom teachers Training: student booklets; teachers received no further training or coaching beyond the written materials
Comparison program	Common school curriculum (no specific program)
Participants (n)	101
Drop-outs (n)	There was no differential attrition by condition
Program Deliverer	Not applicable
Outcomes	Outcome <u>Measurement:</u> Life satisfaction The Students' Life Satisfaction Scale (SLSS; Huebner, 1991b, c) <u>Measurement:</u>

	<p>Self-esteem</p> <p>Rosenberg Self-Esteem Scale (RSE) Rosenberg, (1965)</p>
Comments	<p>Additional outcomes:</p> <p>Positive and negative affects; The positive and negative affects schedule (PANAS) (Watson, Clark, & Tellegen, 1988)</p>
Risk of bias	Moderate
Author	Reinke
Year	2018
Country	United States
Ref	[105]
Study design	Randomized controlled trial
Study protocol	No information
Setting	Urban schools
Inclusion criteria	All teacher participants and parents of student participants provided written consent, and all students provided written assent to participate in the study.
Follow up	After intervention (end of school year)
Population characteristics	<p>Teachers and children kindergarten to third grade</p> <p>Intervention group:</p> <p>Age, years; Mean (SD): 7.15 (1.22)</p> <p>Sex; (Percent girls): 50</p> <p>Socioeconomic/educations; Mean (SD): % free or reduced lunch 60</p> <p>Control group:</p> <p>Age, years; Mean (SD): 7.06 (1.09)</p> <p>Sex;(Percent girls): 48</p> <p>Socioeconomic/educations; Mean (SD): % free or reduced lunch 61</p>
Intervention program	Incredible Years Teacher Classroom Management Program (IY TCM)
Program extent	<p>Program aimed at teachers</p> <p>Number of sessions: three sets of two full-day group trainings of two full-day group trainings</p> <p>Intensity: up to 1 h on a weekly basis.</p> <p>Duration: 1 school year</p> <p>Attendance: The overall mean time spent with a teacher by the coach outside of observing in the classroom was 28 min (range = 4 to 120 min).</p> <p>Implementation: The overall mean number of coaching sessions for teachers in the sample was 7 (range = 3–12).</p>
Participants (n)	<p>Teachers: 53</p> <p>Students: 900</p>

Drop-outs (n)	<i>Teachers: 0</i> <i>Students: 67</i>
Program Deliverer	<i>Classroom teachers</i> <i>Training: three sets of two full-day group trainings</i>
Comparison program	<i>Common school curriculum (no specific program)</i>
Participants (n)	<i>Teachers: 52</i> <i>Students: 917</i>
Drop-outs (n)	<i>Teachers: 0</i> <i>Students: 70</i>
Program Deliverer	<i>Not applicable</i>
Outcomes	<p>Outcome</p> <p><u>Measurement:</u> <i>The Teacher Observation of Classroom Adaptation-Checklist (TOCA-C; Koth et al. 2009)</i></p> <p><u>Measurement:</u> <i>Teacher Report of Child Social Behavior and Academics The Teacher Observation of Classroom Adaptation-Checklist (TOCA-C; Koth et al. 2009)</i></p> <p><u>Measurement:</u> <i>Revised Social Competence Scale-Teacher version (TCOMP; Gifford-Smith 2000)</i></p> <p><u>Measurement:</u> <i>Woodcock-Johnson III Normative Update Tests of Achievement (WJ III ACH; Woodcock, McGrew, & Mather 2007)</i></p>
Comments	<i>Additional outcomes:</i>
Risk of bias	<i>Moderate</i>
Author	<i>Ruttledge</i>
Year	<i>2016</i>
Country	<i>Ireland</i>
Ref	<i>[106]</i>
Study design	<i>Randomized controlled trial</i>
Study protocol	<i>No information</i>
Setting	<i>Primary schools</i>
Inclusion criteria	<i>Not stated</i>
Follow up	<i>At 3 months and 6 months</i>
Population characteristics	<i>School children, age 9-13</i> Intervention group:

	<p>Age; Mean (SD): 10.88 (0.70)</p> <p>Sex;(Percent girls): 48</p> <p>Socioeconomic/educations; Mean (SD):</p> <p>School designated socioeconomic disadvantaged (DEIS) status:</p> <p>Non-DEIS 226</p> <p>DEIS 107 (40%)</p> <p>Control group:</p> <p>Age; Mean (SD): 10.79 (0.70)</p> <p>Sex (Percent girls): 54</p> <p>Socioeconomic/educations; Mean (SD):</p> <p>School designated socioeconomic disadvantaged (DEIS) status:</p> <p>School Status:</p> <p>Non-DEIS 224</p> <p>DEIS 152 (47%)</p>
<p>Intervention program</p> <p>Program extent</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p>The FRIENDS for Life programme</p> <p>Number of sessions: 10</p> <p>Intensity: Weekly</p> <p>Duration: Three months</p> <p>Attendance: Not stated</p> <p>Implementation: All teachers returned the fidelity checklist confirming that they had delivered all 10 sessions of the programme in sequence and covered the key components.</p> <p>333</p> <p>32</p> <p>Classroom teachers</p> <p>Training: two-day training</p>
<p>Comparison program</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p>Common school curriculum (no specific program)</p> <p>376</p> <p>39</p> <p>Not applicable</p>
<p>Outcomes</p>	<p>Outcome</p> <p><u>Measurement:</u></p> <p>Coping effectiveness</p> <p>The Coping Efficacy Scale (CES)</p> <p><u>Measurement:</u></p> <p>Self connectedness scale</p> <p>School Connectedness Scale (SCS)The SCS (Resnick et al., 1997)</p>
<p>Comments</p>	<p>Additional outcomes:</p> <p>A number of special schools for children with significant emotional and behavioral difficulties</p>

	(EBD) were also included.of the 27 schools, 13
Risk of bias	<p><i>Aditional outcomes</i></p> <p><i>Anxiety; Spence Children’s Anxiety Scales (SCAS)</i></p> <p><i>Moderate</i></p>
Author	<i>Schonert-Reichl</i>
Year	<i>2012</i>
Country	<i>Canada</i>
Ref	<i>[107]</i>
Study design	<i>Quasi-experimental controlled trial</i>
Study protocol	<i>No information</i>
Setting	<i>Elementary schools</i>
Inclusion criteria	<i>Parental consent</i>
Follow up	<i>2-5 weeks post intervention (8 months)</i>
Population characteristics	<p><i>School children, year 4–7</i></p> <p><i>Intervention group:</i></p> <p><i>Age; Mean (SD): Not stated</i></p> <p><i>Sex;(Percent girls): Not stated</i></p> <p><i>Socioeconomic/educations; Mean (SD): Not stated</i></p> <p><i>Control group:</i></p> <p><i>Age; Mean (SD): Not stated</i></p> <p><i>Sex (Percent girls): Not stated</i></p> <p><i>Socioeconomic/educations; Mean (SD): Not stated</i></p> <p><i>Total population:</i></p> <p><i>Age; Mean (SD): 10.6 (0.87)</i></p> <p><i>Sex (Percent girls): 48</i></p> <p><i>Socioeconomic/educations; Mean (SD): Not stated</i></p>
Intervention program	<i>Roots of Empathy, ROE, (Gordon, 2005)</i>
Program extent	<p><i>Number of sessions: 26</i></p> <p><i>Intensity: 30-45 min</i></p> <p><i>Duration: 8 months</i></p> <p><i>Attendance: Not stated</i></p> <p><i>Implementation: the average number of ROE lessons taught was 25.21 (SD = 1.25) out of the total 26 lessons (range: 23 to 26 lessons), 96%.</i></p> <p><i>Overall, ROE instructors reported implementing, on average, 95% (range from 89% to 100%) of the lesson plan content across the 26 lessons.</i></p>
Participants (n)	<i>306</i>
Drop-outs (n)	<i>34</i>

Program Deliverer	ROE instructors Training: Not stated
Comparison program	Common school curriculum (no specific program)
Participants (n)	279
Drop-outs (n)	19
Program Deliverer	Not applicable
Outcomes	<p>Outcome</p> <p><u>Measurement:</u></p> <p>Prosocial behavior, Teacher rated</p> <p>The Child Behavior Scale (CBS; Ladd & Profilet, 1996)</p> <p><u>Baseline, mean (SD)</u></p> <p><u>Measurement:</u></p> <p>Prosocial behavior, Peer rated</p> <p>Peer nomination and behavioral assessment method</p>
Comments	<p>Additional Outcomes:</p> <p>Assessment of Implementation; monthly diary with number of lessons, percentage of curricular components completed, and a rating of 1-5 of student engagement</p> <p>Understanding of Infant Crying; infant facial expression of emotion (IFEEL) pictures (Emde, Osofsky, & Butterfield, 1993; modified by Catherine & Schonert-Reichl, 2011)</p> <p>Empathic Concern and Perspective Taking; Interpersonal Reactivity Index (IRI; Davis, 1983)</p>
Risk of bias	Moderate
Author	Shum
Year	2019
Country	China (Hong Kong)
Ref	[108]
Study design	Quasi-experimental design
Study protocol	No information
Setting	Primary school
Inclusion criteria	An initial consent was obtained from the principal of each school to invite the students, their parents, and teachers to participate in this study.
Follow up	2 weeks post end of intervention and 6 months after completion of the program.
Population characteristics	<p>Primary 4 and 5 students aged 8 to 12 years</p> <p>Intervention group:</p> <p>Age, years; Mean (SD): 9.53 (0.717)</p> <p>Sex; (Percent girls): Not stated, but 1 out of 4 participation schools was a girl's school</p> <p>Socioeconomic/educations; Mean (SD): Not stated</p> <p>Control group:</p>

	<p>Age, years; Mean (SD): 9.48 (0.64)</p> <p>Sex;(Percent girls): Not stated, but 1 out of 4 participation schools was a girl's school</p> <p>Socioeconomic/educations; Mean (SD):Not stated</p>
<p>Intervention program</p> <p>Program extent</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p><i>The Adventures of DoReMiFa</i></p> <p><i>Number of sessions: 11 digital game-based lessons and 8 classroom teachings</i></p> <p><i>Intensity: 25-60 min per lesson</i></p> <p><i>Duration:</i></p> <p><i>Attendance: Those students who have reached the completion rate of 50% or above were in the high completion group, whereas those below 50% were in the low completion group.</i></p> <p><i>Implementation:</i></p> <p>264</p> <p>T1: 15</p> <p>T2: 43</p> <p><i>graduates or students of a master's degree in Counseling or Counseling and Clinical Psychology or were qualified teachers</i></p> <p><i>Training: 8-hour preservice training</i></p>
<p>Comparison program</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p><i>Common school curriculum (no specific program)</i></p> <p>195</p> <p>T1: 42</p> <p>T2: 82</p> <p><i>Not applicable</i></p>
Outcomes	
<p>Comments</p> <p>Risk of bias</p>	<p><i>Additional outcomes:</i></p> <p><i>Anxiety, The Screen for Child Anxiety–Related Emotional Disorders (SCARED)</i></p> <p><i>Mental Health, Mental Health Knowledge Checklist</i></p> <p><i>Negative self-statements, The original Children's Automatic Thought Scale-Negative/Positive (CATS-N/P)</i></p> <p><i>Perspective-taking behaviors, Interpersonal Reactivity Index (IRI)</i></p> <p><i>Self-esteem, The Rosenberg Self-Esteem Scale (RSES)</i></p> <p><i>Moderate</i></p>
<p>Author</p> <p>Year</p> <p>Country</p> <p>Ref</p>	<p><i>Sørli</i></p> <p>2007</p> <p>Norway</p> <p>[109]</p>
<p>Study design</p> <p>Study protocol</p> <p>Setting</p>	<p><i>Quasiexperimental design</i></p> <p><i>No information</i></p> <p><i>Elementary school</i></p>

<p>Inclusion criteria</p> <p>Follow up</p> <p>Population characteristics</p>	<p>a) an explicit goal to reduce problem behavior and to promote positive behavior and a supportive learning environment; (b) agreement to participate in the programme activities by at least 80% of the staff; (c) the school leader was willing to take part in programme implementation; (d) explicit support and involvement from parents, school administration, and the school psychological services; (e) willingness to use necessary time, reallocate resources, and prioritize 474 M-A. Sørli and T. Ogden PALS for at least three years; and (f) willingness to participate in the outcome evaluation study.</p> <p>Two years after implementation</p> <p>School children, year 1–7</p> <p>Intervention group:</p> <p>Age; Mean (SD): Not stated</p> <p>Sex;(Percent girls): Not stated</p> <p>Socioeconomic/educations; Mean (SD): Not stated</p> <p>Control group:</p> <p>Age; Mean (SD): Not stated</p> <p>Sex (Percent girls): Not stated</p> <p>Socioeconomic/educations; Mean (SD): Not stated</p> <p>Total population:</p> <p>Age; Mean (SD): Not stated</p> <p>Sex (Percent girls): 53.5</p> <p>Socioeconomic/educations; Mean (SD): Not stated</p>
<p>Intervention program</p> <p>Program extent</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p>“Positive behavior, interactions and learning environment in school” (PALS).</p> <p>Number of sessions:</p> <p>Intensity:</p> <p>Duration: Attendance: Implementation:</p> <p>4 Schools, 363 students</p> <p>In total 94% among students (735 post-data of 780 pre-data)</p> <p>Classroom teachers</p> <p>Training: seminars on the theoretical and empirical basis of PALS, monthly training and supervision sessions</p>
<p>Comparison program</p> <p>Participants (n)</p> <p>Drop-outs (n)</p> <p>Program Deliverer</p>	<p>The C-schools had initiated alternative projects to promote positive student behavior and/or improve learning conditions. Two schools implemented parts of the Second Step Programme (Committee of Children, 1997); a third school ran a combined organisational and teaching restructuring project, while the last school continued an ongoing school-wide socio-cultural learning project.</p> <p>4 Schools, 372 students</p> <p>In total 94% among students (735 post-data of 780 pre-data)</p> <p>Not applicable</p>
<p>Outcomes</p>	<p>Outcome</p>

	<p><u>Measurement:</u></p> <p><i>Social competence</i></p> <p><i>Social Skills Rating System (SSRS), which is a well-validated assessment tool (Elliott, Gresham, Freeman, & McCloskey, 1989)</i></p>
<p>Comments</p>	<p><i>Additional outcomes:</i></p> <p><i>Behavior problems. “Problem behavior in the school environment last week”, “Problem behavior in the classroom last week”, Grey and Sime (1989)</i></p> <p><i>Teacher collective efficacy. Collective Efficacy Scale (CES), developed by Goddard and colleagues (2000)</i></p> <p><i>Learning environment. Classroom Climate Scale (Sørli & Nordahl, 1998).</i></p> <p><i>Programme implementation quality. Total Implementation Quality Scale (TIQS)</i></p> <p><i>Teacher collective efficacy. The Collective Efficacy Scale (CES), developed by Goddard and colleagues (2000).</i></p>
<p>Risk of bias</p>	<p><i>Moderate</i></p>

Health economic studies (2 studies)

Author	<i>Ulfsdotter et al.</i>
Year	2015
Reference	[110]
Country	Sweden
Study design	RCT-based CEA
Population	Program offered to 621 parents with children aged 3-12 years. Intervention group: Mean (SD) age of child 6.09 (2.6) years and parent 38.09 (5.5) years. 57.3% boys and 75.1% girls, respectively. Control group: Mean (SD) age of child 6.26 (2.6) years and parent 38.38 (5.4) years. 56.8% boys and 71.3% girls, respectively*
Setting	Most common settings were schools and preschools. Family centres and other community facilities were also used
Perspective	Societal
Intervention	The universal parenting program "All Children in Focus" (the ABC program) (n=317). The ABC program consisted of four sessions and a booster session offered after 3-4 months. Each session was given to a group with on average seven parents and lasted 2.5 hours
vs control	vs Waiting list (n=296)
Incremental cost	<p><u>Setup costs</u> including training in the program and time spent on training for group leaders:</p> <ul style="list-style-type: none"> • Cost per group leader: 1933 EUR • Cost per ABC group: 386.6 EUR • Cost per parent: 53.7 EUR <p><u>Operating costs</u> were divided into municipal costs and societal costs. Municipal costs included group leader time spent on recruiting patients and holding session, and cost of venues, materials, and refreshments. Societal costs included parents' time in sessions and travel costs.</p> <ul style="list-style-type: none"> • Cost per ABC group: 1962.4 EUR • Cost per parent: 272.6 EUR <p><u>Total costs</u></p> <ul style="list-style-type: none"> • Cost per ABC group: 2349.4 EUR • Cost per parent: 326.3 EUR <p>Costs reported in EUR year 2014. No measures of variation reported.</p>

Incremental effect	<p><i>Incremental QALYs for children over the six-month measurement period: 0.0042. Measured with a parent proxy Visual Analog Scale (VAS).</i></p> <p><i>Incremental QALYs for parents over the six-month measurement period: 0.0027. Assessed with the General Health Questionnaire-12 (GHQ-12) and converted to utility weights by Serrano-Aguilar et al. 2009 [111]</i></p> <p><i>Both effect measures showed non-significant between-group changes</i></p>
ICER	<p><i>Incremental cost per parent/ (Incremental QALYs for children + Incremental QALYs for parent) = 326.3/ (0.0042+0.0027) = <u>€47 290 per QALY gained</u>. The probability of the base case scenario being cost-effective at the threshold value €55 000 was 50.8 percent</i></p> <p><i>Alternative scenario excluding QALYs for parent:</i> 326.3/0.0042=€77 690 per QALY gained</p>
Study quality and transferability**	<p><i>Moderate quality</i></p> <p><i>High transferability</i></p>
Further information	<ul style="list-style-type: none"> <i>The main trial results are reported in Ulfsdotter et al. 2014 [91]</i>
Comments	<ul style="list-style-type: none"> <i>The alternative scenario excluding QALYs for parents were calculated by SBU</i>

ABC-program = All Children in Focus program; **CEA** = cost-effectiveness analysis; **CI** = Confidence interval; **EUR** = Euro; **ICER** = Incremental cost-effectiveness ratio; **QALY** = Quality adjusted life year; **RCT** = Randomized controlled trial; **SD** = Standard deviation

*Information from Ulfsdotter et al. 2014 [91].

**Assessed using SBU's checklist for trial-based health economic studies (Appendix 2)

Author	<i>Turner et al.</i>
Year	<i>2020</i>
Reference	<i>[31]</i>
Country	<i>United Kingdom</i>
Study design	<i>RCT-based CUA. 2-years' time horizon.</i>
Population	<i>Children aged 7–9 years (n=5 218). Intervention group: 49.9% female. Control group: 53% female</i>
Setting	<i>Primary schools</i>
Perspective	<i>UK Health service</i>

Intervention	<i>PATHS was implemented and delivered by class teachers as part of the general classroom timetable. PATHS lessons lasted 30–40 min and were designed to be delivered twice weekly throughout the school year. Curriculum packs contained an average of 40 lessons (n=2676)</i>
vs control	<i>vs Usual practice (n=2542)</i>
Incremental cost	<i>Incremental total non-recurrent costs: 39,323 GBP Incremental total recurrent costs: 48,550 GBP Incremental total costs: 87,873 GBP Incremental total cost per child 32.01 GBP Cost reported in GBP year 2018/2019</i>
Incremental effect	<i>Incremental QALYs: Unadjusted 0.013 ± 0.005 Adjusted mean QALY difference 0.0019 (95% CI 0.0009-0.0029). Adjusted for baseline HRQoL and child- and school level covariates. The Child Health Utility Nine-Dimension (CHU-9D) was used [112]</i>
ICER	<i>Based on per child cost: £16 847 per QALY</i>
Study quality and transferability*	<i>Moderate quality Moderate transferability</i>
Further information Comments	<ul style="list-style-type: none"> • <i>The main trial results are reported in Humphrey et al. 2018 [30]</i> • <i>A sensitive analysis including teacher salary costs had a substantial impact on the incremental costs. The costs increased to over 200 GBP per child and the probability of PATHS being cost effective decreased to 0% at the conventional UK thresholds of WTP for a QALY</i> • <i>Preference weights derived using the standard gamble method in a sample of UK adults were used to transform responses to the CHU-9D to utility values ranging from 0.33 to 1 (perfect health), with a value of 0 equivalent to death [112]</i>

CUA = cost-utility analysis; **GBP** = Great British Pound; **HRQoL** = Health-related quality of life; **ICER** = Incremental cost-effectiveness ratio; **PATHS** = Promoting Alternative Thinking Strategies; **QALY** = Quality adjusted life years; **RCT** = Randomized Controlled Trial; **WTP** = Willingness-to-pay

*Assessed using SBU's checklist for trial-based health economic studies (Appendix 2).

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