



EARLY  
INTERVENTION  
FOUNDATION

# Adolescent mental health

## A systematic review on the effectiveness of school-based interventions

**Appendices to the report**

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July 2021

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## About this document

This document provides appendices to the EIF report *Adolescent mental health: A systematic review on the effectiveness of school-based interventions*, published in July 2021.

These appendices should not be read without referring to the main report for background and a summary of findings.

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## About EIF

The Early Intervention Foundation (EIF) is an independent charity established in 2013 to champion and support the use of effective early intervention to improve the lives of children and young people at risk of experiencing poor outcomes.

Effective early intervention works to prevent problems occurring, or to tackle them head-on when they do, before problems get worse. It also helps to foster a whole set of personal strengths and skills that prepare a child for adult life.

EIF is a research charity, focused on promoting and enabling an evidence-based approach to early intervention. Our work focuses on the developmental issues that can arise during a child's life, from birth to the age of 18, including their physical, cognitive, behavioural and social and emotional development. As a result, our work covers a wide range of policy and service areas, including health, education, families and policing.

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THE WHAT WORKS NETWORK



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The aim of this report is to support policymakers, practitioners and commissioners to make informed choices. We have reviewed data from authoritative sources but this analysis must be seen as a supplement to, rather than a substitute for, professional judgment. The What Works Network is not responsible for, and cannot guarantee the accuracy of, any analysis produced or cited herein.

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To download the full report, visit: <https://www.eif.org.uk/report/adolescent-mental-health-a-systematic-review-on-the-effectiveness-of-school-based-interventions>

## Appendix A.1: Promotion

### Notes

- See page 120 for a detailed glossary and list of abbreviations used in these tables, and page 121 for full references for listed reviews and studies.
- Where these tables mention significant effects, this refers to the intervention group experiencing a significantly larger effect than the control group in the desirable direction.
- Significant effects can be improvements in positive outcomes (such as wellbeing or resilience) or reductions in symptoms (such as depression or anxiety). Where the intervention group experienced significantly worse outcomes than the control group, these are listed as 'adverse' effects.
- Effects (for meta-analyses: pooled effects) were deemed significant where  $p$  was less or equal than 0.05 – regardless of the significance level applied by individual studies.

## Table of systematic reviews

### Systematic reviews of mental health promotion and wellbeing interventions

Reference	Analysis	Quality assessment rating	Inclusion criteria 1 Population/age range 2 Interventions 3 Study design 4 Outcomes assessed	Exclusion criteria	Time frame	Number of studies included in review	Results
<b>Baños et al., 2017</b> Online positive interventions to promote wellbeing and resilience in the adolescent population: a narrative review	Narrative synthesis	Moderate	1 Adolescents 2 Universal online positive psychology interventions 3 RCTs 4 Wellbeing, resilience	• Review articles • Non-English papers	Up to April 2016	9	No pooled effect size provided: • Overall limited evidence • What evidence there is shows that digital positive psychology interventions had limited effects, in particular for at-risk groups.
<b>Chiş &amp; Rusu, 2019</b> School-based interventions for developing emotional abilities in adolescents: a systematic review	Narrative synthesis	Weak	1 11–19 years 2 School-based emotional intelligence interventions 3 RCTs, QEDs 4 Emotional abilities	• Non-English papers • Non-mainstream schools	2000–2018	13	No pooled effect size provided: • Emotional abilities training is related to positive educational, behavioural and developmental outcomes.

Systematic reviews of mental health promotion and wellbeing interventions (cont.)

Reference	Analysis	Quality assessment rating	Inclusion criteria 1 Population/age range 2 Interventions 3 Study design 4 Outcomes assessed	Exclusion criteria	Time frame	Number of studies included in review	Results
<b>Cilar et al., 2020</b> Effectiveness of school-based mental wellbeing interventions among adolescents: a systematic review	Narrative synthesis	Moderate	<ol style="list-style-type: none"> <li>1 10–19 years</li> <li>2 School-based interventions for developing young people’s mental health and wellbeing</li> <li>3 Any research design</li> <li>4 Mental wellbeing</li> </ol>	<ul style="list-style-type: none"> <li>• Non-English/ German/ Slovenian/ Croatian papers</li> <li>• Treatment for young people with clinical disorders</li> </ul>	Up to March 2019	57	<p>No pooled effect size provided:</p> <ul style="list-style-type: none"> <li>• School-based interventions can improve wellbeing although a large proportion of interventions had no effects on one, several or all outcomes.</li> </ul>
<b>Curran &amp; Wexler, 2017</b> School-based positive youth development: a systematic review of the literature	Narrative synthesis	Weak	<ol style="list-style-type: none"> <li>1 11–18 years</li> <li>2 School-based positive youth development (PYD)</li> <li>3 Any research design</li> <li>4 Any outcome</li> </ol>	No exclusion criteria reported	‘After 2000’, unclear to which date, possibly 2014/15	24	<p>No pooled effect size provided:</p> <ul style="list-style-type: none"> <li>• Effect sizes were largest in classroom based PYD interventions and effects stronger in those adolescents at risk of antisocial behaviour.</li> </ul>
<b>Grant, 2012</b> A meta-analysis of school-based interventions for middle schoolers: academic, behavioural and social outcomes	Meta-analysis	Moderate	<ol style="list-style-type: none"> <li>1 10–14-year-old US residents</li> <li>2 School-based interventions targeting academic, behavioural or social outcomes</li> <li>3 RCTs, QEDs</li> <li>4 Academic, behavioural or social outcomes</li> </ol>	<ul style="list-style-type: none"> <li>• After school settings</li> <li>• Residential settings for specialised populations</li> </ul>	Not reported	45 (narrative synthesis) 38 (meta-analysis)	<ul style="list-style-type: none"> <li>• Weighted mean effect size across academic, behavioural, and social outcomes: <math>d=0.178</math> (<math>I^2=81.93\%</math>).</li> <li>• 13 interventions were universal, 7 targeted selective, and 18 targeted indicated.</li> <li>• Samples: Mostly African American or Black (<math>n=13</math>), Caucasian (<math>n=11</math>) or diverse (<math>n=18</math>); 7 studies were conducted in schools where &gt;76% of students were eligible for FSM; 15 studies involved at-risk students.</li> </ul>

Systematic reviews of mental health promotion and wellbeing interventions (cont.)

Reference	Analysis	Quality assessment rating	Inclusion criteria 1 Population/age range 2 Interventions 3 Study design 4 Outcomes assessed	Exclusion criteria	Time frame	Number of studies included in review	Results
<p><b>Kuosmanen, Clarke &amp; Barry, 2019</b></p> <p>Promoting adolescents' mental health and wellbeing: evidence synthesis</p>	Narrative synthesis	Moderate	<p>1 10–19 years</p> <p>2 Interventions that promote wellbeing, or prevent behavioural or emotional problems, or suicide and self-harm</p> <p>3 RCTs, QEDs</p> <p>4 Wellbeing or mental health outcomes</p>	<ul style="list-style-type: none"> <li>• Treatment interventions</li> </ul>	2005–Sept 2017	66	<p>No pooled effect size provided:</p> <ul style="list-style-type: none"> <li>• Evidence of effectiveness for (i) universal school-based interventions that promote the development of social and emotional skills, (ii) universal prevention programmes for problems such as bullying and anxiety, (iii) targeted interventions to prevent depression.</li> <li>• Limited evidence of effective suicide prevention, digital and community-based interventions.</li> </ul>
<p><b>McKeering &amp; Hwang, 2019</b></p> <p>A systematic review of mindfulness-based school interventions with early adolescents</p>	Narrative synthesis	Strong	<p>1 11–14 years</p> <p>2 School-based universal mindfulness-based interventions</p> <p>3 Any research design</p> <p>4 Any outcome</p>	<ul style="list-style-type: none"> <li>• Non-English papers</li> <li>• Non-peer reviewed literature; targeted interventions</li> </ul>	Up to October 2017	13	<p>No pooled effect size provided:</p> <ul style="list-style-type: none"> <li>• Inconclusive evidence of effectiveness.</li> <li>• Detailed qualitative discussion of factors that facilitate (teachers' ability to embody mindfulness, collaboration among teachers, support from administrators and parents, relaxing physical environment, students' willingness to learn) and hinder successful implementation (time pressure, crowded curriculum content, students' disengagement).</li> </ul>
<p><b>Patafio et al., 2021</b></p> <p>A systematic mapping review of interventions to improve adolescent mental health literacy, attitudes and behaviours</p>	Narrative synthesis	Moderate	<p>1 12–18 years</p> <p>2 Interventions that aim to improve mental health literacy, attitudes and/or behaviours</p> <p>3 RCTs, QEDs</p> <p>4 Mental health literacy, attitudes towards mental illness or the seeking of mental health treatment, and/or mental health behaviours</p>	No exclusion criteria reported	Up to February 2020	140	<p>No pooled effect size provided:</p> <ul style="list-style-type: none"> <li>• Intervention effectiveness varied across outcomes measured, setting, and control group usage, with mental health knowledge improving most frequently; common limitations included no long-term follow-up or control group inclusion.</li> </ul>

Systematic reviews of mental health promotion and wellbeing interventions (cont.)

Reference	Analysis	Quality assessment rating	Inclusion criteria 1 Population/age range 2 Interventions 3 Study design 4 Outcomes assessed	Exclusion criteria	Time frame	Number of studies included in review	Results
<p><b>Seedaket et al., 2020</b></p> <p>Improving mental health literacy in adolescents: systematic review of supporting intervention studies</p>	Narrative synthesis	Moderate	<p>1 10–19 years</p> <p>2 Interventions to improve mental health literacy</p> <p>3 Any research design</p> <p>4 Mental health literacy outcomes</p>	No exclusion criteria reported	2009–Dec 2019	7	<p>No pooled effect size provided:</p> <ul style="list-style-type: none"> <li>Interventions most effective in improving young people’s mental health knowledge; followed by attitudes or stigma; only one of 4 studies that measured help-seeking reported a positive outcome for this mental health literacy component.</li> </ul>
<p><b>Tejada-Gallardo et al., 2020</b></p> <p>Effects of school-based multicomponent positive psychology interventions on well-being and distress in adolescents: a systematic review and meta-analysis</p>	Meta-analysis	Moderate	<p>1 10–18 years</p> <p>2 Universal positive psychology interventions that target at least 2 components of wellbeing</p> <p>3 RCTs, QEDs</p> <p>4 Wellbeing or mental health outcomes</p>	<ul style="list-style-type: none"> <li>Non-English/ Spanish papers</li> <li>Clinical populations</li> <li>Single component interventions</li> </ul>	Up to July 2019	9	<p>Pooled effect size (random effects):</p> <ul style="list-style-type: none"> <li>Subjective wellbeing: <math>g=0.25</math>, across 6 studies, <math>I^2=490.09</math>; excluding weak studies: <math>g=0.21</math>, <math>I^2=62.91</math>.</li> <li>Psychological wellbeing: <math>g=0.25</math>, across 5 studies, <math>I^2=82.29</math>; excluding weak studies: result was nonsignificant.</li> <li>Depression symptoms: <math>g=0.28</math>, across 4 studies, heterogeneity nonsignificant; excluding weak studies: <math>g=0.34</math>, heterogeneity nonsignificant.</li> <li>Anxiety symptoms: <math>g=0.14</math>, across 4 studies, heterogeneity nonsignificant; excluding weak studies: <math>g=0.15</math>, heterogeneity nonsignificant.</li> </ul> <p>Follow-up:</p> <ul style="list-style-type: none"> <li>Psychological wellbeing: <math>g=0.44</math>, across 3 studies; excluding weak studies: result was nonsignificant.</li> <li>Depression symptoms: <math>g=0.31</math>, across 3 studies; excluding weak studies: <math>g=0.21</math>.</li> <li>Anxiety symptoms: <math>g=0.15</math>, across 3 studies, heterogeneity nonsignificant; excluding weak studies: <math>g=0.21</math> across 2 studies.</li> </ul>

Systematic reviews of mental health promotion and wellbeing interventions (cont.)

Reference	Analysis	Quality assessment rating	Inclusion criteria 1 Population/age range 2 Interventions 3 Study design 4 Outcomes assessed	Exclusion criteria	Time frame	Number of studies included in review	Results
<p><b>Van de Sande et al., 2019</b></p> <p>Do universal social and emotional learning programmes for secondary school students enhance the competencies they address? A systematic review</p>	Meta-analysis	Strong	<p>5 11–19 years</p> <p>6 Universal secondary school-based SEL interventions targeting two or more SEL outcomes</p> <p>7 RCTs, QEDs</p> <p>8 Studies report on a minimum of two of the following outcomes: self-awareness, self-management, responsible decision-making, relationship skills, social awareness</p>	<ul style="list-style-type: none"> <li>Non peer-reviewed literature; non- English/Dutch/German papers; targeted interventions; primary/ tertiary educational settings</li> </ul>	2004–2018	40	<p>Pooled effect size (random effects): <math>I^2 &gt; 99.6\%</math> for all outcomes:</p> <ul style="list-style-type: none"> <li>Self-awareness (<math>d=0.42</math> across 9 studies, 7,078 participants).</li> <li>Social awareness (<math>d=0.58</math>, across 5 studies, 2,562 participants).</li> <li>Self-management (<math>d=0.39</math>, across 17 studies, 8,823 participants).</li> <li>Decision-making (<math>d=0.34</math>, across 6 studies, 6,316 participants).</li> <li>Relationship skills (<math>d=0.24</math>, across 11 studies, 11,588 participants).</li> </ul> <p>Promotional effects on psychosocial outcomes were larger than preventative effects on:</p> <ul style="list-style-type: none"> <li>Depression (<math>d=0.31</math>, across 19 studies, 19,408 participants).</li> <li>Anxiety (<math>d=0.27</math>, across 8 studies, 5,808 participants).</li> <li>Aggression (<math>d=0.39</math>, across 11 studies, 15,315 participants).</li> <li>No mean effect size provided for follow-up; most of the significant follow-up effects in the studies reviewed were found for self-management and relationship skills.</li> </ul>

## Appendix A.2: Promotion

### Table of primary studies

Universal promotion interventions using an SEL approach					
Allen et al. (2020) <b>The Connection Project</b>	<b>Description</b>				
	<b>Target level:</b> Universal The Connection Project aims to enhance adolescent peer relationships. The sessions are organised into three phases: establishing buy-in and a safe peer context, developing/enhancing a sense of social belonging and consolidating peer relationships. Activities include values affirmation, activities designed to enhance youths' sense of social belonging, vignettes from older students, and 'strength bombardment' where students become the focal students and peers offer their assessment of the strength of the student.	<b>Facilitator:</b> Youth group leaders  <b>Format:</b> Group sessions of 5–15 students	<b>Duration and frequency:</b> Twelve 45–60-minute sessions held once per week	<b>Booster:</b> No	<b>Quality assessment:</b> 2
	<b>Study Design</b>	<b>Results</b>			
	<b>RCT</b> <b>Country:</b> US <b>Total sample size:</b> 610 high school students <b>14.9% attrition at FU</b> 50.9% female <b>Mean age:</b> Not reported <b>Control:</b> Usual care (regular health class)	<b>Psychosocial wellbeing</b>	Significant increase in peer-rated approachability at four-month follow-up ( $p < 0.010$ ), but no significant effect post-intervention. In a time-course analysis, the intervention led to an increase in peer-rated approachability over time ( $B=0.09, p=0.04$ ) ( <i>measured with a tool created for this study, where the control group rated the approachability of intervention group members</i> ).  Significant effect on using social support as a coping strategy at four-month follow-up ( $p < 0.050$ ), but no significant effect post-intervention. In a time-course analysis, the intervention led to an increase in use of social coping behaviour over time ( $B=0.54, p=0.05$ ) ( <i>Social Support Scale from the Self-report Coping Scale</i> ).  Significant effect on comfort with classmates at post-intervention ( $p < 0.010$ ) and four-month follow-up ( $p < 0.001$ ). Comfort with classmates increased significantly in both the intervention and control group (post-intervention $p < 0.010$ ; four-month follow-up $p < 0.050$ ) at both timepoints ( <i>purpose-designed questionnaire created for this study</i> ).		
	<b>Psychological wellbeing</b>	Significant effect showing improvements on depression at four-month follow-up ( $p < 0.050$ ), but no significant effect post-intervention. In a time-course analysis, the intervention led to a decrease in depressive symptoms over time ( $B=-0.59, p=0.028$ ) ( <i>The Child Depression Inventory</i> ).  <ul style="list-style-type: none"> <li>Significant mediation effect at four-month follow-up showing increased use of social support significantly decreased depression scores (<math>\beta</math> indirect effect = <math>-0.01, 95\%CI [-0.0003, -0.035]</math>).</li> <li>At post-intervention, significant interaction between gender and intervention was found on depressive symptoms (<math>\beta=0.09, p=0.009</math>), although follow-up analyses revealed no significant effect for males or females.</li> </ul>			
	<b>Academic</b>	Significant effect on academic engagement at four-month follow-up ( $p < 0.050$ ), but no significant effect post-intervention. In a time-course analysis, the intervention led to an increase in academic engagement over time ( $B=0.44, p=0.020$ ) ( <i>Engagement vs Disaffection Scale</i> ).  <ul style="list-style-type: none"> <li>Significant mediation effect at four-month follow-up showing increased use of social support significantly increased academic engagement (<math>\beta</math> indirect effect = <math>0.01, 95\%CI [0.00001, 0.0254]</math>).</li> </ul>			

Universal promotion interventions using an SEL approach (cont.)

Carissoli & Villani (2019)  
EmotivaMente programme

Description		
<p><b>Target level:</b> Universal</p> <p>The EmotivaMente programme is a digital SEL intervention and aims to promote students' emotional intelligence. Videogames are used to help students to recognise their emotional reactions to different experiences, develop awareness about the physiological components of emotions and recognise inter-individual differences.</p>	<p><b>Facilitator:</b> Not reported</p> <p><b>Format:</b> Students completed group (group size not reported) and individual activities</p>	<p><b>Duration and frequency:</b> Eight 90-minute laboratory sessions scheduled during the regular school day; six weekly sessions followed by two follow-up laboratories three months later</p> <p><b>Booster:</b> No</p> <p><b>Quality assessment:</b> 3</p>
Study Design	Results	
<p><b>QED</b></p> <p><b>Country:</b> Italy</p> <p><b>Total sample size:</b> 121</p> <p><b>9.9% attrition at FU</b></p> <p>84.3% female</p> <p><b>Mean age:</b> 14.1 years</p> <p><b>Control:</b> Wait-list control</p>	<p><b>Psychosocial wellbeing</b></p>	<p>Significant effect on emotional intelligence (<i>The Emotional Intelligence Scale – Italian Version</i>).</p> <ul style="list-style-type: none"> <li>Significant effect on assessment and expression of emotions in relations to the self post-intervention (<math>\eta^2=0.078</math>, <math>p&lt;0.001</math>). No significant effect at three-month follow-up.</li> <li>No significant effect on evaluation and expression of emotions in relation to others.</li> <li>No significant effect on regulation and use of emotions.</li> </ul> <p>Significant effect on emotional regulation (<i>Emotion Regulation Questionnaire – Italian Version</i>).</p> <ul style="list-style-type: none"> <li>Significant effect on cognitive reappraisal (<math>\eta^2=0.033</math>, <math>p=0.040</math>) at three-month follow-up. No results reported for post-intervention.</li> <li>No significant effect on emotional suppression (<i>Emotion Regulation Questionnaire – Italian version</i>).</li> </ul>

Universal promotion interventions using an SEL approach (cont.)

Coelho et al. (2017a)  
Positive Attitude

Description		
<p><b>Target level:</b> Universal</p> <p>The Positive Attitude programme aims to enhance students' social-emotional competencies. The programme covers modules including self-awareness and self-management, social awareness, relationship skills and conflict management, and responsible decision-making. In the majority of sessions, two of the four possible themes are developed according to an initial assessment of the class profile and after meeting with the class director.</p>	<p><b>Facilitator:</b> Psychologists, in the presence of the class teacher</p> <p><b>Format:</b> Usual classrooms, group-based sessions with 16–25 students</p>	<p><b>Duration and frequency:</b> Thirteen weekly 45-minute sessions which take place within the same school year</p> <p><b>Booster:</b> No</p> <p><b>Quality assessment:</b> 2 <i>Intervention also evaluated by Coelho et al. (2017b)</i></p>
Study Design	Results	
<p><b>QED</b></p> <p><b>Country:</b> Portugal</p> <p><b>Total sample size:</b> 628 students from six middle schools</p> <p><b>2.1% attrition at FU</b></p> <p>50.1% female</p> <p><b>Mean age:</b> 13.5 years</p> <p><b>Control:</b> No intervention</p>	<p><b>Psychosocial wellbeing</b></p>	<p>Significant effect on the socialisation and social-emotional competencies post-intervention (<i>Bateria de Socialização-3 (BAS-3) – Portuguese adaption</i>).</p> <ul style="list-style-type: none"> <li>Significant effect on social awareness subscale (<math>p &lt; 0.001</math>, <math>d = 0.40</math>); increased scores in intervention group. Sub-analyses found girls in the intervention group had significantly greater improvements in social awareness compared to girls in the control group (<math>p &lt; 0.001</math>, <math>d = 0.42</math>). No significant effect of gender noted for boys. Students with the lowest level of competence (students in the lowest quartile for social awareness) showed greatest improvements and benefited most from the intervention (<math>p = 0.006</math>, <math>d = 0.62</math>).</li> <li>Significant effect on self-control subscale (<math>p &lt; 0.001</math>, <math>d = 0.030</math>); increased scores in the intervention group.</li> <li>Significant effect on social isolation subscale (<math>p = 0.036</math>, <math>d = 0.21</math>); decreased scores in the intervention group. Sub-analyses found girls in the intervention group had significantly greater improvements compared to girls in the control group (<math>p = 0.004</math>, <math>d = 0.29</math>). No significant effect of gender noted for boys.</li> <li>No significant effect on leadership subscale.</li> </ul>
	<p><b>Psychological wellbeing</b></p>	<p>Significant effect on social anxiety post-intervention (<math>p = 0.007</math>, <math>d = 0.22</math>). Control group had significantly increased scores (<i>Social anxiety subscale of the Bateria de Socialização-3 (BAS-3) – Portuguese adaption</i>).</p> <ul style="list-style-type: none"> <li>Sub-analyses found girls in the intervention group had significantly greater improvements compared to girls in the control group (<math>p = 0.004</math>, <math>d = 0.29</math>). No significant effect of gender noted for boys.</li> </ul>

Universal promotion interventions using an SEL approach (cont.)

<p>Coelho et al. (2017b)</p> <p><b>Positive Attitude</b></p>	<p><b>Description</b></p>				
	<p><b>Target level:</b> Universal</p> <p>The Positive Attitude programme aims to enhance students' social-emotional competencies. The programme covers modules including self-awareness and self-management, social awareness, relationship skills and conflict management, and responsible decision-making. In the majority of sessions, two of the four possible themes are developed according to an initial assessment of the class profile and after meeting with the class director.</p>	<p><b>Facilitator:</b> Psychologists, in the presence of the class teacher</p> <p><b>Format:</b> Usual classrooms, group-based sessions with 16–25 students</p>	<p><b>Duration and frequency:</b> Thirteen weekly 1-hour sessions which take place within the same school year</p>	<p><b>Booster:</b> No</p>	<p><b>Quality assessment:</b> 3</p> <p><i>Intervention also evaluated by Coelho et al. (2017a)</i></p>
	<p><b>Study Design</b></p>				
<p><b>QED</b></p> <p><b>Country:</b> Portugal</p> <p><b>Total sample size:</b> 746 students from six middle schools</p> <p><b>40.1% attrition at FU</b></p> <p>46.3% female</p> <p><b>Mean age:</b> 13.4 years</p> <p><b>Control:</b> No intervention</p>	<p><b>Results</b></p>				
	<p><b>Psychosocial wellbeing</b></p>	<p>Significant effect on self-reported socialisation and social-emotional competencies post-intervention (<i>Bateria de Socialização-3 (BAS-3) – Portuguese adaption</i>).</p> <ul style="list-style-type: none"> <li>Significant effect on social-awareness subscale over time (<math>\beta=-0.19, p=0.039</math>) resulting in significant improvements at post-intervention and seven-month follow-up. A significant interaction effect (<math>\beta=-0.26, p=0.029</math>) indicated rural students gained more from the intervention than urban students across the whole measurement period.</li> <li>Significant effect on self-control subscale over time (<math>\beta=-0.30, p=0.016</math>) resulting in significant improvements at post-intervention and seven-month follow-up.</li> </ul> <p>Significant effect on teacher-reported social-emotional competencies post-intervention (<i>Social and Emotional Competencies Evaluation Questionnaire – Teacher's version (QACSE-P)</i>).</p> <ul style="list-style-type: none"> <li>Significant effect on social-awareness subscale over time (<math>\beta=-1.96, p&lt;0.001</math>) resulting in significant improvements at post-intervention and seven-month follow-up. Significant interaction effect showed smaller improvements for 9th graders compared to 7th graders (<math>\beta=2.48, p&lt;0.001</math>) and 8th graders (<math>\beta=1.66, p=0.001</math>). A significant interaction effect indicated students from rural schools showed a more pronounced decrease than students from urban schools (<math>\beta=-2.21, p&lt;0.001</math>).</li> <li>Significant effect on self-control subscale over time (<math>\beta=-1.20, p&lt;0.001</math>) resulting in significant improvements at post-intervention and seven-month follow-up.</li> </ul>			
	<p><b>Subjective wellbeing</b></p>	<p>Significant effect on self-esteem over time (<math>\beta=-1.10, p&lt;0.001</math>) resulting in significant improvements at post-intervention and seven-month follow-up (<i>Global Self-Esteem subscale of the Self-Description Questionnaire II – Portuguese version</i>).</p>			

Universal promotion interventions using an SEL approach (cont.)

<p>Flynn et al. (2018)</p> <p><b>Dialectical Behaviour Therapy Skills Training for Emotional Problem Solving for Adolescents (DBT STEPS-A)</b></p>	<b>Description</b>				
	<p><b>Target level:</b> Universal</p> <p>The DBT STEPS-A is a social-emotional learning programme based on dialectical behaviour therapy (DBT). The programme aims to teach students skills which will aid them with their decision-making and coping strategies, especially when experiencing emotionally stressful times. Each lesson starts with a mindfulness exercise. During the lesson, students are taught new skills and explore in what contexts to use these new skills.</p>	<p><b>Facilitator:</b> Classroom teachers</p> <p><b>Format:</b> Usual classrooms</p>	<p><b>Duration and frequency:</b> 22 weekly classes during the normal school timetable</p>	<p><b>Booster:</b> No</p>	<p><b>Quality assessment:</b> 3</p>
	<b>Study Design</b>	<b>Results</b>			
<p><b>QED</b></p> <p><b>Country:</b> Ireland</p> <p><b>Total sample size:</b> 72 students from two Irish post-primary schools in Ireland</p> <p><b>Attrition not reported</b> 100% female</p> <p><b>Mean age:</b> 15.3 years</p> <p><b>Control:</b> No intervention</p>	<p><b>Psychosocial wellbeing</b></p>	<p>No significant effect on DBT skills (<i>DBT Ways of Coping Checklist (DBT-WCCL)</i>).</p> <p>No significant effect on dysfunctional coping (<i>DBT Ways of Coping Checklist (DBT-WCCL)</i>).</p>			
	<p><b>Psychological wellbeing</b></p>	<p>Significant effect on emotional symptoms post-intervention (Cohen's <math>F^2=0.65</math>, <math>p=0.013</math>). Intervention group experienced significant reduction in symptoms (<i>Second Edition of Behaviour Assessment System for Children (BASC-2)</i>).</p> <p>Significant effect on internalising problems post-intervention (Cohen's <math>F^2=0.83</math>, <math>p=0.0125</math>). Intervention group experienced significant reduction in problems (<i>Second Edition of Behaviour Assessment System for Children (BASC-2)</i>).</p>			

Universal promotion interventions using an SEL approach (cont.)

<p>Kelley et al. (2021)</p> <p><b>Innate Health Education and Resilience Training (iHEART)</b></p>	<b>Description</b>				
	<p><b>Target level:</b> Universal</p> <p>iHEART is a structured programme that aims to improve wellbeing and resilience. It is based on the ‘three principles’ approach to mental health programmes, focusing on how mind, thought and consciousness are related and allow mental health to flourish. The programme is delivered across ten sessions. The first six sessions are based on the topic of ‘how the mind works’ and teaches pupils about their own psychological systems and how these affect thought processes and feelings. The next four sessions are focused on applying this learning to real-life situations including exam stress, anxiety, managing social media, and bullying. The programme is delivered in groups using a combination of modalities including animations, video clips, exercises, games, and practical group-based activities. Students also have access to programme materials via an online learning portal.</p>	<p><b>Facilitator:</b> Two trained programme providers</p> <p><b>Format:</b> Classroom-based delivered as part of core learning on health, relationships and sex education</p>	<p><b>Duration and frequency:</b> Ten 50-minute sessions delivered once per week over 10 weeks</p>	<p><b>Booster:</b> No</p>	<p><b>Quality assessment:</b> 3</p>
	<b>Study Design</b>		<b>Results</b>		
<p><b>QED</b></p> <p><b>Country:</b> England</p> <p><b>Total sample size:</b> 205 students from six secondary schools in London</p> <p><b>Attrition not reported</b> 5.9% female</p> <p><b>Age range:</b> 11–15 years</p> <p><b>Control:</b> Wait-list control</p>	<p><b>Subjective wellbeing</b></p>	<p>Significant effect on wellbeing (<math>\eta^2 = 0.04</math>, <math>p = 0.002</math>). Intervention group showed small increase post-intervention (<math>r = 0.101</math>, mean increase = 0.10 points). (<i>The Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS)</i>)</p>			
	<p><b>Psychosocial wellbeing</b></p>	<p>Significant effect on resilience (<math>\eta^2 = 0.04</math>, <math>p = 0.001</math>). Intervention group showed small improvements post-intervention (<math>r = 0.14</math>, mean decrease = 0.19 points). (<i>Purpose designed questionnaire - The Inside-Out Resilience Questionnaire (I-ORQ)</i>)</p>			

Universal promotion interventions using an SEL approach (cont.)

<p><b>Knight et al. (2019)</b></p> <p><b>Strategies &amp; Tools to Embrace Prevention with Upstream Programs (SEL@MS, formerly known as STEP UP)</b></p>	Description				
	<p><b>Target level:</b> Universal</p> <p>SEL@MS aims to increase students' social-emotional competencies. Each lesson addresses a specific SEL concept, such as self-regulation, understanding boundaries, or recognising manipulative behaviours. Interactive activities, practice skills and strategies included in the programme incorporate a variety of cognitive behavioural techniques, expressive art, and metacognition and mindfulness techniques that are geared towards improving emotional regulation, social competence, self-awareness and motivation through a generalised learning experience. All instructional blocks incorporate student journalling, and lesson activities can include individual reflection, group discussions, role playing and self-assessments. Lessons also include take-home memos for parents that outline SEL instructions on how to foster these skills at home.</p>	<p><b>Facilitator:</b> Teachers or school counsellors</p> <p><b>Format:</b> Delivered during an advisory class – a period set aside for teachers to work with smaller groups of students in a mentorship capacity; letters to parents</p>	<p><b>Duration and frequency:</b> 25-minute lessons that can be delivered once or twice per week. In year one, 8 weeks of the programme were completed and in year two, 12 weeks were completed</p>	<p><b>Booster:</b> No</p>	<p><b>Quality assessment:</b> 2</p>
	Study Design	Results			
<p><b>QED</b></p> <p><b>Country:</b> US</p> <p><b>Total sample size:</b> 59 students from one urban private school</p> <p><b>8.5% attrition at FU</b></p> <p>48% female</p> <p><b>Mean age:</b> 12.7 years</p> <p><b>Control:</b> No intervention</p>	<p><b>Psychosocial wellbeing</b></p>	<p>Significant effect on teacher-rated social and emotional assets and resilience (total score) post-intervention (<math>p &lt; 0.001</math>, <math>\eta^2 = 0.245</math>) (<i>Social Emotional Assets and Resilience Scales – Teacher Rated (SEARS-T)</i>).</p> <ul style="list-style-type: none"> <li>• Significant effect on teacher-rated self-regulation (<math>p &lt; 0.001</math>, <math>\eta^2 = 0.247</math>).</li> <li>• Significant effect on teacher-rated social-competence (<math>p = 0.019</math>, <math>\eta^2 = 0.112</math>).</li> <li>• Significant effect on teacher-rated empathy (<math>p = 0.002</math>, <math>\eta^2 = 0.193</math>).</li> <li>• Significant effect on teacher-rated responsibility (<math>p &lt; 0.001</math>, <math>\eta^2 = 0.308</math>).</li> </ul> <p>No significant effect on student-rated social and emotional assets and resilience (total score) post-intervention (<i>Social Emotional Assets and Resilience Scales – Student (Adolescent) Rated (SEARS-A)</i>).</p>			

Universal promotion interventions using an SEL approach (cont.)

Muratori et al. (2020)  
Coping Power Universal (CPU)

Description		
<p><b>Target level:</b> Universal</p> <p>The CPU programme aims to enhance students' social and emotional competencies. The programme involves the use of a story as a guide throughout the programme's modules. It uses didactic and experience-based activities, and the establishment of a behavioural contract agreed with pupils. Programme modules include: the achievement of short- and long-term goals, the implementation of feelings awareness, emotional regulation, perspective-taking abilities, problem-solving skills and the promotion of interaction with positive schoolmates.</p>	<p><b>Facilitator:</b> Teachers; CPU trainers provided supervision during programme implementation</p> <p><b>Format:</b> Usual classroom of 25–30 students</p>	<p><b>Duration and frequency:</b> 24 sessions delivered between September and May; sessions take place during school day</p> <p><b>Booster:</b> No</p> <p><b>Quality assessment:</b> 1</p>
Study Design	Results	
<p><b>RCT</b></p> <p><b>Country:</b> Italy</p> <p><b>Total sample size:</b> 839 7th and 8th graders from 40 school classrooms in an urban context</p> <p><b>4.1% attrition at FU</b></p> <p>51% female</p> <p><b>Mean age:</b> 13.2 years</p> <p><b>Control:</b> No intervention</p>	<p><b>Behaviour</b></p>	<p>Significant effect for teacher-rated emotional and behavioural difficulties post-intervention. Significant improvements on internalising scores (ES=0.17, p=0.004) and prosocial behaviour (ES=0.36, p=0.003) (<i>Strengths and Difficulties Questionnaire (SDQ) – Italian version</i>).</p> <p>Significant effect for parent-rated emotional and behaviour difficulties post-intervention. Significant improvements in internalising scores (ES=0.23, p=0.007), externalising scores (ES=0.14, p=0.043) and prosocial behaviour (ES=0.28, p=0.001) (<i>Strengths and Difficulties Questionnaire (SDQ) – Italian version</i>).</p>

Universal promotion interventions using an SEL approach (cont.)

Pannebakker et al. (2019)  
**The Dutch Skills for Life Programme (S4L)**

Description		
<p><b>Target level:</b> Universal</p> <p>Skills for Life aims to promote students' social emotional development and prevent mental health problems. The programme is delivered over two years with generic skills being taught first (raising students' awareness of their thoughts, feelings and behaviours, interpersonal problem solving, emotional regulation skills and critical thinking). Following the teaching of these skills, problem-specific skills are taught such as giving and seeking help, dealing with bullying, and setting and respecting boundaries. Skills are applied to six themes: substance abuse, gambling, conflicts, gossip, bullying and sexuality. The second-year lessons addressed three themes: 'dealing with emotional problems and suicidal tendencies', 'dealing with aggression' and 'presenting yourself'.</p>	<p><b>Facilitator:</b> Teachers</p> <p><b>Format:</b> Usual classroom</p>	<p><b>Duration and frequency:</b> The programme is delivered over two consecutive school years: 17 weekly one-hour lessons in year one and 9 weekly lessons in year two</p>
	<p><b>Booster:</b> Teachers received booster training</p>	<p><b>Quality assessment:</b> 2</p>
Study Design	Results	
<p><b>Cluster RCT</b></p> <p><b>Country:</b> Netherlands</p> <p><b>Total sample size:</b> 1,505 students from 26 schools</p> <p><b>66% attrition at FU</b></p> <p>47% female</p> <p><b>Mean age:</b> 14.2 years</p> <p><b>Control:</b> Wait-list control</p>	<p><b>Psychosocial wellbeing</b></p>	<p>No significant effect on social interaction (<i>The frequency questions of the Scale for Interpersonal Behaviour for Adolescents (SIG-A)</i>).</p> <p>Significant effect on self-efficacy at 20-month follow-up (Hedges' <math>g=0.18</math>, <math>p=0.030</math>), but no significant effect post-intervention (<i>10-items Generalized Self-Efficacy Scale (GSES)</i>).</p> <ul style="list-style-type: none"> <li>• Self-efficacy significantly increased over time for students in the lower educational group (vocational training), but not for students in the higher educational group (university preparatory level) (Hedges' <math>g=0.20</math>, <math>p=0.050</math>).</li> </ul>
	<p><b>Subjective wellbeing</b></p>	<p>No significant effect on self-esteem (<i>Rosenberg Self-Esteem Scale (RSE) – Dutch version</i>).</p>
	<p><b>Psychological wellbeing</b></p>	<p>Significant effect on depressive symptoms at 20-month follow-up (Hedges' <math>g=-0.26</math>, <math>p=0.02</math>), but no significant effect post-intervention (<i>Beck Depression Inventory (BDI)</i>).</p> <ul style="list-style-type: none"> <li>• Depressive symptoms significant decreased over time for students in the lower educational group (vocational training) but not for students in the higher educational group (university preparatory level) (Hedges' <math>g=-0.41</math>, <math>p=0.001</math>).</li> </ul>
	<p><b>Behaviour</b></p>	<p>No significant effect on self-reported problematic behaviour (<i>Strengths and Difficulties Questionnaire (SDQ) – Dutch version</i>).</p> <p>Significant effect on teacher-rated problematic behaviour at 20-month follow-up (Hedges' <math>g=-0.35</math>, <math>p=0.001</math>), but no significant effect post-intervention (<i>Strengths and Difficulties Questionnaire (SDQ) – Dutch version</i>).</p> <ul style="list-style-type: none"> <li>• Teacher-ratings of problematic behaviour significantly decreased over time for students in the lower educational group (vocational training) but not for students in the higher educational group (university preparatory level) (Hedges' <math>g=-0.41</math>, <math>p=0.001</math>).</li> </ul>

Universal promotion interventions using an SEL approach (cont.)

Schoeps et al.  
(2018)  
**PREDEMA**

Description					
<b>Target level:</b> Universal					
<p>The PREDEMA programme aims to improve students' social-emotional wellbeing and to prevent bullying behaviour. The programme starts by focusing on basic emotional abilities, including perceiving, labelling, expressing, using and understanding emotions. Next, it targets emotion regulation and management in different contexts and situations. Complementary issues are also discussed, such as personal and global values, responsibility and tolerance, as well as preventing interpersonal conflicts.</p>		<p><b>Facilitator:</b> Psychologists</p> <p><b>Format:</b> Delivered to six classes of 25–30 students; each week students were given home practice activities</p>	<p><b>Duration and frequency:</b> Eleven 50-minute sessions during school hours, delivered over a period of three months</p>	<p><b>Booster:</b> No</p>	<p><b>Quality assessment:</b> 3</p>

Study Design	Results	
<p><b>QED</b></p> <p><b>Country:</b> Spain</p> <p><b>Total sample size:</b> 148 students from four high schools in Valencia</p> <p><b>43% attrition at FU</b></p> <p>57% female</p> <p><b>Mean age:</b> 12.6 years</p> <p><b>Control:</b> Other intervention proposed by the school (e.g. school counselling or peer mediation programmes)</p>	<b>Psychosocial wellbeing</b>	Significant effect on emotional competence at six-month follow-up, but not at post-intervention. Intervention group scored significantly higher on perceived emotions ( $d=0.49, p<0.001$ ) and on managed emotions ( $d=0.61, p<0.001$ ). No significant effect on expressed emotions ( <i>Emotional Skills and Competencies Questionnaire (ESCQ) – Adapted into Spanish</i> ).
	<b>Subjective wellbeing</b>	Significant effect on life satisfaction at six-month follow-up ( $d=0.22, p=0.020$ ), but not at post-intervention ( <i>Satisfaction With Life Scale (SWLS)</i> ).
	<b>Bullying perpetration</b>	Significant effect on cyber-bullying aggression post-intervention ( $d=-0.60, p<0.001$ ) maintained to six-month follow-up ( $d=0.38, p=0.010$ ) ( <i>Cyberbullying Aggression Scale (CYB-AG)</i> ).
	<b>Bullying victimisation</b>	Significant effect on cyber-bullying victimisation at post-intervention ( $d=-0.52, p<0.001$ ), but not at six-month follow-up ( <i>Cyberbullying Victimisation Scale (CYB-VIC)</i> ).

Universal promotion interventions using an SEL approach (cont.)

<p>Sinyor et al. (2020)  <b>Harry Potter-based CBT Curriculum</b></p>	<p><b>Description</b></p>				
	<p><b>Target level:</b> Universal</p> <p>The programme aims to enhance students’ resilience and prevent symptoms of depression and anxiety. Students read the Harry Potter novels and learn CBT skills along with the main characters. It involves nine modules that follow the Harry Potter books’ narratives: 1) Psychoeducation A (risk factors for emotional distress); 2) Psychoeducation B (understanding depression and its treatment); 3) Introduction to Cognitive Distortions; 4) Introduction to CBT treatment; 5) Key CBT skills (fear hierarchies, behavioural activation, managing cognitive distortions, identifying core beliefs); 6) Psychoeducation (handling setbacks); 7) Putting learned CBT skills into practice; 8) Advanced Management of Cognitive Distortions/ Core Belief Work; and 9) Relapse Prevention/Consolidation of Learning.</p>	<p><b>Facilitator:</b> English teachers</p> <p><b>Format:</b> Five classes taught by four teachers (one semester) and 13 classes taught by 11 teachers (one semester, one year later)</p>	<p><b>Duration and frequency:</b> Most teachers completed the curriculum in 8-12 weeks.</p>	<p><b>Booster:</b> No</p>	<p><b>Quality assessment:</b> 3</p>
	<p><b>Study Design</b></p>				
<p><b>QED</b>  <b>Country:</b> Canada  <b>Total sample size:</b> 594 students from middle schools in one small, rural, publicly funded school board area in Eastern Ontario  <b>0% attrition at FU</b>                      51.9% female  <b>Mean age:</b> 12.6 years  <b>Control:</b> No intervention</p>	<p><b>Results</b></p> <p><b>Psychosocial wellbeing</b></p> <p>No significant effect on wellbeing (<i>Well-Being and Resiliency Survey (WBR)</i>).                      No significant effect on resilience (<i>Well-Being and Resiliency Survey (WBR)</i>).</p>				

Universal promotion interventions using an SEL approach (cont.)

Veltro et al. (2020)  
**Psycho-educational intervention for promoting psychological well-being and emotional intelligence at school**

Description		
<b>Target level:</b> Universal	<b>Facilitator:</b> Trained programme facilitators (psychologists and pedagogists)	<b>Duration and frequency:</b> One-hour sessions per week for 20 weeks
<b>Quality assessment:</b> 3	<b>Booster:</b> No	
<b>Format:</b> Usual classrooms and homework, assignments performed using the notebook		
Study Design	Results	
<b>QED</b> <b>Country:</b> Italy <b>Total sample size:</b> 276 students from 12 classes across 3 schools <b>0% attrition</b> 51% female <b>Mean age:</b> 12.7 years <b>Control:</b> Not reported	<b>Psychosocial wellbeing</b>  Significant effect within but not between groups on emotional intelligence post-intervention ( $p < 0.010$ ). Significant improvements in both the intervention ( $p = 0.001$ ) and the control ( $p = 0.001$ ) groups ( <i>Index of Emotional Intelligence (IEI)</i> ).  Significant effect within but not between groups on social and emotional skills post-intervention, including goal definition ( $p < 0.050$ ), expressing positive feelings ( $p < 0.010$ ), making requests ( $p < 0.01$ ), expressing unpleasant feelings ( $p < 0.010$ ), active listening ( $p < 0.010$ ) and problem solving ( $p < 0.050$ ).  <ul style="list-style-type: none"> <li>• Significant improvements were observed in the intervention group for goal definition (<math>p = 0.027</math>), expressing positive feelings (<math>p &lt; 0.001</math>), making requests (<math>p &lt; 0.001</math>), expressing unpleasant feelings (<math>p &lt; 0.001</math>), active listening (<math>p &lt; 0.001</math>) and problem solving (<math>p = 0.035</math>).</li> <li>• No significant differences in the control group, apart from problem solving where a significant worsening of scores was observed (<math>p = 0.004</math>) (<i>Learning Abilities Questionnaire</i>).</li> </ul>	
	<b>Mental health literacy</b>  Significant effect within but not between groups on irrational/dysfunctional beliefs (Inventory Ideas) post-intervention ( $p < 0.050$ ). Pre- to post-intervention improvements were seen in both the intervention ( $p < 0.010$ ) and the control ( $p < 0.010$ ) groups ( <i>Inventory Idea Questionnaire</i> ).	

## Universal promotion interventions using a positive psychology approach

Freire et al. (2018)  
**Challenge: To Be+ program**

Description				
<p><b>Target level:</b> Universal</p> <p>The Challenge: To BE+ programme adopts a positive psychology approach to supporting positive youth development. The programme focuses on three main topics: positive emotions, character strengths and optimal experiences. Each session includes several structured activities (oral or written), involving individual reflections and/or interactive group work/discussions.</p>	<p><b>Facilitator:</b> Psychologist (Masters' students)</p> <p><b>Format:</b> Group-based with 13 students per group</p>	<p><b>Duration and frequency:</b> Eight-week sessions of 90 minutes each (one session per week)</p>	<p><b>Booster:</b> No</p>	<p><b>Quality assessment:</b> 2</p>
Study Design	Results			
<p><b>QED</b></p> <p><b>Country:</b> Portugal</p> <p><b>Total sample size:</b> 104 students from one school</p> <p><b>4.8% attrition at FU</b></p> <p>56% female</p> <p><b>Mean age:</b> 14.3 years</p> <p><b>Control:</b> No intervention</p>	<p><b>Subjective Wellbeing</b></p> <p>No significant effect on self-concept post-intervention (<i>Piers-Harris children's self-concept scale – Portuguese version</i>).</p> <ul style="list-style-type: none"> <li>Gender was a significant predictor of self-concept (<math>\beta=-3.142</math>, <math>p&lt;0.050</math>) with girls, more than boys, having increased levels post-intervention.</li> </ul> <p>Significant effect on self-esteem post-intervention (<math>F=4.364</math>, <math>p&lt;0.050</math>) (<i>Rosenberg Self-esteem Scale – Portuguese version</i>).</p> <ul style="list-style-type: none"> <li>Gender was a significant predictor of self-esteem (<math>\beta=-2.443</math>, <math>p&lt;0.050</math>) with girls, more than boys, having increased levels post-intervention.</li> </ul> <p>Significant effect on life satisfaction (<math>F=-5.721</math>, <math>p&lt;0.050</math>) (<i>Life Satisfaction Scale – Portuguese version</i>).</p> <ul style="list-style-type: none"> <li>Gender was a significant predictor of life satisfaction (<math>\beta=-2.852</math>, <math>p&lt;0.010</math>) with girls, more than boys, having increased levels post-intervention.</li> </ul>			
	<p><b>Psychological Wellbeing</b></p> <p>No significant effect on psychological wellbeing post-intervention (<i>Psychological Wellbeing Scale for Adolescents</i>).</p> <ul style="list-style-type: none"> <li>Gender was a significant predictor of psychological wellbeing (<math>\beta=-7.265</math>, <math>p&lt;0.050</math>) with girls, more than boys, having increased levels post-intervention.</li> </ul>			

Universal promotion interventions using a positive psychology approach (cont.)

Lombas et al. (2019)  
**Happy Classrooms Programme (HPC) – Brief Version**

**Description**

**Target level:** Universal

The Happy Classrooms Programme (HCP) aims to improve students' psychological wellbeing, foster positive classroom climate, and reduce school aggression. HCP relies on mindfulness and character strengths as guiding principles for intervention content. This study evaluates a brief version of the intervention, which contained 13 mindfulness activities and 25 transcendence activities (that is, character strength activities). Teachers receive training in how to deliver and facilitate the activities. This includes learning about (1) theoretical foundations of mindfulness and empirical evidence of the benefits on wellbeing, and (2) experiential practice in the activities of mindfulness and character strengths designed for the students.

**Facilitator:**  
Teachers

**Format:**  
Class-based (group size not reported)

**Duration and frequency:**  
Programme delivered over 18 weeks; activities were practised for approximately 5 minutes at least twice per week; estimated total intervention time was 18 week × 2 sessions × 5 minutes = 180 minutes – however, there was large variability among the duration actually delivered

**Booster:**  
No

**Quality assessment:**  
2

**Study Design**

**QED**  
**Country:** Spain  
**Total sample size:** 524 students from five public high schools  
 50.2% female  
**Mean age:** 13.6 years  
**Control:** No intervention

**Results**

**Subjective wellbeing**

Significant effect on mindfulness ( $\beta=0.22$ ,  $SE=0.09$ ,  $p=0.017$ ); however, effect only observed when pre-test mindfulness levels were medium–high, meaning improvements associated with intervention were mediated by pre-existing mindfulness skills ( $\beta=0.40$ ,  $SE=0.16$ ,  $p=0.011$ ) (*the Spanish version of the Mindfulness Attention Scale*).  
 No significant effect on self-esteem over time (*the Spanish version of the Rosenberg Self-esteem Scale*).  
 Significant effect on satisfaction with life over time ( $\beta=0.33$ ,  $SE=0.19$ ,  $p=0.014$ ) (*The Spanish version of the Satisfaction with Life Scale*).  
 Significant effect on emotional intelligence (*the Spanish version of the Trait Meta Mood Scale*):

- Significant effect on the emotional repair subscale ( $\beta=0.28$ ,  $SE=0.12$ ,  $p=0.019$ ).
- No significant effect on emotional attention subscale.
- No significant effect on emotional clarity subscale.

**Psychosocial wellbeing**

Significant effect on psychological need (*the Psychological Needs Satisfaction Scale in Education*):

- Significant effect on relatedness subscale ( $\beta=0.31$ ,  $SE=0.12$ ,  $p=0.008$ ).
- No significant effect on autonomy subscale.
- No significant effect on competence subscale.

No significant effect on empathy (*the Spanish version of the Index of Empathy for Children and Adolescents*).  
 Significant effect on classroom environment (*the Spanish version of the Classroom Environment Scale*):

- Significant effect on affiliation over time ( $\beta=0.28$ ,  $SE=0.09$ ,  $p=0.001$ ).
- No significant effect on involvement subscale.

**Psychological wellbeing**

No significant effect on depressive symptoms (*the Spanish version of the reduced version of the Scale of Depressive Symptomatology*).

- Significant improvements observed when pre-test mindfulness levels were medium-high meaning improvements associated with intervention were mediated by pre-existing mindfulness skills ( $\beta=-0.55$ ,  $SE=0.20$ ,  $p=0.007$ ).

Universal promotion interventions using a positive psychology approach (cont.)

Truskauskaitė-Kunevičienė et al. (2020)  
**Try Volunteering**

Description		
<p><b>Target level:</b> Universal</p> <p>The Try Volunteering programme adopts a positive youth development and positive psychology approach promoting student wellbeing. The programme seeks to develop the 'five Cs': Competence, Confidence, Connection, Character and Caring. Session topics address the five C's and include: 'I can be open to new experiences', 'I can learn about my strengths', 'I can cherish my connection with others', 'I can understand my own and other people's feelings', 'I can survive difficult situations', 'I can see life as a meaningful experience', 'I can share what I have with others', and 'I can become a volunteer'.</p>	<p><b>Facilitator:</b> 26 programme leaders (University student volunteers)</p> <p><b>Format:</b> Group based with 15 participants or fewer per group</p>	<p><b>Duration and frequency:</b> Eight classroom sessions (45 minutes each) delivered once a week during the regular school hours over two months</p> <p><b>Booster:</b> No</p> <p><b>Quality assessment:</b> 3</p>
Study Design	Results	
<p><b>QED</b></p> <p><b>Country:</b> Lithuania</p> <p><b>Total sample size:</b> 615 students from 26 classrooms (9th and 10th grade) from two middle schools</p> <p><b>Attrition not reported</b> 42.8% female</p> <p><b>Mean age:</b> 15.3 years</p> <p><b>Control:</b> Not described</p>	<p><b>Psychosocial wellbeing</b></p> <p>No significant effect on competence in the full sample (Positive Youth Development Inventory (PYDI)).</p> <ul style="list-style-type: none"> <li>Significant sub-group effect. In classes with the most number of students, significant increase in the intervention group (97%, <math>p &lt; 0.010</math>) and significant decrease in the control group (90%, <math>p &lt; 0.001</math>)</li> </ul> <p>No significant effect on connection in the full sample (Positive Youth Development Inventory (PYDI)).</p> <ul style="list-style-type: none"> <li>Significant sub-group effect. In classes with the most number of students, significant increase in the intervention group (97%, <math>p &lt; 0.001</math>) but no significant effect in the control group.</li> </ul> <p>No significant effect on caring in the full sample (Positive Youth Development Inventory (PYDI)).</p> <ul style="list-style-type: none"> <li>Significant sub-group effect. In classes with the most number of students, significant increase in the intervention group (95%, <math>p &lt; 0.001</math>) but no significant effect in the control group.</li> </ul>	<p><b>Subjective wellbeing</b></p> <p>No significant effect on confidence in the full sample (Positive Youth Development Inventory (PYDI)).</p> <ul style="list-style-type: none"> <li>Significant sub-group effect. In classes with the most number of students, significant increase in the intervention group (97%, <math>p &lt; 0.001</math>) and significant decrease in the control group (84%, <math>p &lt; 0.050</math>).</li> </ul> <p>No significant effect on character in the full sample (Positive Youth Development Inventory (PYDI)).</p> <ul style="list-style-type: none"> <li>Significant sub-group effect. In classes with the most number of students, no significant change in the intervention group and significant decrease in the control group (87%, <math>p &lt; 0.050</math>).</li> </ul>

## Universal promotion interventions using a mindfulness approach

Johnson et al.  
(2017)  
.b  
(‘dot be’)

### Description

#### Target level: Universal

The .b (‘Dot be’) Mindfulness in Schools curriculum is a manualised mindfulness intervention designed for 11- to 16-year-olds. Each week, students are guided through a series of short mindfulness practices. This includes breath counting (stop, feel your feet, feel your breathing, and be present); mindfulness of routine daily activities (walking; watching thought traffic); and two 9-minute guided audio files with two mindfulness exercises.

This study evaluated ‘.b’ in a two-armed intervention. In the first arm, students received the intervention according to the manual (described above). In a second intervention arm, students received the same intervention, but parents were also enrolled in the intervention. Once per week, parents received an email with a link to a 10-minute online activity which included a summary of each week’s key points, a guided mindfulness exercise, and an outline of student’s home practice sessions for the week.

.b is included on the [EIF Guidebook](#).

**Facilitator:**  
Researcher-led (first author)

**Format:**  
Group-based intervention (size not reported)

**Duration and frequency:**  
Weekly lessons (40–60 minutes) for nine weeks

**Booster:**  
No

**Quality assessment:**  
1

*Intervention also evaluated by Johnson & Wade (2019) and Volanen et al. (2020)*

### Study Design

#### RCT

**Country:** Australia

**Total sample size:**  
555 students across four co-educational secondary schools (one private, three public)

**27% attrition at FU**

45.4% female

**Mean age:** 13.4 years

**Control:** No intervention

### Results

#### Psychosocial wellbeing

No significant effect on depression at post-intervention, six- or 12-month follow-up (*the Depression subscale of the Depression, Anxiety and Stress Scale-Short form (DASS-21)*).

No significant effect on anxiety at post-intervention, six- or 12-month follow-up (*the 7-item Generalized Anxiety Disorder Scale (GAD-7)*).

No significant effect on wellbeing at post-intervention, six- or 12-month follow-up (*the Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS)*).

Universal promotion interventions using a mindfulness approach (cont.)

<p>Johnson &amp; Wade (2019)</p> <p><b>Mindfulness Training for Teens</b></p>	<p><b>Description</b></p>				
	<p><b>Target level:</b> Universal</p> <p>The Mindfulness Training for Teens programme is a mindfulness intervention based on the Mindfulness-Based Stress Reduction (MBSR; Kabat-Zinn, 1990) and mindfulness-based cognitive therapy (MBCT; Segal et al., 2013) programmes designed for adults. The intervention aims to improve the mental health of students through reduction in depression and anxiety, and increases in wellbeing. Students are guided through mindfulness practice each week. Sessions begin with guided sitting or lying meditation for 10–20 minutes, followed by group discussions of experience guided by a facilitator. Sessions also include a presentation on the concepts of mindfulness. Class teachers deliver prompts to students once per week as a reminder to practise mindfulness at home.</p>	<p><b>Facilitator:</b> A mindfulness practitioner</p> <p><b>Format:</b> Group-based sessions led by a facilitator; sessions took place in a carpeted room away from normal classrooms to create a different and special atmosphere compared to normal lessons</p>	<p><b>Duration and frequency:</b> Weekly 90-minute sessions for eight weeks</p>	<p><b>Booster:</b> Students instructed to practise mindfulness exercises at home after the intervention; less than 8% of students reported practice at home at four-month follow-up</p>	<p><b>Quality assessment:</b> 3</p>
	<p><b>Study Design</b></p> <p><b>QED</b></p> <p><b>Country:</b> Australia</p> <p><b>Total sample size:</b> 146 students across two secondary schools</p> <p><b>50.4% attrition at FU</b></p> <p>45.9% female</p> <p><b>Mean age:</b> Students in year 8 (M=13.5 years) and year 10 (M=15.5 years)</p> <p><b>Control:</b> No intervention</p>	<p><b>Results</b></p>			
<p><b>Psychological wellbeing</b></p>	<p>Significant effect on depression at four-month follow-up (<math>p &lt; 0.05</math>, <math>d = 0.61</math>). No significant effect at post-intervention (<i>the Depression subscale of the Depression, Anxiety and Stress Scale-Short form (DASS-21)</i>).</p> <ul style="list-style-type: none"> <li>Sub-group analyses at four months showed the intervention may be more effective for older students: year 10 students showed greater improvements in anxiety (<math>d = 0.95</math>) than year 8 students, who showed no significant improvements.</li> </ul> <p>Significant effect on anxiety at four-month follow-up (<math>p &lt; 0.05</math>, <math>d = 0.52</math>). No significant effect at post-intervention (<i>the 7-item Generalized Anxiety Disorder Scale (GAD-7)</i>).</p> <ul style="list-style-type: none"> <li>Sub-group analyses at four months showed the intervention may be more effective for older students: year 10 students showed greater improvements in anxiety (<math>d = 0.81</math>) than year 8 students, who showed no significant improvements.</li> </ul>				
<p><b>Psychosocial wellbeing</b></p>	<p>No significant effect on wellbeing at post-intervention or four-month follow-up (<i>the Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS)</i>).</p>				

Universal promotion interventions using a mindfulness approach (cont.)

<p>Kang et al. (2018)</p> <p><b>Meditation &amp; Mindfulness Intervention</b></p>	<b>Description</b>				
	<p><b>Target level:</b> Universal</p> <p>This universal meditation intervention is based on the Integrative Contemplative Pedagogy method (Roth, 2014) that integrates traditional knowledge-based learning (lecture) with first person experiential learning (meditation) to enhance students' mindfulness and improve wellbeing. The mindfulness meditation techniques used in this intervention included: (1) breath awareness/breath counting; (2) awareness of thoughts, feelings, and sensations, and (3) body sweeps.</p>	<p><b>Facilitator:</b> Teachers</p> <p><b>Format:</b> Group-based (size not reported)</p>	<p><b>Duration and frequency:</b> Meditation sessions four to five times per week at the beginning of each history lesson. Each session lasted between 3–12 minutes (5 minutes on average)</p>	<p><b>Booster:</b> No</p>	<p><b>Quality assessment:</b> 3</p>
	<b>Study Design</b>		<b>Results</b>		
<p><b>RCT</b></p> <p><b>Country:</b> US</p> <p><b>Total sample size:</b> 101 students at a private middle school</p> <p><b>1% attrition at FU</b></p> <p>46% female</p> <p><b>Mean age:</b> 11.8 years</p> <p><b>Control:</b> Active control matched for intensity, duration, delivery and activity; for example, students received a lesson on African history delivered by the same facilitator as the intervention group, and made a life-sized model of an Egyptian sarcophagus</p>	<p><b>Subjective wellbeing</b></p>	<p>Significant effect on emotional wellbeing (<i>a modified version of the 20-item Spielberger Anxiety Inventory-Child version</i>).</p> <p>Significant effect on global affect disturbance subscale (<math>p=0.05</math>, <math>d=0.41</math>).</p> <p>Significant effect on positive affect subscale (<math>p=0.04</math>, <math>d=0.41</math>) in the intervention group.</p>			
	<p><b>Psychosocial wellbeing</b></p>	<p>No significant effect on self-compassion (<i>the 26-item Self-Compassion Scale</i>).</p>			

Universal promotion interventions using a mindfulness approach (cont.)

Lam & Seiden (2019)  
Learning to BREATHE (L2B)

Description		
<b>Target level:</b> Universal	<b>Facilitator:</b> Clinical psychologist employed at the school, and a graduate-level research assistant provided logistical support to intervention delivery <b>Format:</b> Group-based in classes with 32–35 students each	<b>Duration and frequency:</b> Six 70-minute sessions, one per week <b>Booster:</b> No <b>Quality assessment:</b> 2 <i>Intervention also evaluated by Felver et al. (2019) and Fung et al. (2019)</i>
<b>Target level:</b> Universal Learning to Breathe (L2B) aims to promote student’s wellbeing, social and emotional skills, and learning outcomes by increasing students’ emotional regulation, stress management, compassion and executive function through a mindfulness approach. Students are guided through six sessions, which each cover a different topic following the acronym BREATHE: Body, Reflections (thoughts), Emotions, Attention, Tenderness/Take it like it is, and Habits for a healthy mind, with the final E representing the overall programme goal of Empowerment/gaining an inner Edge. The programme also includes homework practice sessions (for instance mindful eating/breathing; stretching). To maximise generalisation, students receive home practice handouts at the end of each session and can download audio files for guided practice.		
Study Design	Results	
<b>QED</b> <b>Country:</b> Hong Kong <b>Total sample size:</b> 115 students at one public high school in the lowest academic tier <b>0% attrition at FU</b> 35% female <b>Mean age:</b> 12.4 years <b>Control:</b> No intervention	<b>Psychosocial wellbeing</b>	No significant effect on emotional regulation ( <i>the Chinese version of the Difficulties in Emotion Regulation Scale (DERS)</i> ). No significant effect on internalised and externalised emotional and behavioural problems (the Youth Self-Report (YSR)). No significant effect on rumination ( <i>the Chinese version of the Ruminative Responses Scale (RRS)</i> ). Significant effect on executive function ( $p < 0.001$ , $\eta^2 = 0.11$ ). The intervention group showed slight improvement at post-intervention while the control group reported increased problems.
	<b>Psychological wellbeing</b>	No significant effect on perceived stress ( <i>a single-item purpose-designed measure</i> ).

Universal promotion interventions using a mindfulness approach (cont.)

Rodríguez-Ledo et al. (2018) <b>The Emotional Competency Development SEA Programme</b>	<b>Description</b>				
	<b>Target level:</b> Universal The Emotional Competency Development SEA Programme is designed to improve student's attention, life satisfaction and emotional development through a mindfulness approach. SEA programme sessions include guided mindfulness practice sessions for 10–15 minutes using audio-recorded instructions. These practice sessions include activities such as breathing practice, association of words activities and body scanning exercises. The mindfulness techniques are designed to be useful in the participants' real world by seeking their real practical use and attempting to transfer them to their real lives.	<b>Facilitator:</b> Teachers  <b>Format:</b> Group-based delivered across six classes (size not specified), held at the same time in the morning	<b>Duration and frequency:</b> One hour per week for 18 weeks across the academic year	<b>Booster:</b> No	<b>Quality assessment:</b> 3
	<b>Study Design</b>				
<b>QED</b> <b>Country:</b> Spain <b>Total sample size:</b> 156 students from one public high school <b>2.6% attrition at FU</b> 44.9% female <b>Age Range:</b> 11–14 years <b>Control:</b> Unknown	<b>Results</b>				
	<b>Subjective wellbeing</b>	No significant effect on mindfulness total score ( <i>The mindfulness scale for school scope</i> ). <ul style="list-style-type: none"> <li>• Significant differences within but not between groups on kinaesthetic mindfulness subscale (<math>F_{156}=4.326</math>, <math>\eta^2=0.029</math>, <math>p=0.039</math>); however, it is unknown whether increases or decreases in mindfulness were observed in the intervention and/or control group.</li> <li>• Significant differences within but not between groups on internal mindfulness subscale (<math>F_{156}=4.979</math>, <math>\eta^2=0.033</math>, <math>p=0.027</math>); however, it is unknown whether increases or decreases in mindfulness were observed in the intervention and/or control group.</li> </ul>			

Universal promotion interventions using a mindfulness approach (cont.)

<p>Saxena et al. (2020) Hatha Yoga</p>	<b>Description</b>				
	<p><b>Target level:</b> Universal</p> <p>Hatha Yoga is a universal intervention delivered as part of routine health science classes designed to improve student’s attention and reduce stress. Hatha yoga encompasses the practices of physical postures, breathing exercises and meditation. Its goal is to develop strength and flexibility of the body, foster a calm and clear mind, and overall good health. The yoga classes are delivered in the morning during the students’ health science class, a required course for all 9th graders. Each lesson consists of time for yoga practice facilitated by an instructor, followed by guided meditation practice.</p>	<p><b>Facilitator:</b> Yoga instructor</p> <p><b>Format:</b> Group-based with about 50 students</p>	<p><b>Duration and frequency:</b> 25-minute sessions of yoga and meditation twice per week for twelve weeks; each lesson consisted of 18 minutes of yoga poses and 7 minutes of meditation</p>	<p><b>Booster:</b> No</p>	<p><b>Quality assessment:</b> 2</p>
	<b>Study Design</b>	<b>Results</b>			
	<p><b>QED</b></p> <p><b>Country:</b> US</p> <p><b>Total sample size:</b> 174 students in 9th grade of high school</p> <p><b>5.4% attrition at FU</b></p> <p>64.4% female</p> <p><b>Mean age:</b> 14.7 years</p> <p><b>Control:</b> Curriculum as usual: students enrolled in usual health science class</p>	<p><b>Academic</b></p> <p>Significant effect on ADHD-Inattentive behaviour over time (<math>\beta=-1.09</math>, <math>SE=0.30</math>, <math>p&lt;0.001</math>). Pairwise t-tests showed a significant reduction in inattention within the intervention group (<math>t=3.239</math>, <math>p=0.002</math>; <math>d=0.27</math>) and a significant increase in inattention within the control group (<math>t=-2.574</math>, <math>p=0.013</math>). (<i>the Strengths and Weaknesses of ADAH Symptoms and Normal Behaviour (SWAN)</i>).</p>	<p><b>Behavioural</b></p> <p>No significant effect on ADHD-Hyperactive/Impulsive behaviour (<i>the Strengths and Weaknesses of ADAH Symptoms and Normal Behaviour (SWAN)</i>).</p>	<p><b>Psychological wellbeing</b></p> <p>No significant effect on perceived stress (<i>the Perceived Stress Scale (PSS)</i>).</p>	

Universal promotion interventions using a mindfulness approach (cont.)

Takahashi et al. (2020)  
Low-dose ACT

Description		
<p><b>Target level:</b> Universal</p> <p>A low-dose intervention which adopts mindfulness and acceptance and commitment therapy (ACT) approaches to improving students' psychological flexibility and addressing emotional and behavioural problems. The intervention is delivered across six sessions, which each focus on a core component of ACT. In the first two sessions, participants learned the meaning of 'values' how to clarify their own values, and how to choose and commit to their values. In the third through fifth sessions, the focus is on acceptance of both aversive and non-aversive emotions and cognitions. The final session is used to plan the everyday implementation of the skills participants acquire.</p>	<p><b>Facilitator:</b> Clinical psychologist</p> <p><b>Format:</b> Group-based (size not reported) delivered in everyday classrooms</p>	<p><b>Duration and frequency:</b> Six bi-weekly sessions each lasting 50 minutes for a total of 5 hours</p> <p><b>Booster:</b> No</p> <p><b>Quality assessment:</b> 2</p>
Study Design	Results	
<p><b>QED</b></p> <p><b>Country:</b> Japan</p> <p><b>Total sample size:</b> 299 students across four junior high schools in a single district</p> <p><b>9.7% attrition at FU</b></p> <p>53.3% female</p> <p><b>Mean age:</b> 14.1 years</p> <p><b>Control:</b> Wait-list control who received education sessions on mathematics and politics before post-intervention measurement</p>	<p><b>Psychosocial wellbeing</b></p>	<p>Significant effect on continuation of avoidance, a subscale of psychological flexibility, across time (<math>\beta=0.86, p=0.011</math>). (Two subscales (<i>Value of clarification and Commitment &amp; Continuation of Avoidance</i>) of the <i>Value of Young Age Scale – VOYAGE</i>).</p> <ul style="list-style-type: none"> <li>Significant effect on continuation of avoidance among students with elevated but 'sub clinical' (students scoring 13 or more on the SDQ total difficulties) levels of behavioural difficulty across time (<math>\beta=2.02, p=0.008</math>).</li> </ul>
	<p><b>Behavioural</b></p>	<p>No significant effect on emotional and behavioural difficulties (<i>the Strengths and Difficulties Questionnaire (SDQ)</i>).</p> <ul style="list-style-type: none"> <li>No significant effect on emotional problems subscale.</li> <li>No significant effect on conduct problems subscale.</li> <li>No significant effect on peer relationship problems subscale.</li> <li>No significant effect on prosocial behaviour subscale.</li> <li>Significant effect on hyperactivity/inattention subscale over time (<math>\beta=-0.69, p=0.026</math>).</li> </ul>

Universal promotion interventions using a mindfulness approach (cont.)

Volanen et al. (2020)  
**.b**  
**Mindfulness**

Description				
<p><b>Target level:</b> Universal</p> <p>The .b ('Dot be') Mindfulness in Schools curriculum is a manualised mindfulness intervention designed for 11- to 16-year-olds. Each week, students are guided through a series of short mindfulness practices. This includes breath counting (stop, feel your feet, feel your breathing, and be present); mindfulness of routine daily activities (walking; watching thought traffic); and two 9-minute guided audio files with two mindfulness exercises.</p> <p>.b is included on the <a href="#">EIF Guidebook</a>.</p>	<p><b>Facilitator:</b> Trained mindfulness facilitators</p> <p><b>Format:</b> Group-based: 1,646 students across 94 classes in 25 schools</p>	<p><b>Duration and frequency:</b> Weekly guided group mindfulness sessions in the classroom at school (45 minutes each) with individual short practice at home: (between five and six times per week, between 3 and 15 minutes per day)</p>	<p><b>Booster:</b> No</p>	<p><b>Quality assessment:</b> 1</p> <p><i>Intervention also evaluated by Johnson et al. (2017) and Johnson &amp; Wade (2019)</i></p>
Study Design	Results			
<p><b>Cluster RCT</b></p> <p><b>Country:</b> Finland</p> <p><b>Total sample size:</b> 3,519 students across 56 secondary schools</p> <p><b>34.3% attrition at FU</b></p> <p>50.2% female</p> <p><b>Age range:</b> 12–15 years</p> <p><b>Active Control:</b> Relaxation Intervention (9-week programme: each session in two sections: 1) relaxation exercises (breathing exercises, visualisation, emotion focus, rest); 2) group discussions about different topics (stress, relaxation, upsides and downsides of smartphones, sleep, exercising, food and attitudes)</p> <p><b>Inactive Control:</b> Usual school curriculum without intervention</p>	<p><b>Psychosocial wellbeing</b></p> <p>Significant effect on resilience. Significant improvements observed in intervention group compared to active control group (<math>\beta=1.183</math>, <math>SE=0.570</math>, <math>p&lt;0.050</math>) at post-intervention, but no significant improvements in intervention group compared to inactive control. No significant effect at six-month follow-up (<i>The Resilience Scale (RS14)</i>).</p> <ul style="list-style-type: none"> <li>Significant effect on resilience for students in 7th grade at six-month follow-up (<math>\beta=2.894</math>, <math>p&gt;0.050</math>), compared to students in 6th grade. Underpowered sub-group analyses suggest this was particularly true for girls (<math>\beta=3.127</math>, <math>p&lt;0.050</math>).</li> </ul>			
	<p><b>Psychosocial wellbeing</b></p> <p>No significant effect on social-emotional functioning at post-intervention or at six-month follow-up (<i>the Strengths and Difficulties Questionnaire (SDQ)</i>).</p>			
	<p><b>Depression</b></p> <p>No significant effect on depressive symptoms at post-intervention or six-month follow-up (<i>the Beck Depression Inventory (BDI)</i>).</p> <ul style="list-style-type: none"> <li>Underpowered sub-group analyses suggest significant effect on depressive symptoms in girls, not boys, at six-month follow up (<math>\beta=-0.493</math>, <math>p&lt;0.050</math>).</li> </ul>			

## Universal promotion interventions using a positive youth development approach

Allara et al.  
(2019)  
**Diario della Salute**  
[My Health Diary]

Description		
<p><b>Target level:</b> Universal</p> <p>The My Health Diary programme aims to improve students' wellbeing. The programme is made up of five sessions (each 2–4 hours) that explore emotional wellbeing, aggressive behaviours, health behaviours, interpersonal relationships and puberty (My emotions; Beyond stereotypes; Becoming men and women; Exploring the world of adults; Let's keep fit). The sessions are multimodal and include a combination of information giving, presentations, brainstorming, role-playing, worksheets, plenary discussions, group work and team games. Each session is designed to increase students' capability to recognise and manage emotions, improving interpersonal and communication skills, developing critical thinking, improve peer pressure resistance skills, and increase self-efficacy.</p>	<p><b>Facilitator:</b> Classroom teachers</p> <p><b>Format:</b> Normal classrooms (not specified) with interactive group sessions, individual worksheets and one homework session</p>	<p><b>Duration and frequency:</b> Five sessions lasting 2–4 hours each</p> <p><b>Booster:</b> No</p> <p><b>Quality assessment:</b> 2</p>
Study Design	Results	
<p><b>QED</b></p> <p><b>Country:</b> Italy</p> <p><b>Total sample size:</b> 3,476 students from 62 middle schools (156 classes)</p> <p><b>16.7 % attrition at FU</b></p> <p>50.1% female</p> <p><b>Mean age:</b> 12.1 years (SD=0.54)</p> <p><b>Control:</b> No intervention</p>	<p><b>Psychosocial wellbeing</b></p>	<p><b>Adverse effect:</b> Significant adverse effect on wellbeing (<math>p &lt; 0.05</math>) (<i>The WHO/Europe Health Behaviour in School-aged Children (HBSC) Symptom Checklist</i>).</p>
	<p><b>Psychosocial wellbeing</b></p>	<p>No significant effect on social acceptance (<i>three items designed by study authors</i>).</p>
	<p><b>Aggression</b></p>	<p>No significant effect on aggressive behaviour (<i>the Italian version of the Physical and Verbal Aggression Scale</i>).</p>

Universal promotion interventions using a positive youth development approach (cont.)

Avitsland et al. (2020)

**Physical Active Learning (PAL) and Don't worry, be happy**

Description				
<b>Target level:</b> Universal	<b>Facilitator:</b> PE teachers and student-led activities	<b>Duration and frequency:</b> PAL: 29 weekly physically active academic lessons (30 min/week), PA not connected to a curriculum (30 min/week), and one additional physical education (PE) lesson (45–60 min/week). Don't worry, be happy: 29 Weeks of one additional PE lesson (45–60 min/week) and one additional PA lesson (45–60 min/week)	<b>Booster:</b> No	<b>Quality assessment:</b> 1
<p>The PAL and 'don't worry, be happy' programmes are universal programmes that both adopt a positive youth development and physical activity approach to enhancing adolescent mental health. In the PAL intervention, students undertake weekly physically active academic lessons where the curriculum of the subject (for instance maths) is taught in a physically active manner; participate in additional physical activity sessions (30 minutes per week); and have an extra physical education lesson in addition to lessons offered in the core curriculum. The 'don't worry, be happy' programme involved one additional physical education lesson and one additional physical activity lesson.</p>				

Study Design	Results	
<p><b>Cluster RCT</b>  <b>Country:</b> Norway  <b>Total sample size:</b> 2,084 students from 29 lower secondary schools  <b>1.9% attrition at FU</b>                      49% female  <b>Age range:</b> 14–15 years  <b>Control:</b> No intervention</p>	<b>Psychosocial wellbeing</b>	<p>No significant effect on peer problems in the total sample (<i>Strength and Difficulties Questionnaire (SDQ) – Norwegian version</i>).</p> <ul style="list-style-type: none"> <li>• <b>Adverse effect:</b> Sub-analyses revealed adverse effect dependent on immigrant status (Norwegian Yes/No). Significant increase in peer problems in the non-immigrant group (b=0.32, p=0.034) post-intervention. Peer problems also significantly increased among non-immigrant girls (b=0.42, p=0.010).</li> <li>• <b>Adverse effect:</b> Sub-analyses revealed peer-problems significantly increased among students with elevated but sub-clinical (i.e. borderline) total SDQ scores (b=0.89, p=0.029).</li> </ul>
	<b>Psychological wellbeing</b>	<p>No significant effect on psychological problems and strengths in the total sample (<i>Strength and Difficulties Questionnaire (SDQ) – Norwegian version</i>).</p> <ul style="list-style-type: none"> <li>• Sub-group analyses show students with elevated SDQ scores (i.e. 'at risk' of developing a mental disorder), significantly reduced their scores by 22% post-intervention (b=-2.9, p=0.045).</li> </ul> <p>No significant effect on emotional problems in the total sample (<i>Strength and Difficulties Questionnaire (SDQ) – Norwegian version</i>).</p> <ul style="list-style-type: none"> <li>• Sub-group analyses show significant decreases in emotional problems among students from immigrant backgrounds in both the PAL intervention (b=-1.1, p=0.008) and the Don't worry, be happy intervention (b=-1.0, p=0.036) but not students from non-immigrant backgrounds (i.e. Norwegian).</li> </ul>
	<b>Behaviour</b>	<p>No significant effect on conduct problems (<i>Strength and Difficulties Questionnaire (SDQ) – Norwegian version</i>).</p> <p>Significant effect on hyperactivity for the PAL intervention group compared to control (p=0.009).</p>

Universal promotion interventions using a positive youth development approach (cont.)

<p>Larsen et al. (2019)  <b>The COMPLETE Project – single and multi-tier intervention (The Dream School Programme (DSP) and the Mental Health Support Team (MHST))</b></p>	<p><b>Description</b></p>				
	<p><b>Target level:</b> Universal and Targeted Indicated/Selective</p> <p>The DSP and MHST programmes aim to reduce mental health problems and loneliness. The DSP component adopts a whole-school approach involving all staff and students. The central activity is the dream class where students work with their teachers to discuss their ideal class environment and actions they can take to achieve this. Peer mentors, other students from upper-secondary grades (ages 16–19), aid in dream classes and are involved in creating meeting points for socialisation throughout the year. A resource group is trained with peer mentors and facilitate dream classes and follow up with peer leaders. The MHST component targets students with known mental health problems or those at risk of dropping out. It reorganises student services, for example making services accessible, enhancing the quality of school start, and mapping 1st year upper-secondary school student’s health and wellbeing for follow-up where needed.</p>	<p><b>Facilitator:</b></p> <p>Dream class: teachers, peer leaders, resource group (representatives from school management, staff and student council)</p> <p>MHST: Counsellors, school nurses and follow-up services staff</p> <p><b>Format:</b></p> <p>DSP only versus combined DSP with MHST versus control; whole-school work, classroom sessions (DSP) and targeted work for specific students (MHST)</p>	<p><b>Duration and frequency:</b></p> <p>Two dream classes, one in the first week of school, one at the beginning of the second semester of the school year</p>	<p><b>Booster:</b></p> <p>No</p>	<p><b>Quality assessment:</b></p> <p>1</p>
	<p><b>Study Design</b></p> <p>RCT</p> <p><b>Country:</b> Norway</p> <p><b>Total sample size:</b> 3,003 students from 17 upper secondary schools</p> <p><b>10.6% attrition at FU</b></p> <p>35% female</p> <p><b>Mean age:</b> 16.8 years</p> <p><b>Control:</b> No intervention</p>	<p><b>Results</b></p>			
	<p><b>Subjective wellbeing</b></p>	<p>No significant effect on loneliness (<i>the Loneliness Scale – Norwegian version</i>).</p> <ul style="list-style-type: none"> <li>• Increase in loneliness in control group (0.08), DSP group (0.7) and combined DSP &amp; MHST group (0.01).</li> </ul>			
	<p><b>Psychological wellbeing</b></p>	<p>No significant effect on combined symptoms of depression and anxiety (<i>short form of the Symptom Check List (SCL-5)</i>).</p> <ul style="list-style-type: none"> <li>• Increase in symptoms of anxiety and depression in the control group (0.08), DSP group (0.11) and combined DSP &amp; MHST group (0.06).</li> <li>• Significant effect of gender. Girls in the combined DSP &amp; MHST group showed significantly slowed increased mental health symptoms (-0.17, 95%CI -0.32, -0.01, p=0.003) compared to control group.</li> <li>• <b>Adverse effect:</b> Girls and boys both report increase in mental health symptoms at follow-up.</li> </ul>			

Universal promotion interventions using a positive youth development approach (cont.)

<p>Moore et al. (2018)</p> <p><b>Martial arts intervention</b></p>	<b>Description</b>				
	<p><b>Target level:</b> Universal</p> <p>The martial arts intervention adopts a positive youth development and physical activity approach to promoting young people's resilience and self-efficacy. Each intervention session included psychoeducation (topics, for example, included respect, goal setting, self-concept and self-esteem), warm-up activities, stretching activities, technical martial arts practice, pattern practice (a choreographed sequence of martial art movements), sparring and meditation.</p>	<p><b>Facilitator:</b> A psychologist and a Taekwondo instructor</p> <p><b>Format:</b> Delivered in a face-to-face group format</p>	<p><b>Duration and frequency:</b> Ten 50-minute sessions, once per week for 10 weeks</p>	<p><b>Booster:</b> No</p>	<p><b>Quality assessment:</b> 2</p>
	<b>Study Design</b>		<b>Results</b>		
<p><b>RCT</b></p> <p><b>Country:</b> Australia</p> <p><b>Total sample size:</b> 283 students from five secondary government catholic schools in New South Wales</p> <p><b>14.8% attrition at FU</b></p> <p>50.5% female</p> <p><b>Mean age:</b> 12.8 years</p> <p><b>Control:</b> Wait-list control</p>	<p><b>Psychosocial wellbeing</b></p>	<p>Significant effect on resilience total score (<math>\eta^2=0.12</math>, <math>p&lt;0.001</math>) (<i>the Child and Youth Resilience Measure (CYRM-28)</i>).</p> <ul style="list-style-type: none"> <li>Significant effect on individual capacities and resources subscale (<math>\eta^2=0.07</math>, <math>p&lt;0.001</math>).</li> <li>Significant effect on relationship with primary caregiver subscale (<math>\eta^2=0.09</math>, <math>p &lt;0.001</math>).</li> <li>Significant effect on contextual factors subscale (<math>\eta^2=0.09</math>, <math>p &lt;0.001</math>).</li> </ul> <p>Significant effect on self-efficacy total score (<math>\eta^2=0.08</math>, <math>p&lt;0.001</math>) (<i>Self-efficacy Questionnaire for Children (SEQ-C)</i>).</p> <ul style="list-style-type: none"> <li>Significant effect on social self-efficacy subscale (<math>\eta^2=0.04</math>, <math>p&lt;0.010</math>). NB: Intervention group had significantly increased social self-efficacy scores pre-intervention (<math>\eta^2= 0.03</math>, <math>p &lt;0.050</math>).</li> <li>Significant effect on emotional self-efficacy subscale (<math>\eta^2= 0.06</math>, <math>p&lt;0.001</math>).</li> </ul>			
	<p><b>Behaviour</b></p>	<p>No significant effect on psychological problem behaviour (<i>Strength and Difficulties Questionnaire (SDQ)</i>).</p>			

## Universal promotion interventions using mental health literacy approach

Ahmad et al.  
(2020)  
**Let's Erase the Stigma (LETS)**

Description		
<b>Target level:</b> Universal	<b>Facilitator:</b> Student-led, but overseen by a sponsor (member of school staff)	<b>Duration and frequency:</b> Most clubs met either weekly or biweekly; three clubs met monthly, and one met every two months
Let's Erase the Stigma (LETS) is a student-initiated programme designed to improve mental health literacy and reduce mental health stigma. It uses a psychoeducational and positive youth development approach. The programme involves the establishment of student-led school clubs, overseen by a member of staff, which allow students to design and engage in group-based activities and social action with the aim of enhancing humanisation and reducing the stigma of mental health. Student-led school clubs include activities such as: fundraising for mental health causes, educational videos and activities, social media activities/campaigns, and volunteer/community outreach activities, creating flyers during mental health awareness week/month, presenting information at school-wide assemblies, formulating recruitment activities to increase club membership, organising therapy animals to visit the school, and facilitating activities within the larger community (for instance participating in suicide awareness walks).	<b>Booster:</b> No	<b>Quality assessment:</b> 2
Study Design	Results	
<b>RCT</b> <b>Country:</b> US <b>Total sample size:</b> 731 students across 42 high schools <b>30.6% attrition at FU</b> 75% female <b>Mean age:</b> Not Reported <b>Control:</b> Wait-list control	<b>Mental health literacy</b>	Significant effect within groups on mental health knowledge. Significant improvements were observed in both the intervention (F (2,59.6)=3.4, p=0.039) and control group (F (2, 70.5)=23.8, p<0.001) over time ( <i>the Knowledge Scale</i> ). No significant effect on attitudes towards mental health over time ( <i>the Attitudes Scale</i> ).
	<b>Mental health stigma</b>	No significant effect on stigma and prejudice towards people with mental health conditions over time ( <i>the Social Distance Scale</i> ). No significant effect on the number of positive actions performed in past three months ( <i>the Positive Actions Scale</i> ).

Universal promotion interventions using mental health literacy approach (cont.)

<p>Andrés-Rodríguez et al. (2017) <b>'What's Up!'</b></p>	<b>Description</b>				
	<p><b>Target level:</b> Universal</p> <p>'What's up!' aims to enhance students' mental health literacy skills and reduce mental health stigma using a programme of educational and group-based social activities incorporated into the typical school curriculum. The units in the programme are delivered in the context of different school subjects: Language, Foreign Language, Sciences, Mathematics, Physical Education, and Culture and Ethical Values.</p>	<p><b>Facilitator:</b> Teachers</p> <p><b>Format:</b> Class-based: maximum 25 students per class; some exercises completed in individual and small groups</p>	<p><b>Duration and frequency:</b> Nine modules completed one per week for nine weeks</p>	<p><b>Booster:</b> No</p>	<p><b>Quality assessment:</b> 1</p>
	<b>Study Design</b>	<b>Results</b>			
<p><b>RCT</b></p> <p><b>Country:</b> Spain</p> <p><b>Total sample size:</b> 446 students across nine high schools</p> <p><b>13.7% attrition at FU</b></p> <p>52% female</p> <p><b>Mean Age:</b> 14.0 years</p> <p><b>Control:</b> No intervention</p>	<p><b>Mental health stigma</b></p>	<p>Significant effect on stereotypic attribution at post-intervention (<math>p &lt; 0.010</math>) and at nine-month follow-up (<math>p &lt; 0.010</math>), with a small effect (<i>Catalan version of the Stereotype Scale</i>).</p> <p>Significant effect on behavioural intentions of social acceptance at post-intervention (<math>p = 0.030</math>) and at nine-month follow-up (<math>p = 0.010</math>), with a small effect (<i>the Catalan version of the Social Acceptance Scale</i>).</p> <p>Significant effect on Stigma Related Behaviour at post-intervention (<math>p = 0.010</math>) and at nine-month follow-up (<math>p = 0.020</math>), with a small effect (<i>the Catalan version of the Reported and Intended Behaviour Scale (RIBS)</i>).</p>			

Universal promotion interventions using mental health literacy approach (cont.)

Campos et al.  
(2019)  
Finding Space

Description		
<p><b>Target level:</b> Universal</p> <p>Finding Space aims to enhance students' mental health literacy skills. Session one explores students' knowledge and beliefs about physical and mental health; the signs and impact of mental health problems; risk factors for mental health; symptoms, and signs of five mental disorders; and stigmatisation and inclusivity of mental health disorders. Session two aims to increase students' awareness of mental health problems and their impact; identify help-seeking options, including self-help strategies; and promote the use of mental health 'first aid' skills.</p>	<p><b>Facilitator:</b> One psychologist (assisted by student psychologist)</p> <p><b>Format:</b> Normal classes (20–25 students) lead by a single facilitator</p>	<p><b>Duration and frequency:</b> Two sessions delivered at one-week intervals each lasting 90 minutes</p> <p><b>Booster:</b> No</p> <p><b>Quality assessment:</b> 1</p>
Study Design	Results	
<p><b>RCT</b></p> <p><b>Country:</b> Portugal</p> <p><b>Total sample size:</b> 543 students in 22 classes from eight schools</p> <p><b>28.7 % attrition at FU</b></p> <p>48% female</p> <p><b>Mean age:</b> 13 years</p> <p><b>Control:</b> No intervention (option for intervention waiting list)</p>	<p><b>Mental health literacy</b></p>	<p>Significant effect on mental health literacy at six-month follow-up (<math>\beta=7.707</math>; <math>p&lt;0.001</math>). Students who did not know someone with a mental health problem had smaller improvements than students who knew someone with a mental health condition. Overall, authors suggest older students, female students and students from state-funded schools may benefit more from the intervention (<i>the Mental Health Literacy Questionnaire</i>).</p> <ul style="list-style-type: none"> <li>• Significant effect on knowledge/stereotypes subscale at six-month follow-up (<math>\beta=5.69</math>, <math>p&lt;0.001</math>).</li> <li>• Significant effect on first aid skills and help seeking subscale at six-month follow-up (<math>\beta=0.74</math>, <math>p=0.017</math>).</li> <li>• Significant effect on self-help strategies subscale at six-month follow-up (<math>\beta=1.24</math>, <math>p&lt;0.001</math>).</li> </ul>

Universal promotion interventions using mental health literacy approach (cont.)

<p>DeLuca et al. (2020)</p> <p><b>Ending the Silence (ETS)</b></p>	<b>Description</b>				
	<p><b>Target level:</b> Universal</p> <p>Ending the Silence (ETS) is a public health education programme. It consists of a single session that aims to increase students' mental health literacy and awareness of mental health stigma. The session presents information on mental health and mental health stigma, and includes a personal story from someone with lived experience.</p>	<p><b>Facilitator:</b> Trained programme providers</p> <p><b>Format:</b> Classroom based (group size not reported)</p>	<p><b>Duration and frequency:</b> Single session presentation lasting 35–40 minutes</p>	<p><b>Booster:</b> No</p>	<p><b>Quality assessment:</b> 2</p> <p><i>Intervention also evaluated by Wahl et al. (2019)</i></p>
	<b>Study Design</b>	<b>Results</b>			
<p><b>RCT</b></p> <p><b>Country:</b> US</p> <p><b>Total sample size:</b> 206 students in one public high school</p> <p><b>17% attrition at FU</b></p> <p>56.2% female</p> <p><b>Mean age:</b> 15.4 years</p> <p><b>Control:</b> Active control of a presentation about careers in psychology, matched in duration and setting</p>	<p><b>Mental health stigma</b></p>	<p>Significant effect on negative stereotypes toward persons with mental health problems at post-intervention (<math>p &lt; 0.0005</math>), four-week follow-up (<math>p = 0.024</math>), but not at eight-week follow-up (<i>the Attitudes about Mental Illness and Its Treatment Scale (AMIS)</i>).</p> <p>No significant effect on mental health stigma at post-intervention, four-week or eight-week follow-up (<i>the 4-item Categorical Thinking subscale of the Attitudes Toward Serious Mental Illness Adolescent Version</i>).</p> <p>No significant effect on intended social distancing behaviours at post-intervention, four-week or eight-week follow-up (<i>the Reported and Intended Behaviour Scale (RIBS)</i>).</p> <p>Significant effect on stigma-related mental health knowledge at post-intervention (<math>p = 0.026</math>), four-week follow-up (<math>p = 0.010</math>) and at eight-week follow-up (<math>p = 0.034</math>), with small-medium effect size (<math>d = 0.24</math>) (<i>The Mental Health Knowledge Schedule</i>).</p> <p>No significant effect on emotional responses towards a hypothetical student with mental illness at post-intervention, four-week or eight-week follow-up (<i>the revised Attribution Questionnaire (r-AQ)</i>).</p> <p>No significant effect on peer support intentions at post-intervention, four-week or eight-week follow-up (<i>the Peer Support scale</i>).</p> <p>Significant effect on perceived stigma students anticipate from those they interact with at post-intervention (<math>p = 0.032</math>), but not at four-week or eight-week follow-up (<i>the Perceptions of Stigmatization by Others for Seeking Help scale (PSOSH)</i>).</p> <p>No significant effect on feelings of inadequacy and inferiority for seeking mental health treatment at post-intervention, four-week or eight-week follow-up (<i>the Self-Stigma of Seeking Help scale (SSOSH)</i>).</p> <p>Significant effect on disclosure worries about confidentiality in regard to mental health services at eight-week follow-up (<math>p = 0.003</math>), but not at post-intervention or four-week follow-up (<i>the Disclosure Expectations Scale (DES)</i>).</p>			
	<p><b>Help-seeking</b></p>	<p>No significant effect on mental health help-seeking intentions at post-intervention, four-week or eight-week follow-up (<i>the Intentions to Seek Counselling Inventory (ISCI)</i>).</p>			

Universal promotion interventions using mental health literacy approach (cont.)

<p>Hart et al. (2018) and Hart et al. (2019)</p> <p><b>Teen Mental Health First Aid (Teen MHFA)</b></p>	<b>Description</b>				
	<p><b>Target level:</b> Universal</p> <p>Teen Mental Health First Aid is a psychoeducational programme that aims to prevent poor mental health outcomes by developing students' first aid skills so they can provide first aid to peers and individuals who develop a mental health problem or experience a mental health crisis, until appropriate professional help is received, or the crisis resolves. Training is multimodal (presentations, videos, role-plays, group discussion, small group and workbook activities) and focuses on developing knowledge and skills in recognising mental health problems, talking about mental health and appropriate help-seeking. A core message of the training encourages students to seek help from a trusted and reliable adult, so the training programme was also offered to staff and parents at participating schools.</p>	<p><b>Facilitator:</b> Youth Mental Health instructors</p> <p><b>Format:</b> Classroom-based groups of 20-25 students</p>	<p><b>Duration and frequency:</b> Three sessions, one per week each lasting 75-minutes</p>	<p><b>Booster:</b> No</p>	<p><b>Quality assessment:</b> 3</p>
	<b>Study Design</b>	<b>Results</b>			
	<p><b>Cluster-RCT</b></p> <p><b>Country:</b> Australia</p> <p><b>Total sample size:</b> 1,942 students across four public schools</p> <p><b>42.5% attrition at FU</b></p> <p>44.7% Female</p> <p><b>Mean age:</b> 15.9 years</p> <p><b>Control:</b> Active control: Physical First Aid course to match duration and intensity of intervention group</p>	<p><b>Mental health literacy</b></p>	<p>Significant effect on mental health literacy (<i>purposed designed surveys</i>).</p> <ul style="list-style-type: none"> <li>Significant effect on intention to use mental health first aid (p&lt;0.001).</li> <li>Significant effect on confidence in being able to provide mental health first aid (p&lt;0.001).</li> <li>Significant effect on recognising suicidality at post-intervention (p=0.020), but not at 12-month follow-up.</li> <li>Significant effect on providing adequate suicide first aid response (p&lt;0.001) post-intervention and at 12-month follow-up (p&lt;0.001).</li> <li>Significant improvement on avoidance of talking about suicide at post-intervention (p&lt;0.001) and at 12-month follow-up (p&lt;0.001).</li> </ul>		
	<p><b>Mental health stigma</b></p>	<p>Significant effect on mental health stigma (<i>the Social Distance Scale and the Depression Stigma Scale modified for use with vignettes</i>).</p> <ul style="list-style-type: none"> <li>Significant effect on social distance subscale (p&lt;0.001).</li> <li>Significant effect on weak-not-sick subscale (p&lt;0.001).</li> <li>Significant effect on dangerous subscale (p&lt;0.001).</li> <li>Significant effect on reporting suicidality subscale (p&lt;0.001).</li> </ul>			
	<p><b>Psychological wellbeing</b></p>	<p>No significant effect on psychological distress at 12-month follow-up (<i>the Kessler 6-item Psychological Distress Scale</i>).</p>			

Universal promotion interventions using mental health literacy approach (cont.)

Howard et al. (2019)  
**Brief Biologically-based Psychoeducational Intervention**

Description		
<p><b>Target level:</b> Universal</p> <p>An online psychoeducational programme which aims to change students' beliefs about the causes of depression, to reduce mental health stigma and increase intentions for mental health help-seeking. Students receive one of two interventions: a biological-based education programme advocating that depression is predominantly biologically caused, or a psychosocial-based education programme advocating for depression as having psychosocial causes. The intervention suggests that attributing depression to biological causes will reduce depression stigma by attributing mental health symptoms to something other than self, and outside the control of the individual. The online sessions describe the causes of depression (either biological or psychosocial) and provide a vignette of a person who met the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) criteria for major depression.</p>	<p><b>Facilitator:</b> Students complete the intervention individually online</p> <p><b>Format:</b> Individual completion online in a classroom</p>	<p><b>Duration and frequency:</b> A single session intervention lasting 40 minutes</p> <p><b>Booster:</b> No</p> <p><b>Quality assessment:</b> 1</p>
Study Design	Results	
<p><b>RCT</b></p> <p><b>Country:</b> Australia</p> <p><b>Total sample size:</b> 351 students across two catholic schools</p> <p><b>6.6 % attrition</b></p> <p>47% female</p> <p><b>Median age:</b> 16 years</p> <p><b>Control:</b> Educational session providing neutral information on the symptoms and causes of depression</p>	<p><b>Mental health literacy</b></p>	<p>Significant effect on attributions of depression. Compared to the control group, students in the biological intervention had significant increases in believing depression had a biological cause (<math>p &lt; 0.001</math>, <math>d = 0.79</math>) and students in the psychosocial intervention group showed significant increases in attributing depression as having a psychosocial cause (<math>p &lt; 0.001</math>, <math>d = 0.06</math>) (<i>adapted versions of the Biological Attribution Scale (BAS) and Psychological Blame Scale (PBS)</i>).</p>
	<p><b>Help-seeking</b></p>	<p>Significant effect on intentions for help-seeking. Compared to the control group, students in the biological intervention showed significant improvement in help-seeking intentions (<math>p = 0.014</math>, <math>d = 0.24</math>). No significant effect in the psychosocial intervention group (<i>the General Help-seeking Questionnaire</i>).</p>
	<p><b>Mental health stigma</b></p>	<p>No significant effect on anticipated internalised stigma about own depressive symptoms (<i>the 16-item Self-Stigma for Depression Scale</i>).</p> <p>No significant effect on stigma attitudes towards others with depression (<i>the 'Personal' subscale of the Depression Stigma Scale</i>).</p>

Universal promotion interventions using mental health literacy approach (cont.)

Link et al. (2020)  
Eliminating the Stigma of Differences (ESD)

Description		
<b>Target level:</b> Universal	<b>Facilitator:</b> Physical education teachers <b>Format:</b> Classes (not specified)	<b>Duration and frequency:</b> Three one-hour sessions delivered within one week <b>Booster:</b> No <b>Quality assessment:</b> 1
Eliminating the Stigma of Differences (ESD) aims to reduce the stigma associated with mental health conditions and subsequently increase the likelihood that adolescents will seek help for mental health problems when needed. Each session involves an interactive component, group discussion and homework exercises and address specific topics of stigma and mental health, barriers to treatment seeking, and mental health conditions (definition, description, causes and treatments).		
Study Design	Results	
<b>RCT</b> <b>Country:</b> US <b>Total sample size:</b> 751 students across 19 classes in 14 schools <b>25.0% attrition at FU</b> 56% female <b>Mean age:</b> 11.5 years <b>Control:</b> Two active control conditions: 1) Printed materials, posters and written materials provided to students; 2) Contact: two people diagnosed with mental health conditions delivered 10-minute presentation about their experiences, followed by facilitated group discussion, and one inactive control (no intervention)	<b>Mental health literacy</b>	No significant effect on knowledge and attitudes towards mental health comparing the intervention to either of the two active or one inactive control group, across time ( <i>the Knowledge and Positive Attitudes measure</i> ). • Significant effect in the intervention group across time (d=0.35; p<0.001), compared to all control arms collapsed into one group.
	<b>Mental health stigma</b>	No significant effect on willingness to interact with someone identified as having a mental illness comparing the intervention to either of the two active or one inactive control group, across time ( <i>the Children's Social Distance Scale</i> ). • Significant effect in the intervention group across time (d=0.16; p<0.050), compared to all control arms collapsed into one group.
	<b>Help-seeking</b>	Significant effect on mental health treatment seeking across time. Students with high symptom levels were significantly more likely to seek help (OR=3.90, 95%CI 1.09, 13.87) than students assigned to any other control group (active or inactive) ( <i>measured dichotomously (yes or no) by asking students whether they had taken medicine for a mental health problem or talked to a therapist or counsellor about a mental health problem</i> ).
	<b>Psychological wellbeing</b>	No significant effect on mental health symptoms across time ( <i>21 questions from the National Institute of Mental Health Diagnostic Interview Schedule for Children (DISC)</i> ).

Universal promotion interventions using mental health literacy approach (cont.)

Lubman et al. (2020) MAKINGtheLINK	<b>Description</b>				
	<p><b>Target level:</b> Universal</p> <p>MAKINGtheLINK aims to increase help-seeking behaviour for mental health issues by improving mental health literacy, identifying barriers to help-seeking behaviour with appropriate solutions, and improving awareness of mental health conditions. Activities focus on recognising mental health crises, identifying help available, and addressing myths about mental health and substance abuse.</p>	<p><b>Facilitator:</b> Not Reported</p> <p><b>Format:</b> Secondary school classrooms (not specified)</p>	<p><b>Duration and frequency:</b> Five interactive sessions over two class periods</p>	<p><b>Booster:</b> Yes: One booster one month post-intervention to reiterate key messages</p>	<p><b>Quality assessment:</b> 1</p>
	<b>Study Design</b>	<b>Results</b>			
<p><b>RCT</b></p> <p><b>Country:</b> Australia</p> <p><b>Total sample size:</b> 2,447 students across 22 Government, Catholic or Independent schools</p> <p><b>25.2 % attrition at FU</b></p> <p>50.3% female</p> <p><b>Age group:</b> 14–15 years</p> <p><b>Control:</b> Wait-list control</p>	<b>Help-seeking</b>	<p>No significant effect on overall help-seeking at 12-month follow-up (<i>an adapted version of the Actual Help Seeking Questionnaire (AHSQ)</i>).</p> <ul style="list-style-type: none"> <li>• No significant effect on help-seeking for depression at 12-month follow-up.</li> <li>• No significant effect on help seeking for stress and anxiety at 12-month follow-up.</li> <li>• No significant effect on help seeking for alcohol/other drugs at 12-month follow-up.</li> </ul> <p>Significant effect on formal help-seeking at 12-month follow-up (OR=1.81, p=0.005) (<i>an adapted version of the Actual Help Seeking Questionnaire (AHSQ)</i>).</p> <ul style="list-style-type: none"> <li>• Significant effect on formal help-seeking for depression at 12-month follow-up (OR=2.09, p=0.01).</li> <li>• Significant effect on formal help-seeking for stress and anxiety at 12-month follow-up (OR=1.72, p&lt;0.006).</li> </ul> <p>No significant effect on likelihood of seeking professional help at six-week, six-month or 12-month follow-up (<i>one purpose-designed item</i>).</p> <p>No significant effect on psychological barriers to seeking support at six-week, six-month or 12-month follow-up (<i>brief version of the Barriers to Adolescents Seeking Help Questionnaire</i>).</p> <p>Significant effect on confidence in ability to help a peer seek support at six weeks (OR=1.71, p&lt;0.001) and six months (OR=1.45, p=0.006), but the effect was not sustained to 12-month follow-up (<i>one purpose-designed dichotomous item</i>).</p>			

Universal promotion interventions using mental health literacy approach (cont.)

<p>Swartz et al. (2017) and Townsend et al. (2019)</p> <p><b>Adolescent Depression Awareness Program (ADAP)</b></p>	<b>Description</b>				
	<p><b>Target level:</b> Universal</p> <p>Adolescent Depression Awareness Program (ADAP) aims to increase student's depression literacy skills. The core modules of the intervention cover the topics of identifying symptoms of depression, understanding the process of medical decision-making; seeing parallels between depression and other medical illnesses, recognising suicide as a potential consequence of depression, understanding that depression is a treatable medical illness. ADAP focuses on increasing depression literacy as the first step in encouraging youths to seek treatment.</p>	<p><b>Facilitator:</b> School personnel (usually health education teachers)</p> <p><b>Format:</b> Classes (not specified)</p>	<p><b>Duration and frequency:</b> Three hourly sessions designed to be taught in two or three consecutive health classes as part of the health education curriculum</p>	<p><b>Booster:</b> No</p>	<p><b>Quality assessment:</b> 3</p>
	<b>Study Design</b>	<b>Results</b>			
	<p><b>RCT</b></p> <p><b>Country:</b> US</p> <p><b>Total sample size:</b> 6,679 students across 54 schools</p> <p><b>46.7 % attrition at FU</b></p> <p>51.0% female</p> <p><b>Age Range:</b> 14–15 years</p> <p><b>Control:</b> Wait-list control</p>	<p><b>Mental health literacy</b></p> <p>Significant effect on depression literacy at six weeks post-intervention (aOR=3.10; p&lt;0.001; 95%CI 2.0, 5.0) and at four-month follow-up (aOR=3.30; p&lt;0.001; 95% CI 2.2, 5.0) (<i>the Adolescent Depression Knowledge Questionnaire</i>).</p> <ul style="list-style-type: none"> <li>Girls were significantly more likely to be depression literate at six weeks post-intervention (aOR=1.50; p&lt;0.001; 95%CI 1.30, 1.60) than boys. This effect was maintained at four-month follow-up.</li> </ul>	<p><b>Mental health stigma</b></p> <p>No significant effect on mental health stigma at six weeks post-intervention or at four-month follow-up (<i>the Reported and Intended Behaviour Scale (RIBS) modified for use in adolescents</i>).</p> <ul style="list-style-type: none"> <li>Girls were less likely to have high mental health stigma at six weeks post-intervention (aOR=0.50; p=0.001; 95%CI 0.30,0.70), which was maintained to four-month follow-up.</li> </ul>	<p><b>Help-seeking</b></p> <p>No significant effect on mental health service use at six weeks post-intervention or at four-month follow-up (<i>the Child and Adolescent Services Assessment</i>).</p>	

Universal promotion interventions using mental health literacy approach (cont.)

<p>Wahl et al. (2019) National Alliance on Mental Illness - Ending the Silence (NAMI - ETS)</p>	<b>Description</b>				
	<p><b>Target level:</b> Universal</p> <p>NAMI-ETS offers a single session presentation that aims to increase student's mental health literacy. The presentation provides facts about youth mental illness, describes warning signs of mental health conditions, discusses what one should do in response to such warning signs, encourages acceptance of mental health conditions, and urges action to reduce stigma. Key messages include: 1) mental illness is a medical illness like any other physical illness, 2) there are specific observable signs of mental health conditions, and 3) if you notice these warning signs in yourself or a friend it is important to tell a trusted adult as soon as possible.</p>	<p><b>Facilitator:</b> Trained programme provider</p> <p><b>Format:</b> Classroom-based (not specified)</p>	<p><b>Frequency and number of sessions:</b> One 50-minute presentation</p>	<p><b>Booster:</b> No</p>	<p><b>Quality assessment:</b> 3</p> <p><i>Intervention also evaluated by DeLuca et al. (2020)</i></p>
	<b>Study Design</b>		<b>Results</b>		
<p><b>QED</b></p> <p><b>Country:</b> US</p> <p><b>Total sample size:</b> 932 students across 10 schools</p> <p><b>Attrition not reported</b> 54.5% female</p> <p><b>Mean age:</b> 14.7 years</p> <p><b>Control:</b> No intervention</p>	<p><b>Mental health literacy</b></p>	<p>• Significant effect on students' knowledge and attitudes towards mental health at post-intervention (d=1.30) and at six-week follow-up (d=0.78) (<i>the NAMI Questionnaire</i>).</p>			

## Universal promotion interventions using 'Other' approaches

Stapleton et al. (2019)  
**Emotional Freedoms Technique (EFT)**

Description		
<p><b>Target level:</b> Universal</p> <p>The emotional freedoms technique is a therapeutic technique designed to improve students' self-esteem and resilience, decrease their fear of failure and emotional difficulties. The programme consists of five sessions and covers using EFT to target limiting beliefs, academic fears and anxiety, limiting expectations and goal setting for the future.</p>	<p><b>Facilitator:</b> Trained programme providers (a clinical psychologist and a psychotherapist)</p> <p><b>Format:</b> Not reported</p>	<p><b>Duration and frequency:</b> Five weekly sessions of 75-minute duration during normal school hours</p> <p><b>Booster:</b> No</p> <p><b>Quality assessment:</b> 3</p>
Study Design	Results	
<p><b>QED</b></p> <p><b>Country:</b> Australia</p> <p><b>Total sample size:</b> 204 students from two high school cohorts</p> <p><b>Attrition not reported</b></p> <p><b>Mean age:</b> 14.8 years</p> <p><b>Control:</b> Wait-list control</p>	<b>Psychosocial wellbeing</b>	No significant effect on resilience post-intervention. No comparison against effect in control group ( <i>the Conners-Davidson Resilience Scale (CD-RISC)</i> ).
	<b>Subjective wellbeing</b>	No significant effect on self-esteem post-intervention. No comparison against effect in control group ( <i>the Rosenberg Self-Esteem Scale (RSES)</i> ).
	<b>Psychological wellbeing</b>	No significant effect on emotional difficulties ( <i>the Strengths and Difficulties Questionnaire for ages 11–17 (SDQ)</i> ). Significant effect within but not between groups on fear of failure. No comparison against effect in control group ( <i>the Performance Failure Appraisal Index-Short Form (PFAI)</i> ). <ul style="list-style-type: none"> <li>Significant reduction within the intervention group (<math>\eta^2=0.09</math>, <math>p=0.020</math>) up to 12-month follow-up.</li> </ul>

Universal promotion interventions using 'Other' approaches (cont.)

Umaña-Taylor et al. (2018a, 2018b)  
**The Identity Project**

Description	
<p><b>Target level:</b> Universal</p> <p>The Identity Project is designed to engage students in ethnic-racial identity exploration. The programme is based on the premise that allowing students to explore their own ethnic-racial identity, and understand how this part of self-identity forms one's sense of self, will provide a clearer sense of inner identity of who they are and who they can become. The programme follows weekly sessions with students exploring their ethnic-racial identity including unpacking identity, group differences, family history, symbols and traditions, and storyboarding identity journeys.</p>	<p><b>Facilitator:</b> Researcher-led</p> <p><b>Format:</b> School classroom (size not specified)</p> <p><b>Duration and frequency:</b> An eight-week curriculum with one session a week, each lasting 55 minutes, delivered as part of regular school lessons</p> <p><b>Booster:</b> No</p> <p><b>Quality assessment:</b> 1</p>
Study Design	Results
<p><b>RCT</b></p> <p><b>Country:</b> US</p> <p><b>Total sample size:</b> 218 students across eight public high schools</p> <p><b>22.1% attrition at FU</b></p> <p>50% female</p> <p><b>Mean age:</b> 15.0 years</p> <p><b>Control:</b> Attention control group: Careers lessons focused on exposing students to educational and career opportunities after high school.</p>	<p><b>Psychosocial wellbeing</b></p> <p>Significant effect on Ethnic Racial Identity (ERI).</p> <ul style="list-style-type: none"> <li>Minority ethnic students (Black or African American, Latino, Asian American, American Indian or Native American) had higher ERI exploration scores (<math>\beta=-0.40</math>, <math>SE=0.06</math>, <math>p&lt;0.001</math>, <math>d=0.95</math>), and ERI resolution scores (<math>\beta=-0.17</math>, <math>SE=0.07</math>, <math>p=0.016</math>, <math>d=0.35</math>) than white majority students, showing the intervention had greater improvements among minority ethnic students (<i>Brief Ethnic Identity Scale, purpose designed questionnaire</i>). <p>Significant effect on Global Identity Cohesion (<math>\beta=1.41</math>; 95%CI 0.16; 4.13) through increases in Ethnic Racial Identity Exploration and Resolution (<i>the Erikson Psychosocial Stage Inventory</i>).</p> <p>Significant effect on self-esteem (<math>\beta=1.63</math>; 95%CI 0.22; 4.61) through increases in Ethnic Racial Identity Exploration and Resolution (<i>the Rosenberg Self-Esteem Scale</i>).</p> </li></ul>
	<p><b>Academic achievement</b></p> <p>No significant effect on academic engagement (<i>the Engagement vs. Disaffection with Learning: Student Report Scale</i>).</p> <p>Significant effect on academic achievement through increases in Ethnic Racial Identity Exploration and Resolution (<math>\beta=2.64</math>; 95%CI 0.34; 8.11) (<i>Students' grades in Math, English, Science, and Social Studies rated on a frequency scale</i>).</p>
	<p><b>Depression</b></p> <p>Significant effect on depressive symptoms (<math>\beta=-0.83</math>; 95%CI -2.93; -0.06) through increases in Ethnic and Racial Identity Exploration and Resolution (<i>the Centre for Epidemiological Studies Depression Scale</i>).</p>
	<p><b>Other: Group orientation</b></p> <p>No significant effect on group orientation (<i>the Other Group Orientation Subscale of Multigroup Ethnic Identity Measure</i>).</p>

## Targeted selective promotion interventions using an SEL approach

Dowling et al. (2019)  
The MindOut Programme

Description		Facilitator:	Duration and frequency:	Booster:	Quality assessment:
<p><b>Target level:</b> Universal programme implemented and evaluated with selective sample – disadvantaged schools in Ireland.</p> <p>The MindOut Programme adopts an SEL approach and aims to promote social and emotional wellbeing. The programme employs interactive teaching strategies (such as collaborative learning) to engage students in a number of skill-building activities, such as identifying and managing emotions, coping with challenges, overcoming negative thinking, communication, empathy and relationship skills. There is also a whole-school element where school staff are provided with a menu of strategies for promoting social and emotional development.</p>		<p>Teachers in the Social Personal Health Education (SPHE) curriculum</p> <p><b>Format:</b> Usual classroom during SPHE curricular lessons, whole-school resources and at-home activities</p>	<p>13 weekly sessions</p>	<p>No</p>	<p>1</p>
Study Design	Results				
<p><b>Cluster RCT</b> <b>Country:</b> Ireland <b>Total sample size:</b> 497 students from 32 disadvantaged schools <b>35.8% attrition at FU</b> 51.1% female <b>Mean age:</b> 15.9 years <b>Control:</b> Usual Social Personal Health Education curriculum</p>	<b>Psychosocial wellbeing</b>	<p>Significant effect on emotional regulation post-intervention, but not at 12-month follow-up. Students in the high implementation group showed significant decreased in emotion suppression (<math>p=0.035</math>) compared to control group. No significant effect observed in the low implementation group (<i>the Emotional Regulation Questionnaire</i>).</p> <p>Significant effect on coping skills at post-intervention and 12-month follow-up. Students in the high implementation group showed significantly lower levels of avoidance coping post-intervention (<math>p=0.006</math>) and at 12-month follow-up (<math>p=0.033</math>).</p> <p>Significant effect on social support coping post-intervention (<math>p=0.009</math>). Students in the high implementation group showed significantly increased levels of social support coping compared to control (<i>Coping Strategy Indicator (CSI-15)</i>).</p> <p>No significant effect on self-efficacy (<i>Self-Efficacy Questionnaire (SEQC)</i>).</p> <p>No significant effect on emotional intelligence (<i>Trait Meta-Mood Scale (TMMS)</i>).</p> <p>No significant effect on asserting influence and conflict resolution (<i>Adolescent Interpersonal Competence Questionnaire (AICQ)</i>).</p> <p>No significant effect on decision making (<i>Making Decisions in Everyday Life Scale</i>).</p> <p><i>NOTE: Additional sub-analyses available in full text.</i></p>			
	<b>Subjective wellbeing</b>	<p>No significant effect on self-esteem (<i>the Rosenberg Self-esteem Scale</i>).</p> <p>No significant effect on mental wellbeing (<i>14-item Warwick Edinburgh Mental Wellbeing Scale (WEMWBS)</i>).</p> <p><i>NOTE: Additional sub-analyses available in full text.</i></p>			
	<b>Psychological wellbeing</b>	<p>Significant effect on depression at post-intervention (<math>p=0.030</math>), but not at 12-month follow-up. The high implementation intervention group showed significantly lower levels of depression (<math>p=0.025</math>) (<i>Depression Anxiety Stress Scale (DASS-21)</i>).</p> <p>No significant effect on anxiety at post-intervention or 12-month follow-up. At post-intervention, significant reduction on anxiety found in female participants only (<math>p=0.044</math>), but not at 12-month follow-up (<i>Depression Anxiety Stress Scale (DASS-21)</i>).</p> <p>Significant effect on stress at post-intervention (<math>p=0.017</math>), but no effect at follow-up. In the high implementation intervention group, significant reduction in stress (<math>p=0.012</math>) compared to control. No significant effect observed in the low implementation group post-intervention or at 12-month follow-up (<i>Depression Anxiety Stress Scale (DASS-21)</i>).</p> <p><i>NOTE: Additional sub-analyses available in full text.</i></p>			
	<b>Academic</b>	<p>No significant effect on school achievement motivation (<i>School Achievement Motivation Rating Scale (SAMRS)</i>).</p> <p>No significant effect on attitudes towards school at post-intervention or 12-month follow-up. In the high implementation intervention group compared to the low implementation group students experienced significantly more positive attitudes towards school (<math>p=0.022</math>) (<i>the Attitudes Towards School Scale</i>).</p>			

## Targeted selective promotion interventions using a mindfulness approach

Duthely et al.  
(2017)  
**Gratitude  
Meditation**

Description		
<p><b>Target level:</b> Universal programme implemented and evaluated with selective sample – schools in a low-income area in the US.</p> <p>Gratitude Meditation is designed to promote adolescent life satisfaction, school identity and gratitude. The intervention uses a heart-centred meditation technique, which focuses on visualisations of gratitude and positive emotions. The intervention works on the idea that practising this meditation cultivates positive emotions of peace and gratitude, which will increase life satisfaction and happiness. Students are guided through breathing and relaxation exercises, visualisations and concentration techniques, where they are encouraged to focus on objects (such as dots, flowers, candle flame) and invoke themes and feelings of peace, serenity and gratitude. The programme relies on a manualised handbook: <i>The Jewels of Happiness: Inspiration and Wisdom to Guide Your Life-Journey</i>.</p>	<p><b>Facilitator:</b> Researcher-led (lead author)</p> <p><b>Format:</b> Classroom-based (group size not reported)</p>	<p><b>Duration and frequency:</b> Eleven sessions, lasting between 15 and 20 minutes</p> <p><b>Booster:</b> No</p> <p><b>Quality assessment:</b> 2</p>
Study Design	Results	
<p><b>QED</b></p> <p><b>Country:</b> US</p> <p><b>Total sample size:</b> 75 students in a public middle school in a low-income area</p> <p><b>19.1% attrition at FU</b></p> <p>58.2% female</p> <p><b>Mean age:</b> Not reported</p> <p><b>Control:</b> No intervention</p>	<p><b>Subjective wellbeing</b></p>	<p>Significant effect on life satisfaction (<math>p=0.017</math>, <math>\eta^2=0.104</math>) (<i>the Huebner's Students' Life Satisfaction Scale (SLSS)</i>). Significant effect on gratitude (<math>p&lt;0.001</math>, <math>\eta^2=0.243</math>) (<i>the Gratitude Questionnaire-Six-Item Form (GQ-6)</i>).</p>
	<p><b>Academic</b></p>	<p>Significant effect on school satisfaction (<math>p=0.001</math>, <math>\eta^2=0.185</math>) (<i>the School Satisfaction Subscale (SSS) of the Multidimensional Students' Life Satisfaction Scale (MSLSS)</i>).</p>

Targeted selective promotion interventions using a mindfulness approach (cont.)

Felver et al. (2019)  
**Learning to BREATHE (L2B)**

Description				
<p><b>Target level:</b>                      Target level: Universal programme implemented and evaluated with a selective sample: adolescents at-risk of poor outcomes (72% of students were classified as socioeconomically disadvantaged and the school had a low graduation rate (61%)).</p> <p>Learning to Breathe (L2B) aims to promote student’s wellbeing and learning outcomes by increasing students’ emotional regulation, stress management, compassion and executive function through a mindfulness approach. Students are guided through six meditation sessions, which each cover a different topic: body awareness; understanding and working with feelings; increasing awareness of thoughts, feelings and bodily sensations; reducing harmful self-judgments; cultivating positive emotions and mindfulness training in daily life; and cultivating emotional balance and empowerment through meditation. Between guided sessions, students could listen to a brief five-minute audio recording of a mindfulness session guided by the lead author.</p>	<p><b>Facilitator:</b>                      Researcher-led (study authors)</p> <p><b>Format:</b> Group class sessions (not specified)</p>	<p><b>Duration and frequency:</b>                      Six sessions, each 48 minutes long, delivered over nine weeks</p>	<p><b>Booster:</b>                      Students instructed to practise mindfulness exercises at home following the intervention; only four students reported continued practice outside of the intervention</p>	<p><b>Quality assessment:</b>                      2  <i>Intervention also evaluated by Lam &amp; Seiden (2019) and Fung et al. (2019)</i></p>

Study Design	Results	
<p><b>Cluster-RCT</b>  <b>Country:</b> US  <b>Total sample size:</b> 29 students from a public high school  <b>20.7% attrition at FU</b>                      67% female  <b>Mean age:</b> 16.4 years  <b>Control:</b> Health education programming delivered by a health teacher</p>	<p><b>Psychosocial wellbeing</b></p>	<p>Significant effect on student resilience. Students in the control group had significantly lower scores post-intervention (p=0.013) (<i>the Social-Emotional Assets and Resilience Scales (SEARS-SF)</i>).</p>
	<p><b>Behaviour</b></p>	<p>No significant effect on behavioural difficulties (<i>the 28-item Behaviour Assessment System for Children</i>).</p>
	<p><b>Academic</b></p>	<p>No significant effect on student attendance at school (<i>the total number of absences from school pre- and post-intervention</i>).                      No significant effect on students’ academic grade (<i>grades across all of their classes summed and averaged on a 100-point scale pre- and post-intervention</i>).</p>

Targeted selective promotion interventions using a mindfulness approach (cont.)

Frank et al. (2017)  
**Transformative Life Skills (TLS)**

Description		
<p><b>Target level:</b>                      Universal programme implemented and evaluated with a selective sample: high-poverty catchment area of an inner city in the US.</p> <p>Transformative Life Skills (TLS) is aimed at reducing students' stress and promoting social-emotional physical wellness. The intervention combines yoga and mindfulness practice to offer a combined mindfulness and physical activity approach. Lessons in the programme are divided into four units which focus on topics of: stress management, body and emotional awareness, self-regulation and building healthy relationships. Each unit includes 12 lessons that can be delivered in 15-, 30- or 60-minute segments. Each lesson is designed to teach specific skills connected to the overarching unit theme and follows a predictable instructional sequence. The lessons include guided yoga practice and meditation practice. Specifically, students engage in the Action-Breathing Centring Activities (referred to as the 'ABCs') which provided experience of engaging in yoga postures, focused breathing, and centring meditation.</p>	<p><b>Facilitator:</b>                      Trained programme providers</p> <p><b>Format:</b>                      Group-based practice delivered in the regular homeroom classroom (size not reported)</p>	<p><b>Duration and frequency:</b>                      Three to four days per week during the first semester of the school year. Each session lasted approximately 30 minutes</p> <p><b>Booster:</b>                      No</p> <p><b>Quality assessment:</b>                      2</p>
Study Design	Results	
<p><b>RCT</b></p> <p><b>Country:</b> US</p> <p><b>Total sample size:</b>                      159 students at one middle school in a high-poverty catchment area of an inner city</p> <p><b>6% attrition at FU</b>                      46.5% female</p> <p><b>Age:</b> Not reported (US Grade 6 and 9)</p> <p><b>Control:</b> No intervention</p>	<p><b>Psychosocial wellbeing</b></p>	No significant effect on somatisation ( <i>the somatic complaints' subscale of the Child Behaviour Checklist (CBCL)</i> ).
	<p><b>Subjective wellbeing</b></p>	<p>No significant effect on general positive or negative affect (<i>the Positive and Negative Affect Scale for children (PANAS-C)</i>).</p> <ul style="list-style-type: none"> <li>• Significant effect on positive coping strategies (<i>the response to stress questionnaire (RSQ)</i>).</li> <li>• Significant effect on primary coping subscale (p=0.020, d=0.15).</li> <li>• Significant effect on emotion regulation subscale (p=0.050, d=0.12).</li> <li>• Significant effect on secondary coping subscale (p=0.010, d=0.14).</li> <li>• Significant effect on positive thinking subscale (p =0.050, d=0.13).</li> <li>• Significant effect on cognitive restructuring subscale (p=0.010, d=0.20).</li> <li>• No significant effect on problem-solving subscale.</li> <li>• No significant effect on emotional expression subscale.</li> <li>• No significant effect on acceptance subscale.</li> </ul>
	<p><b>Aggression</b></p>	No significant effect on attitudes towards violence ( <i>the Attitudes Toward Violence Scale</i> ).
	<p><b>Academic</b></p>	<p>Significant effect on school engagement (p=0.010, d=0.45) (<i>the School Engagement Scale</i>).</p> <p>Significant effect on school attendance (<i>measured using school academic and behavioural records (total number of accumulated unexcused absences, number of detentions assigned, number of suspensions, and quarterly student grades in English and mathematic)</i>).</p> <p>Significant effect on unexcused absences (p=0.010, d=-0.86).</p> <p>Significant effect on number of detentions (p=0.050, d=-0.33).</p> <p>No significant effect on student suspensions.</p> <p>No significant effect on English and Math grades.</p>

## Targeted selective promotion interventions using a positive psychology approach

Roberts et al.  
(2019)  
**Personal Leadership Program (PLP)**

Description		
<p><b>Target level:</b> The PLP programme is a targeted selective programme implemented with students who were identified as likely to benefit most from the programme (such as those at risk of school failure). The programme aims to promote wellbeing and uses CBT principles to get students to challenge their self-talk (internal dialogue) and communication with others in order to foster positive emotion and good relationships. Concepts of motivation and growth are introduced, as well as strategies for making positive decisions and finding the meaning of life.</p>	<p><b>Facilitator:</b> Trained programme providers</p> <p><b>Format:</b> Group setting (max 18 students per group); students also have a short, weekly one-on-one mentoring session with a trainer and homework activities</p>	<p><b>Duration and frequency:</b> The programme is delivered over a full school day once a week for nine weeks</p> <p><b>Booster:</b> No</p> <p><b>Quality assessment:</b> 3</p>
Study Design	Results	
<p><b>QED</b> <b>Country:</b> Australia <b>Total sample size:</b> 102 students in grade 10 at five government-funded high schools in Adelaide, South Australia <b>Attrition not reported</b> 62.8% female <b>Mean age:</b> 15.1 years <b>Control:</b> No intervention</p>	<b>Psychosocial wellbeing</b>	No significant effect on relationship quality ( <i>Parent and Classmate subscales of the Level Two Child and Adolescent Social Support Scale (CASSS)</i> ).
	<b>Subjective wellbeing</b>	Significant effect on positive emotion post-intervention ( $\eta^2=0.21$ , $p<0.001$ ) ( <i>Positive and Negative Affect Schedule (PANAS)</i> ). Significant effect on student-rated engagement post-intervention ( $\eta^2=0.09$ , $p<0.010$ ) ( <i>School Engagement Questionnaire (SEQ)</i> ). Significant effect on meaning in life ( $\eta^2=0.17$ , $p<0.001$ ) ( <i>the Purpose in Life subscale – 14-item version, from the Psychological Wellbeing Scale (PWBS)</i> ). Significant effect on goal setting post-intervention ( $\eta^2=0.30$ , $p<0.001$ ) ( <i>the 4-item Goal Planning Questionnaire (GPQ)</i> ). Significant effect on self-esteem ( $\eta^2=0.18$ , $p<0.001$ ) ( <i>Rosenberg Self-Esteem Scale (RSES)</i> ). No significant effect on accomplishment ( <i>Short Grit Scale (Grit-S)</i> ).
	<b>Academic</b>	Significant effect on teacher-rated student engagement ( $\eta^2=0.11$ , $p<0.050$ ) ( <i>Student Engagement Matrix (SEM)</i> ).

## Targeted indicated promotion interventions using a mindfulness approach

Fung et al. (2019)  
Learning to BREATHE (L2B)

Description				
<p><b>Target level:</b> Universal programme implemented and evaluated with a targeted indicated sample: students with elevated mood symptoms and students from predominantly minority ethnic backgrounds (Asian American, Latinx).</p> <p>Learning to Breathe (L2B) aims to promote student's wellbeing, social and emotional skills by increasing students' emotional regulation, stress management, compassion and executive function through a mindfulness approach. In the L2B curriculum students are guided through six sessions, which each cover a different topic following the acronym BREATHE: body awareness (Body), understanding and working with thoughts (Reflection), understanding and working with feelings (Emotion), integrating awareness of thoughts, feelings and bodily sensations (Attention), reducing harmful self-judgments (Tenderness), and integrating mindful awareness into daily life (Habit), with the final E representing the overall programme goal of Empowerment/gaining an inner Edge. As part of the curriculum students also receive home practice handouts at the end of each session.</p>	<p><b>Facilitator:</b> Doctoral psychology students</p> <p><b>Format:</b> Group-based with no more than 10 students per group</p>	<p><b>Duration and frequency:</b> Twelve sessions each lasting 50 minutes</p>	<p><b>Booster:</b> No</p>	<p><b>Quality assessment:</b> 1</p> <p><i>Intervention also evaluated by Lam &amp; Seiden (2019) and Felver et al. (2019)</i></p>
Study Design	Results			
<p><b>RCT</b></p> <p><b>Country:</b> US</p> <p><b>Total sample size:</b> 145 students across three high schools</p> <p><b>21.4% attrition at FU</b></p> <p>67.6% female</p> <p><b>Mean age:</b> 14.0 years</p> <p><b>Control:</b> Wait-list control</p>	<p><b>Psychosocial wellbeing</b></p> <p>Significant effect on internalised and externalised emotional and behavioural problems (<i>the 112-item Youth Self-Report</i>).</p> <ul style="list-style-type: none"> <li>Significant effect on internalising problems at post-intervention (<math>p=0.015</math>) and over time (<math>p&lt;0.001</math>, <math>d=0.51</math>).</li> <li>Significant effect on externalising problems over time (<math>p&lt;0.001</math>, <math>d=0.56</math>).</li> <li>Significant effect on attentional problems over time (<math>p&lt;0.010</math>, <math>d=0.39</math>).</li> <li>Students with higher internalising symptoms at baseline experienced significantly greater improvements at post-intervention and at follow-up for externalising symptoms (<math>p&lt;0.001</math>), and attentional problems (<math>p&lt;0.001</math>).</li> </ul> <p>Significant effect on emotional regulation at post intervention (<math>p=0.007</math>) and at three-month follow-up (<i>the 10-item Emotion Regulation Questionnaire for Children and Adolescents</i>).</p> <ul style="list-style-type: none"> <li>Significant effect on cognitive reappraisal subscale over time (<math>p&lt;0.050</math>, <math>d=0.31</math>).</li> <li>Significant effect on expressive suppression subscale over time (<math>p&lt;0.001</math>, <math>d=0.68</math>).</li> </ul> <p>Significant effect on emotional approach coping (<i>the 8-item Emotional Approach Coping Scale</i>).</p> <ul style="list-style-type: none"> <li>Significant effect on emotional processing subscale at post-intervention (<math>p=0.002</math>) and over time (<math>p&lt;0.001</math>, <math>d=0.58</math>).</li> <li>Significant effect on emotional expression subscale at post-intervention (<math>p=0.012</math>) and over time (<math>p&lt;0.001</math>, <math>d=0.61</math>).</li> </ul> <p>Significant effect on avoidance at three-month follow-up (<math>p&lt;0.001</math>) and over time (<math>p&lt;0.001</math>, <math>d=0.90</math>). No significant effect at post-intervention (<i>the 8-item short form of the Avoidance and Fusion Questionnaire for Youth</i>).</p> <p>Significant effect on rumination at post-intervention (<math>p&lt;0.001</math>), three-month follow-up (<math>p&lt;0.001</math>) and over time (<math>p&lt;0.001</math>, <math>d=0.61</math>) (<i>the 13-item rumination subscale of the Children's Response Styles Questionnaire</i>).</p>			
	<p><b>Psychological wellbeing</b></p> <p>Significant effect on perceived stress at post-intervention (<math>p&lt;0.001</math>), three-month follow-up (<math>p&lt;0.001</math>) and over time (<math>p&lt;0.001</math>, <math>d=0.88</math>) (<i>the Perceived Stress Scale</i>).</p> <ul style="list-style-type: none"> <li>Moderation analyses showed students with more severe stress at baseline showed greater improvements over time than students with less stress at baseline (<math>p&lt;0.001</math>).</li> </ul>			

## Targeted indicated promotion interventions using a positive youth development approach

Tokolahi et al. (2018)  
**Kia Piki te Hauora: Uplifting our Health and Wellbeing**

Description		Facilitator:	Duration and frequency:	Booster:	Quality assessment:
<p><b>Target level:</b> Indicated</p> <p>The Kia Piki te Hauora: Uplifting our Health and Wellbeing is a targeted indicated programme for students presenting with early symptoms of anxiety, depression, low self-esteem and/or poor participation in typical occupations (selected based on the school personnel's judgement of the child). The programme aims to prevent anxiety and depression and promote self-esteem. Session topics include: Introduction to occupation; Sleep and rest occupations; Active occupations; Communication in occupations; Coping; Values and identity; Integrative Summary. Delivery methods include didactic presentation, peer exchange, direct experience and personal exploration.</p>		Occupational therapist	One hour per week over a period of eight weeks of a school term	No	1
Study Design	Results				
<p><b>Cluster RCT</b></p> <p><b>Country:</b> New Zealand</p> <p><b>Total sample size:</b> 142 students from 14 schools (10–12 students per school) in Auckland</p> <p><b>11.3% attrition at FU</b></p> <p>Gender not reported</p> <p><b>Age range:</b> 11–13 years</p> <p><b>Control:</b> Waitlist control</p>	<b>Subjective wellbeing</b>	<p>No significant effect on child-rated self-esteem (<i>Rosenberg Self Esteem Scale (RSES) and Single Item Self Esteem Scale (SISES)</i>).</p> <p>No significant effect on parent-reported self-esteem (<i>Rosenberg Self Esteem Scale (RSES) and Single Item Self Esteem Scale (SISES)</i>).</p> <p>No significant effect on child-rated wellbeing (<i>Student Life Satisfaction Scale (SLSS)</i>).</p>			
	<b>Psychological wellbeing</b>	<p>No significant effect on child-rated anxiety (<i>Multidimensional Anxiety Scale for Children – Short form (MASC-10)</i>).</p> <p>No significant effect on parent-rated anxiety (<i>Revised Child Anxiety and Depression Scale – Short version (RCADS)</i>).</p> <p>Significant effect on teacher-rated anxiety post-intervention (Estimated difference (ED)=3.2, p=0.001) (<i>School Anxiety Scale (SAS)</i>).</p> <ul style="list-style-type: none"> <li>Subscale analyses showed significant reduction in teacher-rated child anxiety on the general anxiety subscale (ED=1.5, p=0.017) and on the school anxiety subscale (ED=1.6, p=0.011).</li> </ul> <p>No significant effect on child-rated depression (<i>Child Depression Inventory 2nd edition: Self Report [Short form] (CDI2)</i>).</p> <p>No significant effect on parent-rated depression (<i>Revised Child Anxiety and Depression Scale – Parent report, short version (RCADS)</i>).</p>			
	<b>Academic</b>	<p>Significant effect on child-rated participation (Estimated difference=-1.30, p=0.009) (<i>Canadian Occupational Performance Measure (COPM)</i>).</p> <ul style="list-style-type: none"> <li>Effect deemed not clinically significant based on defined thresholds. When considering crossover data, this significance disappears and was thus interpreted as having no significant impact on overall participation (Estimated difference=0.6, p=0.076).</li> </ul> <p>No significant effect on parent-rated participation (<i>Canadian Occupational Performance Measure (COPM)</i>).</p>			

To download the full report, visit: <https://www.eif.org.uk/report/adolescent-mental-health-a-systematic-review-on-the-effectiveness-of-school-based-interventions>

## Appendix B.1: Prevention

### Notes

- See page 120 for a detailed glossary and list of abbreviations used in these tables, and page 121 for full references for listed reviews and studies.
- Where these tables mention significant effects, this refers to the intervention group experiencing a significantly larger effect than the control group in the desirable direction.
- Significant effects can be improvements in positive outcomes (such as wellbeing or resilience) or reductions in symptoms (such as depression or anxiety). Where the intervention group experienced significantly worse outcomes than the control group, these are listed as 'adverse' effects.
- Effects (for meta-analyses: pooled effects) were deemed significant where  $p$  was less or equal than 0.05 – regardless of the significance level applied by individual studies.

### Table of systematic reviews

#### Systematic reviews of mental health interventions aimed at preventing mental health difficulties

Reference	Analysis	Quality assessment rating	Inclusion criteria 1 Population/age range 2 Interventions 3 Study design 4 Outcomes assessed	Exclusion criteria	Time frame	Number of studies included in review	Results
<b>Carnevale et al., 2013</b> Universal adolescent depression prevention programmes: a review	Narrative synthesis	Weak	1 Adolescents 2 Universal adolescent depression prevention programme studies that can be administered by school nurses 3 RCTs, QEDs 4 Depressive symptoms	• Out of school interventions; interventions with no pre/post measures, studies that did not report the psychometric properties of the outcome measures	2000–2010	11	No pooled effect size provided: <ul style="list-style-type: none"> <li>• Studies reviewed identified small to moderate positive outcomes as rated on the depression instruments.</li> <li>• Only three of the programmes implemented demonstrated adoption and sustainability.</li> </ul>

Systematic reviews of mental health interventions aimed at preventing mental health difficulties (cont.)

Reference	Analysis	Quality assessment rating	Inclusion criteria 1 Population/age range 2 Interventions 3 Study design 4 Outcomes assessed	Exclusion criteria	Time frame	Number of studies included in review	Results
<b>Feiss et al., 2019</b> A systematic review and meta-analysis of school-based stress, anxiety and depression prevention programmes for adolescents	Meta-analysis	Strong	<ol style="list-style-type: none"> <li>11–18 years, US-only studies</li> <li>Universal programmes aimed at reducing stress, depression/depressive symptoms, anxiety or other internalising mental health problems</li> <li>RCTs, QEDs</li> <li>Stress, anxiety, depression/depressive symptoms</li> </ol>	<ul style="list-style-type: none"> <li>• Non-peer-reviewed literature; non-empirical studies</li> </ul>	1990–2018	42 studies: 38 studies with depression outcomes; 20 studies with anxiety outcomes; 4 studies with stress outcomes	<p>Pooled effect sizes:</p> <ul style="list-style-type: none"> <li>• Reduced depressive symptoms: <math>t(116)=-3.120</math>, <math>p&lt;0.01</math>, <math>d(\text{intervention})=-0.62</math>, <math>d(\text{control})=-0.22</math> across 38 studies (6,741 participants) high heterogeneity among both intervention effects (<math>I^2=96.91\%</math>) and control effects (<math>I^2=95.07\%</math>).</li> <li>• Reduced anxiety symptoms: <math>t(54)=-3.72</math>, <math>p&lt;0.001</math>, <math>d(\text{intervention})=-0.70</math>, <math>d(\text{control})=-0.14</math>, across 20 studies (2,166 adolescents); high heterogeneity among intervention effects (<math>I^2=89.26\%</math>) and moderate to high heterogeneity among control effects (<math>I^2=63.24\%</math>).</li> <li>• Stress: No significant effects, across 4 studies (420 adolescents), high heterogeneity.</li> <li>• Follow-up: No significant effects on depressive symptoms (across 17 studies) or anxiety symptoms (across six studies), no evidence in relation to stress (0 studies).</li> </ul>
<b>Gee et al., 2020</b> Practitioner review: effectiveness of indicated school-based interventions for adolescent depression and anxiety – a meta-analytic review	Meta-analysis	Strong	<ol style="list-style-type: none"> <li>10–19-year-olds with elevated symptoms of depressive and/or anxiety symptoms</li> <li>School-based manualised psychological interventions designed to decrease depressive and/or anxiety symptoms</li> <li>RCTs</li> <li>Anxiety or depression outcomes</li> </ol>	<ul style="list-style-type: none"> <li>• Studies with a sample below 10 years excluded</li> </ul>	Up to April 2019	45	<p>Standardised mean difference:</p> <p>Reduced depressive symptoms: (SMD=0.45)</p> <ul style="list-style-type: none"> <li>• Data from 2,895 young people, 1,535 of whom were randomised to receive one of the school-based interventions <math>I^2=81\%</math>; removal of one outlier reduced heterogeneity (<math>I^2=61\%</math>) and ES (SMD=0.34).</li> <li>• Intervention type: CBT [k=22], interpersonal therapy [k=4], and other psychological interventions (no sports or dietary components) [k=5].</li> <li>• IPT-based interventions had the strongest effects (k=4; SMD=-0.69), followed by 'other', k=5; SMD=-0.60, and CBT-based interventions, k=22 (SMD=-0.26).</li> </ul> <p>Reduced anxiety: (SMD=0.61)</p> <ul style="list-style-type: none"> <li>• Data from 1,075 young people, 528 of whom were randomised to receive one of the school-based interventions.</li> <li>• <math>I^2=84\%</math>; true effect size could vary from small to large.</li> <li>• Most studies come from HICs in North America and Europe.</li> <li>• Intervention type: CBT [k=10] and other psychological interventions (no sports or dietary components) [k=5].</li> </ul>

Systematic reviews of mental health interventions aimed at preventing mental health difficulties (cont.)

Reference	Analysis	Quality assessment rating	Inclusion criteria 1 Population/age range 2 Interventions 3 Study design 4 Outcomes assessed	Exclusion criteria	Time frame	Number of studies included in review	Results
<b>O’Dea, Calear &amp; Perry, 2015</b> Is e-health the answer to gaps in adolescent mental health service provision?	Narrative synthesis	Weak	1 12–18 years 2 Online or mobile application designed to prevent or treat anxiety or depression 3 RCTs 4 Depression and/or anxiety symptoms	• No exclusion criteria reported	Jan 2014–Jan 2015	6	No pooled effect size provided: • Limited evidence.
<b>Scott, 2015</b> A meta-analysis of school-based interventions for adolescent depression	Meta-analysis	Strong	1 12–17 years 2 School-based interventions for preventing depression 3 RCTs, QEDs 4 Depression symptoms	• Non-English papers	1990–2014	57	Standardised mean difference: • Reduced depression: SMD=0.13, significant heterogeneity [Q]. • Selective and indicated prevention programmes showed significantly greater improvement than universal prevention programmes; the effect size of this difference was 0.73. • Marginal improvements of medium-term outcomes (after 7–12 months) across 18 studies (SMD=0.06); no significant effects across five studies after more than 12 months. • Small number of interventions (7 of 57) reported adverse effects. • Intervention type: CBT, interpersonal therapy, yoga; 52% universal, 32% selective/indicated, 15% treatment.
<b>Shelemy, Harvey &amp; Waite, 2020</b> Meta-analysis and systematic review of teacher-delivered mental health interventions for internalising disorders in adolescents	Meta-analysis	Strong	1 11–18 years 2 Teacher-delivered interventions 3 Any research design 4 Internalising disorders/DSM-5 disorder diagnoses	• Non-English papers, non-peer-reviewed literature	Up to Jan 2016	52	Pooled effect size at post-intervention: • Reduced depression ( $g=-0.12$ , $I^2=19\%$ ), across 29 studies. • Reduced anxiety: ( $g=-0.13$ , $I^2=11\%$ ), across 26 studies. • Reduced PTSD symptoms ( $g=-0.66$ , $I^2=0\%$ ), across four studies. • Several studies (5 of 7) reported larger effects for at-risk populations. Pooled effect size at follow-up: • Depression: No significant effect across 20 studies. • Anxiety ( $g=-0.08$ , $I^2=0\%$ ), across nine studies. • Intervention type: Universal, teacher delivered interventions (CBT, SEL, mindfulness, etc.). • No overall significant effect of selective or indicated interventions on depression or anxiety outcomes.

Systematic reviews of mental health interventions aimed at preventing mental health difficulties (cont.)

Reference	Analysis	Quality assessment rating	Inclusion criteria 1 Population/age range 2 Interventions 3 Study design 4 Outcomes assessed	Exclusion criteria	Time frame	Number of studies included in review	Results
<p><b>Ssegonja et al., 2019</b></p> <p>Indicated preventive interventions for depression in children and adolescents: a meta-analysis and meta-regression</p>	Meta-analysis	Moderate	<p>1 12–19 years</p> <p>2 Group-based CBT indicated preventive interventions with or without booster sessions</p> <p>3 RCTs</p> <p>4 Cases of a depressive disorder (dichotomous); depressive symptoms over time (continuous)</p>	• Non-English papers	Sept 2014–Feb 2018	38	<p>Pooled effect size at post-intervention:</p> <ul style="list-style-type: none"> <li>• Reduced the incidence of depressive disorder: RR=0.43, across eight comparisons (seven trials) and 1,461 participants.</li> <li>• Reduced symptom severity of depression: d=-0.22 across 43 comparisons (33 trials) and 7,525 participants, heterogeneity not reported.</li> </ul> <p>Pooled effect size at follow up:</p> <ul style="list-style-type: none"> <li>• Effects on incidence were significant at six months (seven trials, involving 1,948 participants), 12 months (six trials, involving 1,246 participants) and post 12 months (six trials, involving 1,311 participants); in trials with passive comparator, effects on incidence were significant at six-month and 12-month follow-up but neither at post-intervention nor at post-12 months (across four-six trials).</li> <li>• Effects on symptoms remained significant at six months (21 trials, involving 4,751 participants), 12 months (17 trials, involving 4,480 participants), and post-12 months (nine trials, involving 1,896 participants); in trials with passive comparator effects were significant at all times (eight to 26 trials).</li> </ul>
<p><b>Van Loon et al., 2020</b></p> <p>Can schools reduce adolescent psychological stress? A multilevel meta-analysis of the effectiveness of school-based intervention programmes</p>	Meta-analysis	Strong	<p>1 10–18 years</p> <p>2 School-based interventions that promote psychosocial functioning (e.g., stress reduction, mental health, wellbeing, or coping skills)</p> <p>3 RCTs, QEDs</p> <p>4 Psychological stress (self-report)</p>	• Non-English papers	Up to June 2019	54	<p>Pooled effect size at post-intervention:</p> <ul style="list-style-type: none"> <li>• Stress: d=0.543. Removal of 10 outliers: d=0.276, significant heterogeneity</li> <li>• Effects on school stress (five studies) were significant but not on social stress</li> <li>• The target group moderated the effect, demonstrating significant effects only in samples based on self-selection or screening, for instance on high stress or anxiety levels.</li> </ul> <p>Pooled effect size at follow-up:</p> <ul style="list-style-type: none"> <li>• Larger effects were found at follow up than at post-intervention</li> <li>• Intervention type: Mindfulness (k=19 studies), relaxation techniques (k=21), cognitive behavioural techniques (k=25); no intervention characteristics moderated the effects</li> </ul>

## Systematic reviews of mental health interventions aimed at preventing suicide and self-harm

Reference	Analysis	Quality assessment rating	Inclusion criteria 1 Population/age range 2 Interventions 3 Study design 4 Outcomes assessed	Exclusion criteria	Time frame	Number of studies included in review	Results
<p><b>Calear et al., 2015</b> A systematic review of psychosocial suicide prevention interventions for youth</p>	Narrative synthesis	Moderate	<p>1 12–25 years</p> <p>2 Psychosocial interventions, (i.e. psycho-therapy [e.g., CBT, DBT, problem-solving therapy], psycho-education or community treatment) for the treatment or prevention of suicidal behaviour</p> <p>3 RCTs</p> <p>4 Suicidal behaviour (self-harm, ideation, attempt or completion)</p>	<ul style="list-style-type: none"> <li>• Non-English papers, non-peer-reviewed literature</li> <li>• Gatekeeper interventions (if they did not have adolescent outcomes)</li> </ul>	Up to Dec 2014	28	<p>No pooled effect size provided:</p> <ul style="list-style-type: none"> <li>• Motivational interviewing (targeted indicated support), in combination with ‘support’ and coping skills training, individual or group-based, one or 13 sessions: mixed evidence post-intervention and at follow-up.</li> <li>• Psychoeducation: Signs of Suicide (SOS), teacher, two sessions, group-based: post-intervention and at follow-up reduced suicide attempts, but not in suicide ideation.</li> <li>• Intensive psychotherapy for Depressed Adolescents with Suicidal Risk (IPT-A-IN), 12 sessions: reduced suicide ideation (one trial), no follow-up results reported.</li> </ul>
<p><b>Harlow, Bohanna &amp; Clough, 2014</b> A systematic review of evaluated suicide prevention programs targeting indigenous youth</p>	Narrative synthesis	Moderate	<p>1 ‘Indigenous youth living in Australia, Canada, New Zealand, or the United States’</p> <p>2 Suicide prevention interventions</p> <p>3 Any quantitative or qualitative research design</p> <p>4 Suicide or self-harm</p>	<ul style="list-style-type: none"> <li>• Publications that did not report indigenous data separately from non-indigenous data were excluded</li> </ul>	Search date: Sept 2012; starting date not specified	11	<p>No pooled effect size provided:</p> <ul style="list-style-type: none"> <li>• Zuni Life Skills Development Model: significant reductions in suicidal thoughts and behaviours, reduced feelings of hopelessness, increased problem solving, increased suicide intervention skills.</li> </ul>

Systematic reviews of mental health interventions aimed at preventing suicide and self-harm (cont.)

Reference	Analysis	Quality assessment rating	Inclusion criteria 1 Population/age range 2 Interventions 3 Study design 4 Outcomes assessed	Exclusion criteria	Time frame	Number of studies included in review	Results
<p><b>Klimes-Dougan, Klingbeil &amp; Meller, 2013</b></p> <p>The impact of universal suicide-prevention programmes on the help-seeking attitudes and behaviours of youths</p>	Narrative synthesis	Weak	<p>1 13–18 years</p> <p>2 Suicide-prevention programming, efforts to promote help-seeking</p> <p>3 Any research design</p> <p>4 Help-seeking attitudes or behaviours</p>	<ul style="list-style-type: none"> <li>• Non-peer-reviewed literature</li> </ul>	Unclear	18	<p>No pooled effect size provided:</p> <ul style="list-style-type: none"> <li>• Gatekeeper training: Yellow Ribbon; reduced not increased help-seeking; females had better outcomes; from the table it is unclear whether they experienced larger intervention effects or had better outcomes to start with.</li> </ul>
<p><b>Weil, Kutcher, &amp; LeBlanc, 2015</b></p> <p>Hot idea or hot air: a systematic review of evidence for two widely marketed youth suicide prevention programmes and recommendations for implementation</p>	Narrative synthesis	Moderate	<p>1 Age not reported</p> <p>2 SOS &amp; Yellow Ribbon interventions</p> <p>3 Any research design</p> <p>4 Any outcomes</p>	<ul style="list-style-type: none"> <li>• Non-English papers, non-peer-reviewed literature</li> </ul>	2014	5	<p>No pooled effect size provided:</p> <ul style="list-style-type: none"> <li>• The Yellow Ribbon programme was ranked as 'ineffective' using OJPR (clearinghouse framework)</li> <li>• Three SOS studies were ranked as 'inconclusive evidence' based on the OJPR (clearinghouse framework); one SOS study was ranked as having 'insufficient evidence' on OJPR (clearinghouse framework).</li> </ul>

## Appendix B.2: Prevention

### Table of primary studies

Universal interventions using a cognitive behavioural therapy approach					
Barry et al. (2017) <b>Coaching Intervention to Build Confidence and Resilience and Reduce Depressive Symptoms</b>	<b>Description</b>				
	<b>Target level:</b> Universal This is a cognitive behavioural group coaching intervention which aims to build confidence and resilience and reduce depressive symptoms. The programme uses games and challenges to raise awareness of how thinking can influence behaviours and emotions, and to highlight that we can reframe our thinking styles.	<b>Facilitator:</b> Not reported  <b>Format:</b> Group sessions with 13 in Intervention group, and 14 in Control group	<b>Duration and frequency:</b> Four sessions x 40 minutes each	<b>Booster:</b> No	<b>Quality assessment:</b> 3
	<b>Study Design</b>	<b>Results</b>			
<b>RCT</b> <b>Country:</b> Ireland <b>Total sample size:</b> 27 male students from one Irish secondary school <b>14.8% attrition at FU</b> 0% female <b>Mean age:</b> 15.7 years <b>Control:</b> No intervention	<b>Depression</b>	No significant effect on depressive symptoms ( <i>Center for Epidemiologic Studies Depression Scale for Children (CES-DC)</i> ).			

Universal interventions using a cognitive behavioural therapy approach (cont.)

Garcia-Escelara et al. (2020)  
**Spanish Version of the Unified Protocol for the Treatment of Emotional Disorders in Adolescents (UP-A)**

Description		
<b>Target level:</b> Universal	<b>Facilitator:</b> Psychologists (Doctoral and Master's students in clinical psychology) <b>Format:</b> Group sessions (approximately 30 students) plus homework	<b>Duration and frequency:</b> Nine weekly sessions lasting 55 minutes <b>Booster:</b> No <b>Quality assessment:</b> 1
The UP-A programme is a cognitive behavioural therapy programme designed to prevent anxiety and depression. Students complete eight modules that focus on building and keeping motivation, getting to know your emotions and behaviours, behavioural activation, sensation awareness, being flexible in your thinking, awareness of emotional experiences, situational emotion exposure and keeping it going/maintaining your gains.		
Study Design	Results	
<b>Cluster RCT</b> <b>Country:</b> Spain <b>Total sample size:</b> 151 students from one secondary school in Madrid <b>20% attrition at FU</b> 54.3% female <b>Mean age:</b> 15.1 years <b>Control:</b> Wait-list control	<b>Depression</b>	No significant effect on depression symptoms ( <i>Depression Questionnaire for Children (CDN), modified version</i> ). • For students with elevated baseline depression scores, depression scores significantly decrease (improved) post-intervention (d=0.96, p=0.013) and at three-month follow-up (d=0.88, p=0.026).
	<b>Anxiety</b>	No significant effect on anxiety symptoms ( <i>Anxiety Scale for Children</i> ).
	<b>Psychosocial wellbeing</b>	No significant effect on life satisfaction ( <i>Satisfaction with Life Scale for Children (SWLS-C)</i> ). No significant effect on quality of life ( <i>Kidscreen-10 (KIDSCREEN Group)</i> ). No significant effect on self-esteem ( <i>Escala de autoestima (Self-Esteem Scale)</i> ).
	<b>Behaviour</b>	No significant effect on frequency of disruptive behaviour ( <i>General Indiscipline Scale (Escala de Indisciplina General, modified version)</i> ). No significant effect on peer problems ( <i>Spanish version of Strengths and Difficulties Questionnaire (SDQ) – Peer problems subscale</i> ).
	<b>Academic</b>	No significant effect on self-perceived school performance ( <i>School Adjustment Brief Scale (Escala Breve de Ajuste Escolar; EBAE-10)</i> ).
	<b>Other: School adjustment</b>	No significant effect on school adjustment ( <i>School Adjustment Brief Scale (Escala Breve de Ajuste Escolar; EBAE-10)</i> ).

Universal interventions using a cognitive behavioural therapy approach (cont.)

<p>Garmy et al. (2019)</p> <p><b>Depression in Swedish Adolescents (DISA)</b></p>	<p><b>Description</b></p>											
	<p><b>Target level:</b> Universal</p> <p>The DISA programme is a cognitive behavioural therapy programme which aims to prevent depression in young people. The programme is an adapted version of the indicated Adolescent Coping with Stress course. The programme uses cognitive behavioural techniques designed to change negative thoughts, communication training and training in problem-solving strategies as well as exercises to strengthen social skills and networks and to increase participation in health promotion activities.</p>	<p><b>Facilitator:</b> School tutors (12 school social workers, 9 school nurses, 9 teachers, 2 counsellors, 3 school assistants)</p> <p><b>Format:</b> Group sessions with an average of 12–13 students</p>	<p><b>Duration and frequency:</b> Ten sessions over 10 weeks lasting 1.5 hours each</p>	<p><b>Booster:</b> No</p>	<p><b>Quality assessment:</b> 3</p>							
	<table border="1"> <thead> <tr> <th>Study Design</th> <th colspan="2">Results</th> </tr> </thead> <tbody> <tr> <td rowspan="2"> <p><b>QED</b></p> <p><b>Country:</b> Sweden</p> <p><b>Total sample size:</b> 1,129 students from 21 schools in six Swedish municipalities</p> <p><b>20% attrition at FU</b></p> <p>56% female</p> <p><b>Age range:</b> 13–15 years</p> <p><b>Control:</b> No intervention</p> </td> <td> <p><b>Depression</b></p> </td> <td> <p>Significant effect on depression at three months (<math>d=0.27</math>, <math>p&lt;0.001</math>) but no significant effect at 12-month follow-up (<i>Centre for Epidemiological Studies Depression Scale (CES-D)</i>).</p> </td> </tr> <tr> <td> <p><b>Subjective wellbeing</b></p> </td> <td> <p>Significant effect on self-reported health at three months (<math>d=0.29</math>, <math>p&lt;0.001</math>) but no significant effect at 12-month follow-up (<i>Euro Qol (EQ) visual analogue scale (VAS; EQ-5D)</i>).</p> </td> </tr> </tbody> </table>					Study Design	Results		<p><b>QED</b></p> <p><b>Country:</b> Sweden</p> <p><b>Total sample size:</b> 1,129 students from 21 schools in six Swedish municipalities</p> <p><b>20% attrition at FU</b></p> <p>56% female</p> <p><b>Age range:</b> 13–15 years</p> <p><b>Control:</b> No intervention</p>	<p><b>Depression</b></p>	<p>Significant effect on depression at three months (<math>d=0.27</math>, <math>p&lt;0.001</math>) but no significant effect at 12-month follow-up (<i>Centre for Epidemiological Studies Depression Scale (CES-D)</i>).</p>	<p><b>Subjective wellbeing</b></p>
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Universal interventions using a cognitive behavioural therapy approach (cont.)

Kozina (2019)  
My FRIENDS

Description				
<b>Target level:</b> Universal	<b>Facilitator:</b> Psychologist	<b>Duration and frequency:</b> Ten weekly workshops of 45 minutes each, two booster sessions, two parent meetings	<b>Booster:</b> Yes: one and two months after programme completion	<b>Quality assessment:</b> 3
<p>The My FRIENDS programme is a cognitive behavioural therapy programme (adolescent version of FRIENDS (Barrett, 2005)) which aims to prevent anxiety in young people. The programme includes topics such as becoming acquainted with the group, learning about emotions and the relationship between one's thoughts and feelings, learning how to cope with worries, recognising emotions, relaxation, developing positive self-talk, challenging negative and unhelpful thoughts, developing problem-solving skills, planning how to cope with everyday stressors and reward oneself for success, building on success, and the importance of practice.</p> <p>A variant of this intervention is included on the <a href="#">EIF Guidebook</a>.</p>				

Study Design	Results	
<b>QED</b> <b>Country:</b> Slovenia <b>Total sample size:</b> 78 grade 8 students from two schools <b>Attrition:</b> Not reported 55% female <b>Age range:</b> 13–14 years <b>Control:</b> No intervention	<b>Anxiety</b>	No significant effect on anxiety ( <i>AN-UD Anxiety Scale</i> ).
	<b>Psychosocial wellbeing</b>	No significant effect on behavioural and emotional problems ( <i>Slovenian version of the Strength and Difficulties Questionnaire (SDQ) – internalising (emotional problems and peer problems) subscales</i> ).

Universal interventions using a cognitive behavioural therapy approach (cont.)

<p>Ohira et al. (2019) The Journey of the Brave</p>	<b>Description</b>				
	<p><b>Target level:</b> Universal</p> <p>The Journey of the Brave programme is a cognitive behavioural therapy programme which aims to prevent anxiety-related problems by utilising techniques such as developing 'anxiety hierarchies', gradual exposure and cognitive restructuring.</p>	<p><b>Facilitator:</b> Teachers</p> <p><b>Format:</b> Individual work and homework</p>	<p><b>Duration and frequency:</b> Seven sessions of 50 minutes each</p>	<p><b>Booster:</b> No</p>	<p><b>Quality assessment:</b> 2</p>
	<b>Study Design</b>				
<p><b>QED</b></p> <p><b>Country:</b> Japan</p> <p><b>Total sample size:</b> 472 students from three public junior high schools in a single prefecture</p> <p><b>16.4% attrition at FU</b></p> <p>44.5% female</p> <p><b>Age range:</b> 12–14 years</p> <p><b>Control:</b> No intervention</p>	<b>Results</b>				
	<p><b>Anxiety</b></p>	<p>No significant effect on anxiety symptoms (<i>Spence Child Anxiety Scale (SCAS)</i>).</p>			
	<p><b>Psychosocial wellbeing</b></p>	<p>No significant effect on emotion regulation (<i>Emotion Regulation Skills Questionnaire (ERSQ)</i>).</p>			

Universal interventions using a cognitive behavioural therapy approach (cont.)

Perry et al.  
(2017)  
SPARX-R

Description				
<b>Target level:</b> Universal	<b>Facilitator:</b> Virtual guide with teacher supervision	<b>Duration and frequency:</b> Seven modules taking 20–30 minutes each, completed over the course of five to seven weeks	<b>Booster:</b> No	<b>Quality assessment:</b> 3
The SPARX-R programme is a cognitive behavioural therapy programme with a digital component. It aims to prevent depression using an online game providing cognitive behavioural skills: the users navigate through a fantasy world that has been overrun by GNATs (gloomy, negative, automatic thoughts) with the mission of restoring balance to the world. Topics covered include finding hope, being active, dealing with strong emotions, overcoming problems, recognising unhelpful thoughts, challenging unhelpful thoughts, and bringing it all together. Key skills taught by the programme are relaxation, activity scheduling and behavioural activation, emotion regulation, interpersonal skills, problem solving, cognitive restructuring and distress tolerance.				

Study Design	Results	
<b>Cluster RCT</b> <b>Country:</b> Australia <b>Total sample size:</b> 540 students from 10 secondary schools <b>80.7% attrition at FU</b> 63.1% Female <b>Mean age:</b> 16.7 years <b>Control:</b> Other intervention (lifeSTYLE)	<b>Depression</b>	Significant effect on depression at post-intervention ( $d = 0.29, p < 0.001$ ) and six-month follow-up ( $d = 0.21, p = 0.010$ ). No significant effect maintained to 18-month follow-up ( <i>The Major Depressive Inventory (MDI)</i> ). • For students who completed less than four of seven modules, there was no significant effect on depression at post-intervention or six-month follow-up. However, there was a significant effect on depression at 18-month follow-up ( $p = 0.010$ ).
	<b>Anxiety</b>	No significant effect on anxiety ( <i>Spence Anxiety Scale (SCAS)</i> ).
	<b>Suicidality</b>	No significant effect on suicidality ( <i>3 items from the Youth Risk Behaviour Survey</i> ).
	<b>Mental health literacy</b>	No significant effect on stigma towards depression ( <i>Depression Stigma Scale (DSS)</i> ).
	<b>Academic</b>	No significant effect on academic achievement ( <i>Exam results from Australian Tertiary Admissions Rank</i> ).

Universal interventions using a cognitive behavioural therapy approach (cont.)

Schleider et al. (2019)  
**Growing Minds – Single Session Interventions (GM-SSIs)**

Description		
<b>Target level:</b> Universal (female only)	<b>Facilitator:</b> Computerised intervention <b>Format:</b> Group-based classroom setting, self-administered on computers	<b>Duration and frequency:</b> One session of 45 minutes <b>Booster:</b> No <b>Quality assessment:</b> 1
<p>Growing Minds is a computerised single session growth mindset intervention which aims to prevent depression, anxiety and behaviour-conduct problems. Content focuses on introducing mindsets and provides information and self-change strategies linked to intelligence mindsets, self-regulation mindsets and personality mindsets.</p>		
Study Design	Results	
<b>QED</b> <b>Country:</b> US <b>Total sample size:</b> 222 students from four rural high schools <b>5% attrition at FU</b> 100% female <b>Mean age:</b> 15.2 years <b>Control:</b> Active control (HEART intervention)	<b>Depression</b>	Significant effect on depression at three-months post-intervention ( $d=0.23$ , $p=0.039$ ) ( <i>Short Mood and Feelings Questionnaire (SMFQ)</i> ). Significant reduction in likelihood (odds) of reporting elevated depression symptoms ( $>11$ ) at three months post-intervention ( $d=0.29$ , $p=0.033$ ) ( <i>Short Mood and Feelings Questionnaire (SMFQ)</i> ).
	<b>Anxiety</b>	No significant effect on anxiety symptoms ( <i>Avoidance subscale from the Social Phobia Inventory</i> ).
	<b>Behaviour</b>	No significant effect on conduct problem behaviours ( <i>Rochester Youth Development Study</i> ).
	<b>Other: Growth mindsets of intelligence and personality</b>	Significant increase in growth mindset personality ( $R^2=0.13$ , $p<0.001$ ) and growth mindset of intelligence ( $R^2=0.04$ , $p<0.001$ ) post-intervention. ( <i>Brief 3-item mindset questionnaire, purpose designed</i> ).

Universal interventions using a cognitive behavioural therapy approach (cont.)

Teesson et al. (2019)  
**Climate Schools Combined Mental Health and Substance Use**

Description	
<p><b>Target level:</b> Universal</p> <p>The Climate Schools Combined Mental Health and Substance Use programme is a cognitive behavioural therapy programme which aims to prevent and reduce mental health problems, improve mental health knowledge, and improve knowledge of substance use. Students on the Combined Programme completed one year of the Climate Schools – Substance Use programme (comprising an online cartoon and teacher-delivered component focused on educating students about substance misuse and preventing the use of alcohol and cannabis) as well as one year of the Climate Schools – Mental Health programme (based on cognitive behavioural principles, also using online cartoons and a teacher-delivered component focused on educating students about mental health and preventing the development or worsening of anxiety and depression).</p>	<p><b>Facilitator:</b> Teachers</p> <p><b>Format:</b> Classroom-based activities</p> <p><b>Duration and frequency:</b> Delivered during mandatory Health Education classes; substance use programme one year; mental health programme one year; total delivery over two years</p> <p><b>Booster:</b> No</p> <p><b>Quality assessment:</b> 1</p>
Study Design	Results
<p><b>Cluster RCT</b></p> <p><b>Country:</b> Australia</p> <p><b>Total sample size:</b> 6,386 students from 71 secondary schools across three Australian states (New South Wales, Western Australia and Queensland)</p> <p><b>33% attrition at FU</b></p> <p>54.8% female</p> <p><b>Mean age:</b> 13.5 years</p> <p><b>Control:</b> Active control: usual health education classes, including lessons on alcohol, drugs and mental health.</p> <p><i>NOTE: The trial also compared the effects of the combined intervention to the mental health programme only, and the substance use programme only in sub-analyses.</i></p>	<p><b>Depression</b></p> <p>No significant effect on depressive symptoms at any timepoint (<i>Patient Health Questionnaire-8 (PHQ-8)</i>). No significant effect on likelihood of possible depression diagnosis (<i>PHQ-8 score ≥10</i>).</p>
	<p><b>Anxiety</b></p> <p>Significant effect on anxiety symptoms at 12-month follow-up (<math>d=-0.11, p=0.010</math>) and 30-month follow-up (<math>d=-0.12, p=0.029</math>). Students in the combined intervention group had significantly reduced anxiety symptoms compared to active control. No significant effect at 24-month follow-up (<i>Generalised Anxiety Disorder Assessment 7-item version (GAD-7)</i>). No significant effect on the likelihood of possible anxiety diagnosis (<i>GAD-7 score ≥10</i>).</p>
	<p><b>Mental health literacy</b></p> <p>Significant effect on knowledge of mental health at 24-month follow-up (<math>d=0.17, p&lt;0.001</math>). No significant effect at 12-month or 30-month follow-up (<i>13-item multiple-choice scale, purpose designed</i>).</p>
	<p><b>Other: Knowledge of substance use</b></p> <p>Significant effect on knowledge of alcohol at 12-month (<math>d=0.57, 95\%CI 0.47, 0.66, p&lt;0.001</math>), 24-month (<math>d=0.40, p&lt;0.001</math>) and 30-month follow-up (<math>d=0.26, p&lt;0.001</math>). Students in the combined intervention significantly increased their knowledge over time compared to active control (<i>16-item scale adapted from the Knowledge-of-alcohol Index</i>).</p> <p>Significant effect on knowledge of cannabis at 12-month (<math>d=0.59, p&lt;0.001</math>), 24-month (<math>d=0.33, p&lt;0.001</math>) and 30-month follow-up (<math>d=0.17, p=0.002</math>). Students in the combined intervention significantly increased their knowledge over time compared to active control (<i>16-item scale used in previous Climate Schools Trials, purpose designed</i>).</p>
	<p><b>Other: Alcohol use</b></p> <p>Significant effect on the likelihood of having an alcoholic drink at 12-month (<math>OR=0.52, p=0.042</math>), 24-month (<math>OR=0.36, p=0.003</math>), and 30-month follow-up (<math>OR=0.25, p&lt;0.001</math>). Students in the combined intervention were significantly less likely to consume a standard alcoholic drink within the last six months (<i>questionnaire items derived from previous Climate Schools trials, purpose designed</i>).</p> <p>Significant effect on the likelihood of heavy episodic drinking at 12-month (<math>OR=0.26, p=0.036</math>), 24-months (<math>OR=0.18, p=0.012</math>) and 30-month follow-up (<math>OR=0.15, p=0.006</math>). Students in the combined intervention were significantly less likely to drink five or more standard alcoholic drinks on one occasion within the last six months (<i>questionnaire items derived from previous Climate Schools trials, purpose designed</i>).</p>
<p><i>NOTE: Main effects reported compare effects of the combined intervention to active control. Additional analyses comparing the combined intervention to mental health programme and substance use programme independently are available.</i></p>	

## Universal interventions using a mindfulness approach

Burckhardt et al. (2017)  
**Acceptance and Commitment Therapy**

Description		
<p><b>Target level:</b> Universal</p> <p>This programme uses a combination of acceptance and commitment therapy and mindfulness techniques and is designed for year 10 high school students. It is a group-based programme that aims to prevent depression and anxiety and enhance wellbeing by utilising ACT components of values, committed action, contact with the present moment, acceptance of emotions and thought diffusion.</p>	<p><b>Facilitator:</b>                      Researcher-led (lead author, clinical psychologist)</p> <p><b>Format:</b>                      Group sessions of approximately 15 students</p>	<p><b>Duration and frequency:</b>                      In total, students received 4.6 hours of the intervention in 25-minute sessions</p> <p><b>Booster:</b>                      No</p> <p><b>Quality assessment:</b>                      3</p>
Study Design	Results	
<p><b>QED</b></p> <p><b>Country:</b> Australia</p> <p><b>Total sample size:</b> 48 students from one private school</p> <p><b>41.7% attrition at FU</b></p> <p>42% female</p> <p><b>Mean age:</b> 15.6 years</p> <p><b>Control:</b> Usual care ('Pastoral Care')</p>	<b>Depression</b>	No significant effect on depression symptoms ( <i>Depression, Anxiety and Stress Scale – Short Form (DASS-21) – Depression subscale</i> ).
	<b>Anxiety</b>	No significant effect on anxiety symptoms ( <i>Depression, Anxiety and Stress Scale – Short Form (DASS-21) – Anxiety Subscale</i> ).
	<b>Stress</b>	No significant effect on stress ( <i>Depression, Anxiety and Stress Scale – Short Form (DASS-21) – Stress subscale</i> ).
	<b>Wellbeing</b>	No significant effect on wellbeing ( <i>Flourishing Scale</i> ).

## Universal interventions using a psychotherapy approach

Burckhardt et al. (2018)  
Dialectical Behavioural Therapy

Description		
<p><b>Target level:</b> Universal</p> <p>The DBT programme is a universal group programme conducted in one Anglican all-girls private high school in Australia. It aims to prevent mental health problems by having students complete modules on emotion regulation, mindfulness, distress tolerance and interpersonal relationships.</p>	<p><b>Facilitator:</b> Clinical psychologist</p> <p><b>Format:</b> Group sessions (size not reported) and homework</p>	<p><b>Duration and frequency:</b> Six workshops of 50 minutes each</p> <p><b>Booster:</b> No</p> <p><b>Quality assessment:</b> 3</p>
Study Design	Results	
<p><b>RCT</b></p> <p><b>Country:</b> Australia</p> <p><b>Total sample size:</b> 96 students from one Anglican all-girls private high school</p> <p><b>7.3% attrition at FU</b></p> <p>100% female</p> <p><b>Mean age:</b> 15.6 years</p> <p><b>Control:</b> Usual classes learning about future careers</p>	<b>Depression</b>	No significant effect on depressive symptoms ( <i>Centre for Epidemiologic Studies – Depression Scale 8-item version (CES-D8)</i> ).
	<b>Anxiety</b>	No significant effect on anxiety symptoms ( <i>PROMIS-Anxiety Short Form Scale</i> ).
	<b>Aggression</b>	No significant effect on anger ( <i>PROMIS-Anger Short Form Scale</i> ).
	<b>Psychosocial wellbeing</b>	No significant effect on emotion regulation ( <i>Difficulties in Emotion Regulation Scale (DERS)</i> ).

## Targeted selective interventions using a cognitive behavioural therapy approach

Brown et al. (2019)  
**The DISCOVER 'How to Handle Stress' Workshop Programme**

Description	
<p><b>Target level:</b> Targeted selective</p> <p>The Discover programme is a targeted selective cognitive behavioural therapy programme intervention for pupils between the age of 16 and 19 who are from at-risk backgrounds (ethnic minorities, socioeconomic deprivation). It aims to reduce stress, depression and anxiety by focusing on methods for coping with common personal and academic stress (such as anxiety and worry), dealing with coursework, dealing with family expectations and exam anxiety</p>	<p><b>Facilitator:</b> Two clinical psychologists and one assistant psychologist</p> <p><b>Format:</b> Group sessions of up to 15 students plus homework</p>
<p><b>Duration and frequency:</b> One-day workshop, 20/30-minute follow-up call</p>	<p><b>Booster:</b> Yes: offered two further follow-up calls within 12 weeks</p>
<p><b>Quality assessment:</b> 2</p>	
Study Design	Results
<p><b>Cluster RCT</b>  <b>Country:</b> UK  <b>Total sample size:</b> 155 students from 10 secondary schools in London, UK  <b>8.4% attrition at FU</b>                      81.3% female  <b>Mean age:</b> 17.3 years                      NOTE: 7% Asian or British Asian, 44.5% Black or Black British, 0.6% Chinese, 5.2% Mixed background, 10.3% Other, 9.5% other British, 0.6% prefer not to say, 21.9% White or White British  <b>Control:</b> Wait-list control</p>	<p><b>Depression</b></p> <p>Significant effect on depression at three months post-intervention (<math>d=0.27</math>, <math>p=0.021</math>). Significantly fewer depressive symptoms over time (<i>Mood and Feelings Questionnaire (MFQ)</i>).</p>
	<p><b>Anxiety</b></p> <p>Significant effect on anxiety at three months post-intervention (<math>d=0.25</math>, <math>p=0.018</math>) (<i>Revised Child Anxiety and Depression Scale (RCADS)</i>).</p>
	<p><b>Subjective wellbeing</b></p> <p>Significant effect on quality of life at three months post-intervention (<math>d=0.36</math>, <math>p=0.009</math>) (<i>the Paediatric Quality of Life Enjoyment and Satisfaction Form (PQ-LES-Q)</i>).</p>
	<p><b>Psychological wellbeing</b></p> <p>Significant effect on emotional symptoms at three months post-intervention (<math>d=-0.28</math>, <math>p=0.008</math>) (<i>Revised Child Anxiety and Depression Scale (RCADS)</i>).</p>
	<p><b>Psychosocial wellbeing</b></p> <p>Significant effect on mental wellbeing at three months post-intervention (<math>d=0.46</math>, <math>p=0.001</math>) (<i>The Warwick-Edinburgh Mental Well-Being Scale (WEMWBS)</i>).</p>

Targeted selective interventions using a cognitive behavioural therapy approach (cont.)

Terry et al. (2020)  
Footprints

Description				
<p><b>Target level:</b> Targeted selective</p> <p>Footprints is a targeted selective cognitive behavioural therapy programme for students with poor academic performance and/or disruptive behaviour. It aims to promote wellbeing and prevent behavioural and emotional problems by utilising motivational interviewing (MI) and common modular cognitive-behavioural approaches, including psychoeducation, goals setting, behavioural activation, cognitive restructuring, problem solving, social skills training, relaxation training and enhancement of protective factors. In the current study, Footprints was implemented as part of a whole-school approach to supporting young people's mental health and behaviour (PBIS).</p>	<p><b>Facilitator:</b> Doctoral psychology students (advanced child and family therapy practice)</p> <p><b>Format:</b> Group sessions (5-8 students) and individual sessions plus homework</p>	<p><b>Duration and frequency:</b> Two 40-minute one-to-one MI sessions and six group-based sessions</p>	<p><b>Booster:</b> No</p>	<p><b>Quality assessment:</b> 3</p>

Study Design	Results	
<p><b>QED</b></p> <p><b>Country:</b> US</p> <p><b>Total sample size:</b> 43 students from a south-eastern middle school</p> <p><b>Attrition not reported</b> 39.5% female</p> <p><b>Age range:</b> 6th–8th grade (ages 11–13 years)</p> <p><b>Control:</b> Wait-list control</p>	<p><b>Psychosocial wellbeing</b></p>	<p>Significant effect on self-efficacy for behavioural regulation post-intervention (<math>d=0.86, p&lt;0.001</math>) (<i>Children's Perceived Self-Efficacy (CPSE)</i>).</p>
	<p><b>Academic</b></p>	<p>Significant effect on academic grades post-intervention (<math>d=0.53, p=0.050</math>) (<i>official academic transcripts, converted to a 100-point scale</i>).</p> <p>Significant effect on academic motivation post-intervention (<math>d=1.24, p&lt;0.001</math>) (<i>Perceived School Experience Scale (PSES)</i>).</p>
	<p><b>Psychological wellbeing</b></p>	<p>Significant effect on behavioural and emotional symptoms post-intervention (<math>d=0.41, p=0.04</math>) (<i>Pediatric Symptom Checklist (PSC)</i>).</p>

## Targeted indicated interventions using a cognitive behavioural therapy approach

Briere et al.,  
2019  
Blues  
Programme

### Description

#### Target level: Indicated

The Blues Programme is a targeted indicated cognitive behavioural therapy programme for pupils between the age of 13 and 19 who are experiencing depressive symptoms. It aims to support adolescents to identify negative thoughts, change their thinking patterns, increase their involvement in pleasant activities, and enhance their coping flexibility.

The Blues Programme is included on the [EIF Guidebook](#).

**Facilitator:**  
Five psycho-educators (counsellors) and one psychologist

**Format:**  
Group sessions of 5–9 students, plus homework

**Duration and frequency:**  
Six sessions over six weeks

**Booster:**  
No

**Quality assessment:**  
1

### Study Design

#### RCT

**Country:** Canada

**Total sample size:** 74 students from three schools in Montreal, Canada

**4% attrition at FU**

66% female

**Mean age:** 15.5 years

**Control:** No intervention

### Results

#### Depression

Significant effect on likelihood on developing major depressive disorder (MDD) at six-month follow-up (OR=6.0, 95%CI 1.10, 33.0,  $p<0.050$ ). Students in the control group were six times less likely to develop MDD by six months (*the Structured-Clinical Interview for DSM-IV Disorders*).

Significant effect on depressive symptoms post-intervention ( $d=-0.040$ ,  $p=0.048$ ) but not at six-month follow-up (*Center for Epidemiologic Studies Depression Scale (CES-D)*).

Significant effect on depressive symptoms post-intervention ( $d=-0.51$ ,  $p=0.010$ ) but not at six-month follow-up (*the Structured-Clinical Interview for DSM-IV Disorders*).

#### Anxiety

No significant effect on anxiety symptoms (*social phobia and generalised anxiety subscales of the Spence Children Anxiety Scale (SCAS)*).

#### Psychosocial wellbeing

No significant effect on social adjustment (*Évaluation sociale de soi chez les jeunes adultes (Social self-evaluation in young adults)*).

Significant effect on frequency of pleasant activities post-intervention ( $d=0.49$ ,  $p<0.010$ ). Intervention group experienced increased frequency of pleasant activities. Effect not significant at six-month follow-up (*subset of items from the Pleasant Events Schedule (PES)*).

Significant effect on interactions with parents post-intervention ( $d=0.34$ ,  $p=0.020$ ). Intervention group report better interactions with parents and decreasing conflict with parents, rather than increasing positive interactions. Effect not significant at six-month follow-up (*Mesures de l'Adaptation Sociale et Personnelle des Adolescents Quebecois (Measure of the Social and Personal Adjustment of Quebec Adolescents)*).

#### Psychological wellbeing

No significant effect on negative thoughts (*Automatic Thoughts Questionnaire (ATQ)*).

Targeted indicated interventions using a cognitive behavioural therapy approach (cont.)

<p>Blossom et al. (2019) &amp; Makover et al. (2019)  <b>High School Transition Programme (HSTP)</b></p>	<b>Description</b>				
	<p><b>Target level:</b> Indicated</p> <p>The High School Transition Programme is a targeted indicated cognitive behavioural therapy programme for students with elevated depression and low conduct problem scores. It aims to reduce the development of depressive disorders in at-risk youth as they transition from middle to high school in the US. The programme supports the acquisition of coping-skill competencies, social support resources, engagement in positive social activities, and parental engagement during the transition period.</p>	<p><b>Facilitator:</b> Mental-health Counsellors</p> <p><b>Format:</b> Group sessions (6–8 students each) and parent component</p>	<p><b>Duration and frequency:</b> Twelve sessions, 1 hour each, over six weeks</p>	<p><b>Booster:</b> Yes: 4 one-to-one booster sessions following transition to high school</p>	<p><b>Quality assessment:</b> 1</p>
	<b>Study Design</b>		<b>Results</b>		
<p><b>RCT</b></p> <p><b>Country:</b> US</p> <p><b>Total sample size:</b> 497 students from six urban middle schools in the north-west</p> <p><b>3.4% attrition at FU</b></p> <p>61.5% female</p> <p><b>Age:</b> Middle school students (age 11–13 years)</p> <p><b>Control:</b> No intervention</p>	<p><b>Depression</b></p>	<p>Significant effect on depressive symptoms at 1, 3, 9, 12, and 18 months post-screening. Depressive symptoms decreased in the whole sample by an average of 0.42 points (<math>\beta=-0.42</math>, <math>p&lt;0.001</math>), where students in the intervention group had faster rates of decrease (<math>d=0.23</math>, <math>p=0.020</math>) (<i>Short Mood and Feelings Questionnaire (SMFQ)</i>).</p> <ul style="list-style-type: none"> <li>Depressive symptoms in the intervention group decreased through improvements in school attachment, which in turn improved self-esteem.</li> </ul>			
	<p><b>Anxiety</b></p>	<p>Significant effect on anxiety at 1, 3, 9, 12, and 18 months post-screening. Anxiety symptoms decreased in the whole sample by an average of 0.11 points (<math>\beta=-0.11</math>, <math>p&lt;0.001</math>), where students in the intervention group had faster rates of decrease (<math>d=0.25</math>, <math>p=0.010</math>) (<i>4-item anxiety sub-scale from the High School Questionnaire (HSQ)</i>).</p>			

Targeted indicated interventions using a cognitive behavioural therapy approach (cont.)

Brown et al. (2019)  
**The DISCOVER 'How to Handle Stress' Workshop Programme**

Description		
<b>Target level:</b> Indicated	<b>Facilitator:</b> Two clinical psychologists and one assistant psychologist	<b>Duration and frequency:</b> One-day workshop, 20/30-minute follow-up call
The Discover programme is a targeted indicated cognitive behavioural therapy programme intervention for pupils between the age of 16 and 19 who are from at-risk backgrounds (minority ethnic young people, socioeconomic deprivation). It aims to reduce stress, depression and anxiety by focusing on methods for coping with common personal and academic stress (such as anxiety and worry), dealing with coursework, dealing with family expectations and exam anxiety.	<b>Booster:</b> Yes: offered two further follow-up calls within 12 weeks	<b>Quality assessment:</b> 2
<b>Format:</b> Group sessions of up to 15 students plus homework		
Study Design	Results	
<b>Cluster RCT</b> <b>Country:</b> UK <b>Total sample size:</b> 155 students from 10 secondary schools in London <b>8.4% attrition at FU</b> 81.3% Female <b>Mean age:</b> 17.3 years NOTE: 21.9% white British, 9.5% other British, 7% Asian or British Asian, 44.5% Black or Black British, 5.2% Mixed background, 0.6% Chinese, 10.3% other, 0.6% prefer not to say <b>Control:</b> Waitlist control	<b>Depression</b>	Significant effects on depression at three months post-intervention ( $d=0.27$ , $p=0.021$ ). Significantly fewer depressive symptoms over time ( <i>Mood and Feelings Questionnaire (MFQ)</i> ).
	<b>Anxiety</b>	Significant effects on anxiety at three months post-intervention ( $d=0.25$ , $p=0.018$ ) ( <i>Revised Child Anxiety and Depression Scale (RCADS)</i> ).
	<b>Subjective wellbeing</b>	Significant effects on quality of life at three months post-intervention ( $d=0.36$ , $p=0.009$ ) ( <i>the Paediatric Quality of Life Enjoyment and Satisfaction Form (PQ-LES-Q)</i> ).
	<b>Psychological wellbeing</b>	Significant effects on emotional symptoms at three months post-intervention ( $d=-0.28$ , $p=0.008$ ) ( <i>Revised Child Anxiety and Depression Scale (RCADS)</i> ).
	<b>Psychosocial wellbeing</b>	Significant effects on mental wellbeing at three months post-intervention ( $d=0.46$ , $p=0.001$ ) ( <i>the Warwick-Edinburgh Mental Well-Being Scale (WEMWBS)</i> ).

Targeted indicated interventions using a cognitive behavioural therapy approach (cont.)

<p>Haugland et al. (2017, 2020)</p> <p><b>Vaag (Dare) (brief CBT) and Cool Kids</b></p>	Description				
	<p><b>Target level:</b> Indicated</p> <p>The Vaag and Cool Kids programmes are both targeted indicated cognitive behavioural therapy programmes for adolescents with anxiety symptoms. The Vaag intervention includes psychoeducation, cognitive restructuring, in-session exposure, and behavioural experiments and training plan components. The Cool Kids intervention also includes sessions and activities aimed at understanding exposure hierarchies, skills training (such as assertiveness training), problem solving, dealing with bullying, and future plans and celebration components. An important difference between the programmes is the amount of therapist contact between sessions four and five where students perform exposure tasks in their own time: Vaag includes two telephone calls with students individually whereas Cool Kids practise on their own without reflection and guidance.</p>	<p><b>Facilitator:</b> Two group leaders per group, mainly school personnel (nurses) or mental health workers who all received training</p> <p><b>Format:</b> Group sessions with 5–8 students each; a parent component; plus homework</p>	<p><b>Duration and frequency:</b> <b>Vaag:</b> Five sessions lasting 45 to 90 minutes (total 5.5 hours); two 10-minute calls/text between sessions four and five (five-week gap) <b>CK:</b> Ten 90-minute sessions (total 15 hours); two parent-only sessions lasting 90 minutes each</p>	<p><b>Booster:</b> No</p>	<p><b>Quality assessment:</b> 1</p>
	Study Design	Results			
<p><b>RCT</b></p> <p><b>Country:</b> Norway</p> <p><b>Total sample size:</b> 363 students from 18 junior high schools</p> <p><b>16.6% defined as non-completers (attrition)</b></p> <p>84% female</p> <p><b>Mean age:</b> 14.0 years</p> <p><b>Control:</b> Wait-list control</p>	<p><b>Depression</b></p>	<p>Significant effect on parent-reported depressive symptoms post-intervention (<math>d=0.30</math>, <math>p=0.006</math>). Parent ratings of youth depressive symptoms decreased significantly more in the CBT groups (Vaag and CK groups combined) than the control group. No significant effect at one-year follow-up (<i>Short Mood and Feeling Questionnaire (SMFQ)</i>).</p>			
	<p><b>Anxiety</b></p>	<p>Significant effect on self-report anxiety symptoms (<math>d=0.34</math>, <math>p=0.001</math>), and parent-reported anxiety symptoms (<math>d=0.53</math>, <math>p&lt;0.001</math>) post-intervention. The CBT group (Vaag and CK groups combined), showed significant reductions in anxiety. Vaag was not inferior to CK. No significant effect of intervention at one-year follow-up (<i>Spence Children's Anxiety Scale-child and parent version (SCAS-A/P)</i>).</p> <p>Significant effect on parent reports of youth impairment from anxiety (<math>d=0.51</math>, <math>p&lt;0.001</math>) post-intervention. Parent reports of youth impairment from anxiety significantly improved in the CBT group (Vaag and CK combined) compared to the control group. Vaag was not inferior to CK. No significant effect at one-year follow-up (<i>Children Anxiety Life Interference Scale – Parent (CALIS-P)</i>).</p> <p>Significant effect on group leaders' rating of severity of adolescent anxiety symptoms (<math>d=1.03</math>, <math>p&lt;0.001</math>) post-intervention. Clinical global severity decreased significantly more in the CBT group (Vaag and CK combined) compared to the control group. No significant effect at one-year follow-up (<i>Clinical Global Impression Scale - Severity (CGI-S)</i>).</p>			

Targeted indicated interventions using a cognitive behavioural therapy approach (cont.)

<p>Putwain et al. (2018)</p> <p><b>Strategies to Tackle Exam Pressure and Stress (STEPS)</b></p>	<b>Description</b>				
	<p><b>Target level:</b> Indicated</p> <p>The Strategies to Tackle Exam Pressure and Stress (STEPS) programme is a targeted indicated cognitive behavioural therapy programme for pupils with elevated test anxiety symptoms. STEPS aims to reduce anxiety by focusing on identifying test anxiety signs and triggers, identifying negative thought patterns, and prompting more positive ways of thinking about exams, relaxation techniques, study and test-taking skills, understanding internal and external forms of motivation, goal setting, and reflecting on what elements of the programme worked the most successfully.</p>	<p><b>Facilitator:</b> Assistant psychologists</p> <p><b>Format:</b> Group sessions with a maximum of six students</p>	<p><b>Duration and frequency:</b> Six sessions of 40 minutes each, delivered over six weeks (one session per week)</p>	<p><b>Booster:</b> No</p>	<p><b>Quality assessment:</b> 3</p> <p><i>Intervention also evaluated by Putwain et al. (2020)</i></p>
	<b>Study Design</b>		<b>Results</b>		
<p><b>RCT</b></p> <p><b>Country:</b> England</p> <p><b>Total sample size:</b> 56 students from two secondary schools located in urban areas of England</p> <p><b>17.9% attrition at FU</b></p> <p>66.1% female</p> <p><b>Mean age:</b> 14.7 years</p> <p><b>Control:</b> Wait-list control</p>	<p><b>Anxiety</b></p>	<p>Significant effect on test anxiety subscale of worry (<math>p &lt; 0.001</math>) post-intervention. The intervention group showed a moderate decline (<math>d = 0.76</math>, <math>p &lt; 0.001</math>). The decline over time was associated with a reduction in uncertain control (<math>R^2 = 0.079</math>) (<i>20-item Revised Test Anxiety Scale – Worry Subscale</i>).</p> <p>Significant effect on test anxiety subscale of tension (<math>p &lt; 0.001</math>) post-intervention. The intervention group showed a moderate decline (<math>d = 1.14</math>, <math>p &lt; 0.001</math>) compared to negligible decline in the control group (<math>d = 0.08</math>, <math>p = 0.005</math>). The decline in the intervention group was associated with a reduction in uncertain control (<math>R^2 = 0.064</math>) (<i>20-item Revised Test Anxiety Scale – Tension Subscale</i>).</p> <p>Significant effect on test anxiety subscale of uncertain control (<math>p = 0.040</math>) post-intervention. The intervention group showed a moderate decline (<math>d = 0.64</math>, <math>p = 0.003</math>) compared to no effect in the control group (<i>20-item Revised Test Anxiety Scale – Uncertain Control Subscale</i>).</p> <p>No significant effect on test anxiety subscale of bodily symptoms. (<i>20-item Revised Test Anxiety Scale – Bodily Symptoms Subscale</i>).</p> <p>No significant effect on test anxiety subscale of irrelevant thoughts. (<i>20-item Revised Test Anxiety Scale – Irrelevant Thoughts Subscale</i>).</p>			

Targeted indicated interventions using a cognitive behavioural therapy approach (cont.)

Putwain et al. (2020)  
**Strategies to Tackle Exam Pressure and Stress (STEPS)**

Description		
<p><b>Target level:</b> Indicated</p> <p>The Strategies to Tackle Exam Pressure and Stress (STEPS) programme is a targeted indicated cognitive behavioural therapy programme for pupils with elevated test anxiety symptoms. STEPS It aims to reduce anxiety and promote wellbeing by focusing on identifying test anxious signs and triggers, identifying negative thought patterns and prompting more positive ways of thinking about exams, relaxation techniques, study and test-taking skills, understanding internal and external forms of motivation and goal setting, and reflecting on what elements of the programme worked the most successfully.</p>	<p><b>Facilitator:</b> Assistant psychologists</p> <p><b>Format:</b> Group sessions with a maximum of six students and homework</p>	<p><b>Duration and frequency:</b> Six sessions lasting 45 minutes each, over six weeks (one session per week)</p> <p><b>Booster:</b> No</p> <p><b>Quality assessment:</b> 3 <i>Intervention also evaluated by Putwain et al. (2020)</i></p>
Study Design	Results	
<p><b>RCT</b></p> <p><b>Country:</b> England</p> <p><b>Total sample size:</b> 161 students from eight secondary schools</p> <p><b>9.3% attrition at FU</b></p> <p>62.7% female</p> <p><b>Mean age:</b> 14.1 years</p> <p><b>Control:</b> Wait-list control</p>	<p><b>Anxiety</b></p> <p>Significant effect on test anxiety post-intervention (<math>p=0.001</math>). The intervention group showed a larger significant decrease in test anxiety (<math>d=0.86</math>, <math>p&lt;0.001</math>) than the control group (<math>d=0.62</math>, <math>p&lt;0.001</math>) (<i>20-item Revised Test Anxiety Scale</i>).</p> <p>Significant effect on generalised anxiety subscale of clinical anxiety (<math>p=0.003</math>) post-intervention. The intervention group showed a small significant decrease in generalised anxiety (<math>d=0.43</math>, <math>p&lt;0.001</math>), compared to the control group who showed no effect (<math>d=0.11</math>, <math>p=0.350</math>) (<i>Revised Children's Anxiety and Depression Scale (6-item generalised anxiety and 9-item panic subscales)</i>).</p> <p>Significant effect on panic subscale of clinical anxiety (<math>p&lt;0.001</math>) post-intervention. The intervention group showed a small significant decrease in generalised anxiety (<math>d=0.54</math>, <math>p&lt;0.001</math>), compared to the control group who showed no effect (<math>d=0.19</math>, <math>p=0.140</math>) (<i>Revised Children's Anxiety and Depression Scale (6-item generalised anxiety and 9-item panic subscales)</i>).</p> <p>Reductions in generalised anxiety and panic were significantly associated with concurrent reduction in test anxiety.</p>	<p><b>Wellbeing</b></p> <p>No significant effect on school-related wellbeing (<i>School related Wellbeing Scale (SWBS)</i>).</p>

Targeted indicated interventions using a cognitive behavioural therapy approach (cont.)

<p>Weeks et al. (2017)  <b>CBT Group-Based Intervention</b></p>	<b>Description</b>				
	<p><b>Target level:</b> Indicated</p> <p>This targeted indicated cognitive behavioural therapy programme is designed for pupils with elevated anxiety symptoms. The programme is informed by <i>Cool Connections with Cognitive Behaviour Therapy</i> (Seiler, 2008) and <i>Anxiety: Cognitive Behaviour Therapy with Children and Young People</i> (Stallard, 2009).</p>	<p><b>Facilitator:</b>                      Researcher-led, with a teaching assistant cofacilitating in one school</p> <p><b>Format:</b>                      Group sessions (size not reported)</p>	<p><b>Duration and frequency:</b>                      Six-week group-based intervention with weekly group sessions</p>	<p><b>Booster:</b>                      No</p>	<p><b>Quality assessment:</b>                      3</p>
	<b>Study Design</b>	<b>Results</b>			
	<p><b>QED</b></p> <p><b>Country:</b> UK</p> <p><b>Total sample size:</b>                      19 students from secondary schools in one local authority</p> <p><b>Attrition not reported</b></p> <p>100% female</p> <p><b>Age range:</b> 11–14 years</p> <p><b>Control:</b> Wait-list control</p>	<p><b>Anxiety</b></p> <p>No significant effect on anxiety symptoms. One student reported a large increase in anxiety from pre- to post-intervention (<i>Spence Children's Anxiety Scale (SCAS)</i>).</p> <p>No significant effect on teacher rated anxiety (<i>School Anxiety Scale – Teacher Report (SAS-TR)</i>).</p>	<p><b>Psychological wellbeing</b></p> <p>No significant effect on internalising and externalising problems (<i>Children's Automatic Thoughts Scale (CATS)</i>).</p>	<p><b>Psychosocial wellbeing</b></p> <p>No significant effect on prosocial behaviour (<i>Strengths and Difficulties Questionnaire (SDQ)</i>).</p>	

## Targeted indicated interventions using a psychotherapy approach

<p>Harrison et al. (2020)</p> <p><b>Counselling for Psychological Distress</b></p>	<b>Description</b>				
	<p><b>Target level:</b> Indicated</p> <p>This counselling intervention is designed for students with elevated psychological distress. It aims to reduce distress by using counselling processes (including non-directivity and developing a warm and non-judgemental relationship with participants), active listening, and an emphasis on communication of genuineness, empathy and positive regard.</p>	<p><b>Facilitator:</b> Three counsellors (Master's level)</p> <p><b>Format:</b> Counselling sessions (format not reported)</p>	<p><b>Duration and frequency:</b> Six sessions of 45 minutes each, delivered over approximately three months</p>	<p><b>Booster:</b> No</p>	<p><b>Quality assessment:</b> 2</p>
	<b>Study Design</b>		<b>Results</b>		
<p><b>RCT</b></p> <p><b>Country:</b> Hong Kong</p> <p><b>Total sample size:</b> 33 students from two secondary schools</p> <p><b>33% attrition at FU</b></p> <p>78.8% female</p> <p><b>Mean age:</b> 16.2 years</p> <p><b>Control:</b> No intervention</p>	<p><b>Psychosocial wellbeing</b></p>	<p>No significant effect on emotional distress post-intervention or at three-month follow-up (<i>Young Person's Clinical Outcomes in Routine Evaluation measure (YP-CORE)</i>).</p>			
	<p><b>Psychosocial wellbeing</b></p>	<p>No significant differences on emotional and behavioural symptoms post-intervention or at three-month follow-up. (<i>Strengths and Difficulty Questionnaire (SDQ)</i>).</p>			

Targeted indicated interventions using a psychotherapy approach (cont.)

Pearce et al. (2017) School-based Humanistic Counselling (SBHC)	<b>Description</b>				
	<b>Target level:</b> Indicated This counselling programme is designed for students with moderate to high levels of emotional distress. It aims to reduce distress by giving students the opportunity to talk through their problems which helps students to reflect on their emotions and behaviours.	<b>Facilitator:</b> Qualified counsellors  <b>Format:</b> Group sessions (size not reported)	<b>Duration and frequency:</b> Up to 12 weekly sessions lasting 45 minutes each	<b>Booster:</b> No	<b>Quality assessment:</b> 2
	<b>Study Design</b>	<b>Results</b>			
	<b>RCT</b> <b>Country:</b> UK <b>Total sample size:</b> 64 students from three urban secondary schools <b>29.7% attrition at FU</b> 85.9% female <b>Mean age:</b> 14.2 years <b>Control:</b> No intervention	<b>Psychological wellbeing</b>	Significant effect on psychological distress post-intervention ( $p=0.028$ ). Intervention group showed a significant reduction in psychological distress. No significant effect at six-month or nine-month follow-up ( <i>Young Person's CORE (YP-CORE)</i> ).		
	<b>Psychosocial wellbeing</b>	Significant effect on self-esteem post-intervention ( $p=0.030$ ). Intervention group, compared to the control group, showed a significant reduction in self-esteem. No significant effect at six-month or nine-month follow-up ( <i>Rosenberg Self-Esteem Scale (RSES)</i> ).  Significant effect on total emotional and behavioural symptoms over time ( $p<0.001$ ). Significant improvements in intervention group post-intervention (standardised mean difference 1.33), at six-month follow-up (standardised mean difference 1.59) and nine-month follow-up (standardised mean difference 0.81). No significant effect for subscales of conduct problems, hyperactivity, peer problems, prosocial and goal attainment ( <i>Strengths and Difficulties Questionnaire (SDQ)</i> ).			
	<b>Other: Goals</b>	No significant effect on personal goals ( <i>Goal-based outcomes (GBO)</i> ).			

Targeted indicated interventions using a psychotherapy approach (cont.)

<p>Saelid et al. (2017)</p> <p><b>Rational Emotive Behaviour Therapy (REBT)</b></p>	<p><b>Description</b></p>				
	<p><b>Target level:</b> Indicated</p> <p>REBT is a psychotherapy programme for students with elevated but subclinical anxiety and depression scores. It aims to prevent depression and anxiety by identifying a problem or life adversity and working with a therapist to replace irrational beliefs with effective new philosophies.</p>	<p><b>Facilitator:</b> Researcher-led</p> <p><b>Format:</b> One-to-one session with therapist</p>	<p><b>Duration and frequency:</b> Three sessions of 45 minutes each with approximately two months between each session</p>	<p><b>Booster:</b> No</p>	<p><b>Quality assessment:</b> 2</p>
	<p><b>Study Design</b></p> <p><b>RCT</b> <b>Country:</b> Norway <b>Total sample size:</b> 62 students from one high school <b>9.7% attrition at FU</b> Gender not reported <b>Age range:</b> 16–19 years <b>Control:</b> Active control: individual ATP sessions where students are given the opportunity to ventilate and talk about their problems, but received no advice or directions for solving their problems. Inactive Control: No intervention.</p>	<p><b>Results</b></p>			
	<p><b>Depression</b></p>	<p>Significant effect on anxiety and depression symptoms at six months post-intervention. The REBT intervention had significantly reduced anxiety and depression scores compared to inactive control (<math>d=0.70</math>, <math>p&lt;0.050</math>). No significant effect of active control. No significant difference in depression between the active control (ATP) and REBT group 6 months post-intervention (<i>Hospital Anxiety and Depression Scale (HADS)</i>).</p>			
	<p><b>Anxiety</b></p>	<p>Significant effect on anxiety and depression symptoms at six months post-intervention. The REBT intervention had significantly reduced anxiety and depression scores compared to inactive control (<math>d=0.70</math>, <math>p&lt;0.050</math>). No significant effect of active control. No significant difference in depression between the active control (ATP) and REBT group 6 months post-intervention (<i>Hospital Anxiety and Depression Scale (HADS)</i>).</p>			

Targeted indicated interventions using a psychotherapy approach (cont.)

<p>Young et al. (2019)</p> <p><b>Interpersonal Psychotherapy-Adolescent Skills Training (IPT-AST)</b></p>	<b>Description</b>				
	<p><b>Target level:</b> Indicated</p> <p>The Interpersonal Psychotherapy-Adolescent Skills Training is a targeted indicated programme for students with elevated depression symptoms. It aims to reduce depressive symptoms and improve overall functioning by teaching students about depressive symptoms, interpersonal problems, the link between relationships and emotions, and communication strategies. Pupils also undertake intensive work on their interpersonal goals.</p>	<p><b>Facilitator:</b> Clinical psychology graduate students and clinical psychologists</p> <p><b>Format:</b> 18 groups and individual sessions (may include parents)</p>	<p><b>Duration and frequency:</b> Two individual pre-group sessions, eight group sessions, and one individual mid-group session</p>	<p><b>Booster:</b> Yes: four individual booster sessions delivered in the six months following the group sessions</p>	<p><b>Quality assessment:</b> 1</p>
	<b>Study Design</b>				
<p><b>RCT</b></p> <p><b>Country:</b> US</p> <p><b>Total sample size:</b> 186 students from eligible middle and high schools</p> <p><b>12.9% attrition at FU</b></p> <p>60.3% female</p> <p><b>Mean age:</b> 14.1 years</p> <p><b>Control:</b> Group counselling</p>	<b>Results</b>				
	<b>Depression</b>	<p>No significant effect on depressive symptoms. Depressive symptoms significantly decreased for both groups at 24-month follow-up but there was no significant difference between the intervention and active control groups (<i>Center for Epidemiologic Studies-Depression Scale (CES-D)</i>).</p> <p>No significant effect on likelihood of depression diagnosis (<i>Schedule for Affective Disorders and Schizophrenia for School-Age Children (K-SADS-PL)</i>).</p>			
	<b>Subjective wellbeing</b>	<p>No significant effect on overall functioning. Overall functioning significantly increased for both groups at 24-month follow-up but there was no significant difference between the intervention and active control groups (<i>Children's Global Assessment Scale (CGAS)</i>).</p>			

Targeted indicated interventions using a psychotherapy approach (cont.)

<p>Torcasso &amp; Hilt (2017) TeenScreen</p>	<p><b>Description</b></p>				
	<p><b>Target level:</b> Universal screening</p> <p>TeenScreen is multi-stage suicide screening programme implemented over three years. The first stage in the programme involves all students completing a universal screening questionnaire, which identifies students at risk of poor mental health and suicide. All students move on to the subsequent stage of the programme and attend either a debriefing with an option of seeing a clinician (if they screen negative for being at risk) or a clinical interview (if they screen positive for being at risk). During clinical interviews, the clinician determines if the student needs to be referred to services, and parents are notified within 24 hours of screening. After the referral to parents, a referral package is sent with a list of mental healthcare providers recommended in the community, a release of information form, and a letter outlining next steps.</p>	<p><b>Facilitator:</b> A screening team including programme coordinators, screeners, debriefers, clinicians and case managers who are often community mental health practitioners – teachers are not allowed to participate in the screening process to maintain student confidentiality</p> <p><b>Format:</b> Individual questionnaire completion and individual referrals based on risk and needs assessment</p>	<p><b>Duration and frequency:</b> One 10–20-minute screening questionnaire, followed by one clinical or debrief interview</p>	<p><b>Booster:</b> No</p>	<p><b>Quality assessment:</b> 3</p>
	<p><b>Study Design</b></p>		<p><b>Results</b></p>		
<p><b>QED</b></p> <p><b>Country:</b> US</p> <p><b>Total sample size:</b> 193 students from one public high school</p> <p><b>Attrition:</b> N/A % female not reported</p> <p><b>Age range:</b> 9th Grade Students (age 14–15 years)</p> <p><b>Control:</b> No intervention</p>	<p><b>Psychological wellbeing</b></p>	<p>Significant increase in the proportion of students identified as in need of mental health support and referred to mental health services through the screening programme (OR=11.77, p&lt;0.001) (<i>The Diagnostic Predictive Scales (DPS)</i>).</p>			
	<p><b>Suicidality</b></p>	<p>Significant effect for predicting the number of students who considered suicide and who attempted suicide two or more times. The proportion of students who considered suicide reduced significantly in intervention schools (Effect=-1.59, p=0.015) and the number of students who reported attempting suicide two or more times (Effect=-0.49, p=0.030) reduced significantly in the intervention schools (<i>The Youth Risk Behavior Survey (YRBS) developed by the Centers for Disease Control and Prevention's Youth Risk Behavior Surveillance System (YRBSS)</i>).</p>			

To download the full report, visit: <https://www.eif.org.uk/report/adolescent-mental-health-a-systematic-review-on-the-effectiveness-of-school-based-interventions>

## Appendix C.1: Behaviour

### Notes

- See page 120 for a detailed glossary and list of abbreviations used in these tables, and page 121 for full references for listed reviews and studies.
- Where these tables mention significant effects, this refers to the intervention group experiencing a significantly larger effect than the control group in the desirable direction.
- Significant effects can be improvements in positive outcomes (such as wellbeing or resilience) or reductions in symptoms (such as depression or anxiety). Where the intervention group experienced significantly worse outcomes than the control group, these are listed as 'adverse' effects.
- Effects (for meta-analyses: pooled effects) were deemed significant where p was less or equal than 0.05 – regardless of the significance level applied by individual studies.

## Table of systematic reviews

### Systematic reviews of aggression and violence prevention interventions

Reference	Analysis	Quality assessment rating	Inclusion criteria 1 Population/age range 2 Interventions 3 Study design 4 Outcomes assessed	Exclusion criteria	Time frame	Number of studies included in review	Results
<b>Alford &amp; Derzon, 2012</b> Meta-analysis and systematic review of the effectiveness of school-based programmes to reduce multiple violent and antisocial behavioural outcomes	Meta-analysis	Weak	1 Age not reported, US-only studies 2 School-based interventions to reduce violence and antisocial behaviour 3 RCTs, QEDs 4 Physical aggression, antisocial/aggressive/delinquent behaviour	<ul style="list-style-type: none"> <li>• Differential attrition greater than 20% difference between the treatment and control groups; non-manualised interventions</li> </ul>	Not reported	24	Standardised mean effects: <ul style="list-style-type: none"> <li>• Physical aggression SMD=0.261.</li> <li>• Antisocial behaviour SMD=0.155.</li> <li>• Aggressive/disruptive behaviour SMD=0.127.</li> <li>• Delinquent behaviour SMD=0.080.</li> <li>• Unclear which and how many studies included in meta-analysis. Unclear whether positive effect sizes signify reductions or increases in the behaviours.</li> <li>• Heterogeneity not assessed.</li> </ul>

Systematic reviews of aggression and violence prevention interventions (cont.)

Reference	Analysis	Quality assessment rating	Inclusion criteria 1 Population/age range 2 Interventions 3 Study design 4 Outcomes assessed	Exclusion criteria	Time frame	Number of studies included in review	Results
<p><b>Castillo-Eito et al., 2020</b></p> <p>How can adolescent aggression be reduced? A multi-level meta-analysis</p>	Meta-analysis	Strong	<ol style="list-style-type: none"> <li>1 10–18 years</li> <li>2 Psychosocial interventions to reduce aggressive behaviour</li> <li>3 RCTs</li> <li>4 Actual or threatened physical aggression against peers</li> </ol>	<ul style="list-style-type: none"> <li>• RCTs with clinical populations (diagnoses other than conduct disorder, e.g. ADHD); Non-English/Spanish papers</li> </ul>	Up to Dec 2019	112	<p>Overall mean effect size:</p> <ul style="list-style-type: none"> <li>• Aggressive behaviour: <math>d=0.28</math>, across 95 studies (283 effect sizes from 115 intervention groups) significant heterogeneity; excluding outliers: <math>d=0.21</math>, still significant heterogeneity (<math>\chi^2 &lt; 0.001</math>).</li> <li>• Targeted interventions (52 studies, 132 effect sizes, 64 intervention groups) had a larger effect size (<math>d=0.39</math>) than universal interventions (<math>d=0.14</math>; 45 studies, 151 effect sizes, 52 intervention groups).</li> <li>• Universal interventions that included behavioural practice (<math>d=0.16</math>) or problem solving (<math>d=0.20</math>) were more effective than interventions that did not include them.</li> <li>• Interventions delivered by a teacher or member of staff were less effective than interventions delivered by external professionals.</li> <li>• Duration of the intervention was a significant moderator; shorter interventions were more effective.</li> </ul>
<p><b>Cox et al., 2016</b></p> <p>Violence prevention and intervention programmes for adolescents in Australia: a systematic review</p>	Meta-analysis	Moderate	<ol style="list-style-type: none"> <li>1 12–18-year-old Australian youth only</li> <li>2 Universal interventions designed to prevent or reduce violent behaviour</li> <li>3 RCTs, QEDs</li> <li>4 Violent behaviour</li> </ol>	<ul style="list-style-type: none"> <li>• Clinical populations; pharmaceutical interventions; juvenile justice settings; 'violent' sanctions; Non-English papers</li> </ul>	Up to Dec 2013	19	<p>Pooled effect sizes (Universal programmes):</p> <ul style="list-style-type: none"> <li>• Antisocial and violence behaviour (adolescent rated): <math>d=0.108</math>, across 2 studies.</li> <li>• Nonsignificant pooled effects: Bullying (across 2 studies), Alcohol or other drug-related violence (across 4 studies), parent-rated antisocial and violence behaviour (across 2 studies).</li> <li>• Heterogeneity not assessed.</li> <li>• Intervention type: Universal: multi-level interventions, school-wide policies, psychoeducation, SEL-based interventions.</li> </ul> <p>No pooled effect size provided for targeted programmes:</p> <ul style="list-style-type: none"> <li>• Targeted selective: Music therapy significantly reduced externalising behaviours among refugee adolescents.</li> <li>• Targeted indicated: Aggression management training programme – inconclusive evidence; Multimodal antibullying intervention – reduced bullying, effect maintained at three-month follow-up.</li> </ul>

Systematic reviews of aggression and violence prevention interventions (cont.)

Reference	Analysis	Quality assessment rating	Inclusion criteria 1 Population/age range 2 Interventions 3 Study design 4 Outcomes assessed	Exclusion criteria	Time frame	Number of studies included in review	Results
<p><b>Gavine, Donnelly &amp; Williams, 2016</b></p> <p>Effectiveness of universal school-based programmes for prevention of violence in adolescents</p>	Narrative synthesis	Moderate	<p>1 11–18 years</p> <p>2 School-based interventions designed to reduce non-fatal violent injury, homicide, weapons possession, aggressive behaviour or pro-violent attitudes</p> <p>3 RCTs, QEDs</p> <p>4 Assaults/ (perpetration or victimisation), homicide, weapon possession, incarceration due to violence</p>	<ul style="list-style-type: none"> <li>Non-English papers; non-peer-reviewed literature; primary school settings; other behavioural outcomes; indicated interventions; treatment interventions</li> </ul>	2002–March 2014	21	<p>No pooled effect size provided:</p> <ul style="list-style-type: none"> <li><b>Violent behaviour:</b> 4 out of seven interventions had positive effects; <b>Physical aggression:</b> 4/6 interventions had positive effects, one had adverse effects; <b>Non-Physical aggression:</b> 4/6 interventions had positive effects; <b>Victimisation:</b> 3/4 interventions had positive effects; <b>Violence in schools:</b> 3/3 interventions had positive effects; <b>Attitudes:</b> 6/9 interventions had positive effects, one had adverse effects.</li> <li>No long-term effects.</li> <li>Intervention type: Programmes designed to teach prosocial skills (such as anger management, empathy, problem-solving, communication and decision-making skills) and programmes designed to promote school-wide norms for non-violence.</li> </ul>

## Systematic reviews of bullying prevention interventions

Reference	Analysis	Quality assessment rating	Inclusion criteria 1 Population/age range 2 Interventions 3 Study design 4 Outcomes assessed	Exclusion criteria	Time frame	Number of studies included in review	Results
<p><b>Ng, Chua, &amp; Shorey, 2020</b></p> <p>The effectiveness of educational interventions on traditional bullying and cyberbullying among adolescents: a systematic review and meta-analysis</p>	Meta-analysis	Strong	<ol style="list-style-type: none"> <li>10–18 years</li> <li>Face-to-face or online educational interventions with a set curriculum focused on bullying prevention</li> <li>RCTs</li> <li>Traditional (or cyber-) bullying victimisation and perpetration frequencies</li> </ol>	<ul style="list-style-type: none"> <li>Studies that involved children younger than 10; adolescent minority group samples; uncontrolled studies or active control treatment other than usual or evidence-based practice</li> </ul>	Up to June 2019	17	<p>Standardised mean differences:</p> <ul style="list-style-type: none"> <li>Bullying victimisation frequency (dichotomous): not significant across 2 studies, (continuous): very small, across 10 studies (<math>I^2=71\%</math>). Excluding one outlier: SMD=-0.18; (<math>I^2=29\%</math>), across 9 studies/4,043 participants.</li> <li>Follow-up: SMD=-0.11 (<math>I^2=0\%</math>) across 3 studies/994 participants.</li> <li>Bullying perpetration frequency (dichotomous): not significant across 2 studies, (continuous): SMD=-0.30 (<math>I^2=75\%</math>), across 9 studies/4,043 participants.</li> <li>Follow-up: SMD=-0.22 (<math>I^2=0\%</math>) across 3 studies/994 participants.</li> <li>Cyberbullying victimisation (continuous): SMD=-0.13 (<math>I^2=73\%</math>), across 5 studies/6,419 participants; no outliers were identified.</li> <li>Follow-up: SMD=-0.08 (<math>I^2=0\%</math>), across 2 studies/2,987 participants.</li> <li>Cyberbullying perpetration (continuous) SMD=-0.16 (<math>I^2=80\%</math>), across 5 studies/6,366 participants; no outliers were identified.</li> <li>Follow-up: not significant across 2 studies/2,932 participants.</li> <li>Cyberbullying victimisation, perpetration: interventions delivered by external facilitators (content expert) had a medium significant effect, while interventions delivered by school staff had no significant effect.</li> </ul>
<p><b>Reed et al., 2016</b></p> <p>Cyberbullying: a literature review of its relationship to adolescent depression and current intervention strategies</p>	Narrative synthesis	Weak	<ol style="list-style-type: none"> <li>12–18 years, with symptoms of depression as a consequence of cyberbullying victimisation</li> <li>Interventions for the effect of bullying</li> <li>Any study design</li> <li>Cyberbullying/depression symptoms</li> </ol>	<ul style="list-style-type: none"> <li>Traditional bullying, participant age under 12 or over 18</li> </ul>	Not reported	Not reported	<p>No pooled effect size provided:</p> <ul style="list-style-type: none"> <li>Limited research currently exists about effective intervention strategies to address cyberbullying.</li> </ul>

## Systematic reviews of sexual violence prevention interventions

Reference	Analysis	Quality assessment rating	Inclusion criteria 1 Population/age range 2 Interventions 3 Study design 4 Outcomes assessed	Exclusion criteria	Time frame	Number of studies included in review	Results
<p><b>De Koker et al., 2014</b></p> <p>A systematic review of interventions for preventing adolescent intimate partner violence</p>	Narrative synthesis	Moderate	<p>1 10–19 years</p> <p>2 Universal intervention(s) for preventing perpetration and victimisation of any type of intimate partner violence (IPV) among adolescents</p> <p>3 RCTs, QEDs</p> <p>4 IPV (actual or threatened physical, sexual, psychological violence or sexual harassments)</p>	<ul style="list-style-type: none"> <li>Specialised populations, e.g. drug users, adolescents in juvenile institutions</li> </ul>	Up to Feb 2013	9	<p>No pooled effect size provided:</p> <ul style="list-style-type: none"> <li>Universal interventions targeting perpetration and victimisation of IPV among adolescents can be effective, including in the long term.</li> </ul>
<p><b>De La Rue et al., 2017</b></p> <p>A meta-analysis of school-based interventions aimed to prevent or reduce violence in teen dating relationships</p>	Meta-analysis	Strong	<p>1 11–18</p> <p>2 School-based teen dating violence prevention and intervention programmes</p> <p>3 RCT, QED</p> <p>4 Knowledge (about teen dating violence), attitudes (about teen dating violence behaviour), and frequency of perpetration or victimisation (Verbal aggression, relational aggression [controlling, jealousy], physical aggression/violence or sexual aggression/violence, or coercion) in adolescent intimate partner violence relationships. Also: bystander support or intervention</p>	<ul style="list-style-type: none"> <li>Outcomes had to be primary outcomes in the study, English papers only</li> </ul>	Up to July 2013	23	<p>Pooled effect sizes:</p> <ul style="list-style-type: none"> <li>Teen dating violence knowledge: <math>g=0.22</math>, across 13 studies (15 effect sizes).</li> <li>Follow-up: <math>g=0.36</math>, across 8 studies (10 effect sizes).</li> <li>Teen dating violence attitudes: <math>g=0.14</math>, across 10 studies (23 effect sizes).</li> <li>Follow-up: <math>g=0.11</math>, across 6 studies (15 effect sizes).</li> <li>Rape myths acceptance: <math>g=0.47</math>, across 4 studies (4 effect sizes).</li> <li>Follow-up: 1 study, 1 ES, no pooled ES.</li> <li>Dating violence perpetration: no significant effect across 5 studies (6 effect sizes).</li> <li>Follow-up: <math>g=-0.11</math>, across 4 studies (8 effect sizes).</li> <li>Dating violence victimisation: <math>g=-0.21</math>, across 5 studies (8 effect sizes).</li> <li>Follow-up: no significant effect across 3 studies.</li> <li>Conflict tactics scale: <math>g=0.18</math>, across 8 studies (10 effect sizes).</li> <li>Follow-up: no significant effect across 4 studies.</li> <li>Heterogeneity not assessed: Random Effects Modelling.</li> </ul>

Systematic reviews of sexual violence prevention interventions (cont.)

Reference	Analysis	Quality assessment rating	Inclusion criteria 1 Population/age range 2 Interventions 3 Study design 4 Outcomes assessed	Exclusion criteria	Time frame	Number of studies included in review	Results
<b>Leen et al., 2013</b> Prevalence, dynamic risk factors and the efficacy of primary interventions for adolescent dating violence: an international review	Narrative synthesis	Weak	1 12–18 2 NR 3 Any 4 Adolescent dating violence (physical, sexual, or psychological/ emotional abuse, including threats, towards a dating partner)	• Non-peer-reviewed literature, non-English/ German/ Dutch/ French/ Swedish papers	2000–2011	9	No pooled effect size provided: • ‘Tentative analysis suggests that programs focused on behavioural change may elicit sustainable effects more readily’ (p. 159).
<b>Lundgren &amp; Amin, 2015</b> Addressing intimate partner violence and sexual violence among adolescents: emerging evidence of effectiveness	Narrative synthesis	Moderate	1 10–19, but few found, 15–25 also included: 2 Violence prevention intervention (inc. addressing risk factors) 3 RCTs, QEDs 4 Intimate partner violence: behaviour within an intimate relationship that causes physical, sexual or psychological harm, incl. physical aggression, sexual coercion, psychological abuse and controlling behaviour or sexual violence	• Focus on LMIC but includes HIC setting	1990–search date (not given)	61	No pooled effect size provided: • More research on school-based interventions measuring violence as an outcome is needed.
<b>McElwain et al., 2017</b> Youth relationship education: a meta-analysis	Meta-analysis	Weak	1 Not reported 2 Youth relationship education 3 RCTs, QEDs 4 1) conflict management skills; 2) faulty relationship beliefs; and 3) healthy relationship attitudes	• Systematic reviews, qualitative research	NR	15	• Standardised mean difference (random effects). • Conflict management, $g=0.158$ , across 11 studies (20 effect sizes) (significant heterogeneity [Q]). • Faulty relationship beliefs, $g=0.287$ , across 9 studies (16 effect sizes) (significant heterogeneity [Q]). • Healthy relationship attitudes: nonsignificant across 18 effect sizes, significant heterogeneity [Q].

## Appendix C.2: Behaviour

### Table of primary studies

Universal interventions for aggression/violence prevention					
<p>Banyard et al. (2019)</p> <p><b>The Reducing Sexism and Violence Program – Middle School Program (RSVP-MSP)</b></p>	<b>Description</b>				
	<p><b>Target level:</b> Universal</p> <p>The RSVP-MSP programme aims to prevent violence in boys by exploring the normalisation, pervasiveness and harmful nature of rigid gender role assumptions. Session topics include empathy, healthy relationships, and information about gender-based violence, including bystander intervention training.</p>	<p><b>Facilitator:</b> Trained programme provider</p> <p><b>Format:</b> Group sessions</p>	<p><b>Duration and frequency:</b> Four 1-hour sessions</p>	<p><b>Booster:</b> No</p>	<p><b>Quality assessment:</b> 3</p>
	<b>Study Design</b>	<b>Results</b>			
	<p><b>QED</b></p> <p><b>Country:</b> US</p> <p><b>Total sample size:</b> 340 students from four schools</p> <p><b>4% attrition at FU</b></p> <p>0% female</p> <p><b>Mean age:</b> 12.5 years</p> <p><b>Control:</b> No intervention</p>	<b>Aggression/violence</b>	Significant effect on support for male violence ( $p < 0.05$ ). (9 items from Gender Equitable Attitudes Scale).		
		<b>Wellbeing</b>	No significant effect on empathy (6 items drawn from the compassion scale). No significant effect on emotional awareness (2 items from Gratz and Roemer (2004)). No significant effect on emotion regulation (4 items from Gratz and Roemer (2004)).		
		<b>Other: Helping intentions</b>	No significant effect on Helping intentions (4 items were adapted from intent to help scales developed by Banyard, Edwards and Rizzo (2014)).		
		<b>Other: Injunctive norms</b>	No significant effect on injunctive norms (8 items adapted from Rothman, Edwards, Rizzo, Kearns and Banyard (under review)).		
		<b>Other: Gender norms</b>	No significant effect on gender norms (measurement adapted from a number of previously validated scales).		
		<b>Other: Masculine stress</b>	No significant effect on masculinity stress measurement (5 items from the Gender Role Discrepancy & Discrepancy Stress Scale).		
		<b>Other: Support for gender equality</b>	No significant effect on support for gender equality in relationships (6 items from Gender Equitable Attitudes Scale).		
<b>Other: Support for male power</b>		No significant effect on support for male power (9 items from Gender Equitable Attitudes Scale).			
<b>Adverse effects</b>	Students in the intervention group experienced increased emotional dysregulation scores ( $p = 0.010$ ).				

Universal interventions for aggression/violence prevention (cont.)

Bonnell et al. (2018, 2019)

Learning Together

Description		Facilitator:	Duration and frequency:	Booster:	Quality assessment:
<p><b>Target level:</b> Universal</p> <p>The Learning Together programme is a whole-school intervention aimed at reducing aggression and bullying victimisation. Staff are trained in restorative practices, school policies and systems to address bullying and aggression. Bullying and aggressive behaviours are addressed in an action group, and students receive a SEL skills curriculum (for pupils aged 12–15 years), including modules on establishing respectful relationships, managing emotions, understanding/building and maintaining/repairing relationships, and exploring others needs and avoiding conflict.</p>		<p>Classroom teachers</p> <p><b>Format:</b> Normal classrooms/ groups like 'conferencing' to deal with incidents, action groups</p>	<p>SEL curriculum, 5–10 hours per year, action group six times per school year. Implemented continuously for three years</p>	<p>No</p>	<p>1</p>
Study Design	Results				
<p><b>Cluster RCT</b></p> <p><b>Country:</b> England</p> <p><b>Total sample size:</b> 6,667 students from 40 state secondary schools in south-east England</p> <p><b>85% attrition in control;</b></p> <p><b>81.2% attrition in intervention at FU</b></p> <p>51.8% female</p> <p><b>Mean age:</b> 12.0 years</p> <p><b>Control:</b> No intervention</p>	<b>Aggression/violence</b>	<p>No significant effect on aggression perpetration at 24 months post intervention. The intervention was more effective in those with greater baseline aggression (<i>Edinburgh Study of Youth Transitions and Crime (ESYTC) School Misbehaviour Subscale</i>).</p> <p>Significant effect on perpetration of aggression in or outside of school at 36 months (MD=-0.031, p=0.016), but not at 24 months (<i>modified 4-item version of the ESYTC measure of antisocial behaviours</i>).</p> <p>Significant effect on student-reported observations of other students perpetrating aggression at school at 36 months (MD=0.10, p=0.049), but not at 24 months (<i>purpose-designed measure</i>).</p>			
	<b>Bullying</b>	<p>Significant effect on bullying victimisation at 36-month follow-up (p=0.0441, adj. ES=-0.08). No significant effect at 24-month post-intervention. The intervention was more effective in those with greater baseline aggression (<i>Gatehouse Bullying Scale</i>).</p> <p>No significant effect on bullying perpetration. The intervention had a greater effect in boys than girls and in students with higher baseline bullying experience (<i>Modified Aggression Scale, Bullying Subscale</i>).</p> <p>Significant effect on cyberbullying victimisation. The intervention group had lower rates at 24 months (p=0.035, OR=0.77), but not at 36 months (<i>adapted measure of cyberbullying</i>).</p> <p>Significant effect on cyberbullying perpetration at 36 months (p=0.005, OR=0.65). No significant effect on cyberbullying perpetration at 24 months (<i>adapted measure of cyberbullying</i>).</p>			
	<b>Wellbeing</b>	<p>Significant effect on quality of life at 36-month follow-up higher (p=0.0001, adj. ES=0.14). The intervention had a greater effect in boys than girls, in students with higher baseline bullying experience, and in those with greater baseline aggression (<i>The Paediatric Quality of Life Inventory</i>).</p> <p>Significant effect on wellbeing at 36-month follow-up (p=0.0487, adj. ES=0.07). The intervention had a greater effect in boys than girls, in students with higher baseline bullying experience, and in those with greater baseline aggression (<i>The Short Warwick-Edinburgh Mental Well-Being Scale</i>).</p> <p>Significant effect on psychological problems at 36-month follow-up (p=0.0002, adj. ES=-0.14). The intervention had a greater effect in boys than girls, in students with higher baseline bullying experience, and in those with greater baseline aggression (<i>The Strengths and Difficulties Questionnaire</i>).</p>			
	<b>Other: Use of NHS services</b>	<p>No significant effect on use of NHS services (<i>self-report use of services</i>).</p>			

Results continued on next page...

Universal interventions for aggression/violence prevention (cont.)				
Bonnell et al. (2018, 2019) <b>Learning Together</b>	Study Design	Results		
	<b>Cluster RCT</b> <b>Country:</b> England <b>Total sample size:</b> 6,667 students from 40 state secondary schools in south-east England <b>85% attrition in control;</b> <b>81.2% attrition in intervention at FU</b> 51.8% female <b>Mean age:</b> 12.0 years <b>Control:</b> No intervention	<b>Other: Contact with police</b>	Students in the intervention group had significantly lower odds of having been in contact with the police in the past 12 months ( $p=0.0269$ ), compared to the control group. The intervention had a greater effect in boys than girls ( <i>self-report of being stopped, reprimanded, or picked up by the police in the past 12 months</i> ).	
		<b>Other: E-cigarette use</b>	Significant effect on e-cigarette use at 36 months ( $p=0.002$ , $OR=0.59$ ). No significant effect on e-cigarette use at 24 months ( <i>single item purpose-designed measure</i> ).	
		<b>Other: Perceived school safety</b>	Significant effect on perceived school safety. Students in the intervention group were more likely to report a lack of perceived school safety at 24 months, compared to controls ( $p=0.006$ , $OR=1.38$ ) ( <i>single item purpose-designed measure</i> ).	
		<b>Other: Participation in school disciplinary procedures</b>	Significant effect on participation in school disciplinary procedures. Students in the intervention group reported lower participation in school disciplinary procedures at 24 months ( $MD=-0.160$ , $p=0.043$ ) and at 36 months ( $MD=-0.320$ , $p<0.001$ ), compared to controls ( <i>6-item ESYTC measure of school discipline</i> ).	
		<b>Other: Truancy</b>	Significant effect on truancy at 36 months ( $p=0.001$ , $OR=0.64$ ), but not at 24 months ( <i>single item purposed-designed measure</i> ).	
		<b>Adverse effects</b>	Serious adverse events in control ( $n=7$ ) and intervention ( $n=8$ ) groups. These included suicide, stabbing, potential self-harm, possible non-consensual sex and disability or long-term illness.	

Universal interventions for aggression/violence prevention (cont.)

<p>Carrascosa et al. (2019)</p> <p><b>The DARSI Programme (Developing Healthy and Egalitarian Relationships in Adolescents)</b></p>	<b>Description</b>					
	<p><b>Target level:</b> Universal</p> <p>The DARSI programme aims to prevent peer aggressive behaviours by raising adolescents' awareness of the consequences of violence, their critical thinking on sexist attitudes and myths of romantic love, and their personal and social resources. Activities include role-playing, case studies and guided discussions.</p>		<p><b>Facilitator:</b> Research staff</p> <p><b>Format:</b> Usual classrooms</p>	<p><b>Duration and frequency:</b> Twelve 1-hour sessions over four months</p>	<p><b>Booster:</b> No</p>	<p><b>Quality assessment:</b> 3</p>
	<b>Study Design</b>	<b>Results</b>				
	<p><b>QED</b></p> <p><b>Country:</b> Spain</p> <p><b>Total sample size:</b> 191 students from two secondary schools</p> <p><b>Attrition not reported</b> 53.9% female</p> <p><b>Mean age:</b> 14.1 years</p> <p><b>Control:</b> No intervention control groups</p>	<p><b>Aggression/violence</b></p>	<p>Significant effect on overt aggression (<math>p &lt; 0.001</math>, <math>\eta^2 = 0.111</math>) (<i>the School Aggression Scale</i>).</p> <p>Significant effect on relational aggression (<math>p &lt; 0.001</math>, <math>\eta^2 = 0.103</math>) (<i>the School Aggression Scale</i>).</p> <p>Significant effect on cyberaggression (<math>p &lt; 0.001</math>, <math>\eta^2 = 0.093</math>) (<i>the Scale of Cyber-aggressions Among Peers</i>).</p>			
		<p><b>Other: Hostile sexism</b></p>	<p>Significant effect on hostile sexism (<math>p &lt; 0.001</math>, <math>\eta^2 = 0.157</math>) (<i>the Spanish version of the Ambivalent Sexism Inventory for Adolescents</i>).</p>			
	<p><b>Other: Benevolent sexism</b></p>	<p>Significant effect on benevolent sexism (<math>p &lt; 0.001</math>, <math>\eta^2 = 0.228</math>) (<i>the Spanish version of the Ambivalent Sexism Inventory for Adolescents</i>).</p>				
	<p><b>Other: Romantic myths</b></p>	<p>Significant effect on romantic myths (<math>p &lt; 0.001</math>, <math>\eta^2 = 0.113</math>) (<i>measurement adapted from the Romantic Love Myth Scale</i>).</p>				

Universal interventions for aggression/violence prevention (cont.)

Castillo-Gualda et al. (2017) <b>SEL Training Intervention</b>	<b>Description</b>				
	<b>Target level:</b> Universal The SEL training intervention aims to reduce aggressive behaviour through a three-year intervention which aims to enhance: 1) Accurate perception, appraisal and expression of emotions, (2) Awareness of feelings and ability to generate emotions to facilitate thought, (3) Understanding of emotions including the ability to label them with a rich emotional vocabulary, (4) Regulation of emotions in order to promote emotional and intellectual growth.	<b>Facilitator:</b> Psychologists  <b>Format:</b> Classroom sessions	<b>Duration and frequency:</b> Twelve 1-hour classes between January and May of each of the three years	<b>Booster:</b> No	<b>Quality assessment:</b> 1
	<b>Study Design</b>	<b>Results</b>			
<b>Cluster RCT</b> <b>Country:</b> Spain <b>Total sample size:</b> 526 participants from nine middle and high schools <b>5.7% attrition at FU</b> 51.1% female <b>Mean age:</b> 12.1 years <b>Control:</b> No intervention	<b>Aggression/violence</b>	Significant reduction in verbal aggression ( $p < 0.01$ ) through the reduction in negative affect, anger and hostile feelings in the intervention group, compared to the control group ( <i>subscale from the Spanish version of the Aggression Questionnaire</i> ). Significant reduction in physical aggression ( $p < 0.01$ ) ( <i>subscale from the Spanish version of the Aggression Questionnaire</i> ) through the reduction in negative affect, anger and hostile feelings in the intervention group, compared to the control group.			
<i>Note: Additional pathway analyses available in full article.</i>					

Universal interventions for aggression/violence prevention (cont.)

Suh (2019) <b>Therapeutic Drumming Group/ Education-Based Drumming Group</b>	<b>Description</b>				
	<b>Target level:</b> Universal Both the therapeutic and education drumming programmes aim to prevent aggression and violence. In the therapeutic drumming group, students engage in dyadic and synchronised drum playing while the education-based drumming group were taught how to play the percussion instruments, how to play certain rhythms and how to match music in the textbook.	<b>Facilitator:</b> Therapeutic drumming: music teacher with a music therapist as a consultant Education drumming: music teacher  <b>Format:</b> Classes of approximately 30 students	<b>Duration and frequency:</b> Ten 45-minute weekly sessions	<b>Booster:</b> No	<b>Quality assessment:</b> 3
	<b>Study Design</b>	<b>Results</b>			
<b>QED</b> <b>Country:</b> Korea <b>Total sample size:</b> 231 students from seven classes in one middle school <b>Attrition not reported</b> 50.2% female <b>Mean age:</b> 14.3 years <b>Control:</b> Other intervention (general prevention)	<b>Aggression/violence</b>	Significant reductions in total aggression scores ( $p < 0.05$ , $n_2 = 0.039$ ). The therapeutic drumming group had significant reductions in total aggression scores compared to the education-based drumming group ( <i>the Korean version of the Buss-Perry Aggression Questionnaire</i> ). Significant effect on physical aggression subscale ( $p < 0.05$ , $n_2 = 0.027$ ). The therapeutic drumming group had significant reductions in total aggression scores compared to the education-based drumming group. No significant effect on verbal aggression subscale. No significant effect on anger subscale. Significant reductions in hostility scores ( $p < 0.05$ , $n_2 = 0.027$ ). The therapeutic drumming group had significant reductions in total aggression scores compared to the education-based drumming group.			

## Universal interventions for bullying prevention

Acosta et al.  
(2019)  
**Restorative  
Practices  
Intervention**

Description		
<b>Target level:</b> Universal	<b>Facilitator:</b> All school staff	<b>Duration and frequency:</b> Intervention implemented for two years
The Restorative Practices intervention aims to prevent bullying behaviour and improve peer relationships. It involves training all school staff on how to enact 11 'Essential Elements' including for example: affective statements, restorative questions, small impromptu conferences, proactive circles, responsive circles, fair process and reintegrative management of shame. The intervention seeks to enhance students' relationships with adults, coach students in the use of the essential elements and apply these skills to everyday situations.	<b>Format:</b> Group sessions	<b>Booster:</b> No
		<b>Quality assessment:</b> 2
Study Design	Results	
<b>Cluster RCT</b> <b>Country:</b> US <b>Total sample size:</b> 2,834 students from 13 middle schools <b>29.3% attrition at FU</b> 49% female <b>Age range:</b> 11–12 years <b>Control:</b> No intervention	<b>Bullying</b>	No significant effect on bullying victimisation (verbal, physical nor cyberbullying) (each measured with three items from the <i>Communities That Care Survey</i> ).
	<b>Other: School climate</b>	No significant effect on school climate (positive peer interaction nor student input into decision-making) (4 select scales from the <i>Inventory of School Climate</i> ). No significant effect on social skills (the <i>Social Skills Improvement System-Rating Scale</i> ). No significant effect on student reports of restorative practices (17 questions about their experience of restorative practices at school).
	<b>Other: School connectedness</b>	No significant effect on school connectedness (with a five-item scale from the <i>National Adolescent Health Study</i> ).
	<b>Other: Peer attachment</b>	No significant effect on peer attachment (a three-item scale developed by Acosta (2003)).
	<b>Other: Social skills</b>	No significant effect on social skills (the <i>Social Skills Improvement System-Rating Scale</i> ).
	<b>Other: Restorative practices</b>	No significant effect on student reports of restorative practices (17 questions about their experience of restorative practices at school).

Universal interventions for bullying prevention (cont.)

Benitez-Sillero et al. (2020)  
**PREBULLPE**  
 (programme to prevent bullying in adolescents in physical education classes)

Description				
<b>Target level:</b> Universal	<b>Facilitator:</b> Research team	<b>Duration and frequency:</b> Six 1-hour sessions	<b>Booster:</b> No	<b>Quality assessment:</b> 3
The PREBULLPE programme is designed to prevent bullying using Physical Education classes. Six sessions are inserted into the curriculum of Physical Education. Content includes: knowledge of bullying, the roles of victim and aggressor, knowledge and expression of basic emotions, importance of the social group, collaborative work, self-esteem, empathy, self-control, resilience and discrimination. This content was taught through physical activity games and challenges.				
<b>Format:</b> PE class sessions				

Study Design	Results	
<b>QED</b> <b>Country:</b> Spain <b>Total sample size:</b> 764 students from two high schools <b>Attrition not reported</b> 49.3% female <b>Mean age:</b> 14.8 years <b>Control:</b> No intervention (regular PE class)	<b>Bullying</b>	Significant effect on bullying victimisation ( $F=16,951, p=0.000$ ) ( <i>the Spanish version of the European Bullying Intervention Project Questionnaire</i> ). Significant effect on bullying aggression ( $F=5,215; p=0.023$ ) ( <i>the Spanish version of the European Bullying Intervention Project Questionnaire</i> ). Significant effect on cyberbullying victimisation ( $F=6,34; p=0.013$ ) ( <i>the Spanish version of the European Cyberbullying Intervention Project Questionnaire</i> ). No significant effect on cyberbullying aggression ( <i>the Spanish version of the European Cyberbullying Intervention Project Questionnaire</i> ).

Universal interventions for bullying prevention (cont.)

<p>Calvete et al. (2019a, 2019b)</p> <p><b>Incremental Theory of Personality Interventions (ITPI)</b></p>	Description				
	<p><b>Target level:</b> Universal</p> <p>The Incremental Theory of Personality Intervention aims to prevent internalising and externalising problems by teaching students an element of the theory of personality, namely the belief that people can change. The programme consists of three main parts. First, students are asked to read and summarise a scientific paper providing evidence that individuals have the potential to change. Second, participants read several testimonies from people who read the article and endorsed its conclusions. Third, they describe a time they felt isolated, rejected or disappointed by another person at school. They then imagine the same event has happened to another person at school and describe what they could say or do to help the other student understand that people can change and that the things that happen to people can change.</p>	<p><b>Facilitator:</b> Psychologists</p> <p><b>Format:</b> Classroom session</p>	<p><b>Duration and frequency:</b> One 1-hour session, divided into three parts</p>	<p><b>Booster:</b> No</p>	<p><b>Quality assessment:</b> 1</p>
	Study Design	Results			
	<p><b>RCT</b></p> <p><b>Country:</b> Spain</p> <p><b>Total sample size:</b> 867 students from 10 high schools</p> <p><b>18.9 % attrition at FU</b></p> <p>48% female</p> <p><b>Mean age:</b> 14.6 years</p> <p><b>Control:</b> Active control</p>	<p><b>Bullying</b></p>	<p>No significant effect on bullying perpetration at six or 12-month follow-up (<i>The Spanish or Catalan version of The Revised Peer Experiences Questionnaire</i>).</p> <ul style="list-style-type: none"> <li>Significant moderating effect of age (<math>p=0.027</math>) where younger participants in the intervention decreased in scores while those in the active control group increased.</li> </ul> <p>No significant effect on bullying victimisation at six- or 12-month follow-up (<i>the Spanish or Catalan version of the Revised Peer Experiences Questionnaire</i>).</p> <p>No significant effect on cyberbullying victimisation at six- or 12-month follow-up (<i>the Spanish or Catalan version of Cyberbullying Questionnaire</i>).</p> <p>No significant effect on cyberbullying perpetration at six- or 12-month follow-up (<i>the Spanish or Catalan version of Cyberbullying Questionnaire</i>).</p> <ul style="list-style-type: none"> <li>Significant moderating effect of age (<math>p=0.022</math>) where younger participants in the intervention decreased in scores while those in the active control group increased.</li> </ul>		
	<p><b>Wellbeing</b></p>	<p>No significant effect on depressive symptoms at six- or 12-month follow-up (<i>the Spanish or Catalan version of the Centre for Epidemiologic Studies Depression Scale</i>).</p> <ul style="list-style-type: none"> <li>In 8th grade, adolescents in the intervention group displayed a greater decrease in depressive symptoms (<math>p=0.028</math>). The effect size comparing mean change scores was 0.63, from baseline to six months, and 0.68, from baseline to 12 months. In grade 9 the decrease in depressive symptoms was significantly greater in the active control group. The effect size comparing mean change scores was -0.54, from baseline to six months, and -0.58 from baseline to 12 months.</li> </ul>			
	<p><b>Other: Maladaptive schemas</b></p>	<p>Significant effect on maladaptive schemas (<math>p=0.004</math>) (<i>the Spanish or Catalan version of the Young Schema Questionnaire-3</i>).</p> <ul style="list-style-type: none"> <li>In 8th grade, adolescents in the intervention group displayed a greater decrease in maladaptive schemas (<math>p=0.007</math>). The effect size comparing mean change scores was 1.26 from baseline to six months, and 1.19 from baseline to the 12-month follow-up. In grade 9 the intervention group increased in scores. The effect size comparing mean change scores was -2.95 from baseline to six months, and -2.63 from baseline to the 12-month follow-up.</li> </ul>			

Universal interventions for bullying prevention (cont.)

<p>Cross et al. (2018) The Friendly Schools Project (FSP)</p>	<b>Description</b>				
	<p><b>Target level:</b> Universal</p> <p>The Friendly Schools Project adopts a whole-school approach to reducing the prevalence of frequent bullying as students transition from primary to secondary school. The intervention is comprised of three components targeting students, parents and the whole school. Students are provided with information and taught strategies to help manage the transition from primary school through classroom curricula and education magazines. The parent component comprises two booklets sent to parents before the child transitions to secondary school and up to 30 newsletters over two years providing parents with tips to help build students' skills. The whole-school component includes a review of bullying-related policies and procedures and their implementation, and use of positive behaviour management strategies.</p>	<p><b>Facilitator:</b> Researchers, school staff and implementation team</p> <p><b>Format:</b> Classroom sessions, homework, parent component</p>	<p><b>Duration and frequency:</b> Students received 85 hours of activities in year one and 3.5 hours in year two</p>	<p><b>Booster:</b> No</p>	<p><b>Quality assessment:</b> 2</p>
	<b>Study Design</b>	<b>Results</b>			
	<p><b>Cluster RCT</b> <b>Country:</b> Australia <b>Total sample size:</b> 3,769 students from 20 Catholic secondary schools <b>27.3% attrition at FU</b> 50% female <b>Mean age:</b> 13.0 years <b>Control:</b> No intervention</p>	<p><b>Bullying</b></p>	<p>Significant effect on bullying victimisation at 12-month mid-intervention (<math>p=0.009</math>, effect size=0.113). No significant effect at post-intervention (<i>a seven-item categorical index adapted from Rigby and Slee (1998) and Olweus (1996)</i>).</p> <p>Significant effect on bullying perpetration at 12-month mid-intervention (<math>p=0.015</math>, effect size=0.197). No significant effect at post-intervention (<i>a seven-item categorical index adapted from Rigby and Slee (1998) and Olweus (1996)</i>).</p>		
	<p><b>Wellbeing</b></p>	<p>Significant effect on Loneliness at 12-month mid-intervention (<math>p=0.007</math>, effect size=0.137). No significant effect at post-intervention (<i>seven items adapted from a 15-item loneliness at school scale</i>).</p> <p>Significant effect on Depression at 12-month mid-intervention (<math>p=0.017</math>, effect size=0.154). No significant effect at post-intervention (<i>the Depression Anxiety Stress Scale</i>).</p> <p>Significant effect on Anxiety at 12-month mid-intervention (<math>p=0.005</math>, effect size=0.201). No significant effect at post-intervention (<i>the Depression Anxiety Stress Scale</i>).</p> <p>Significant effect on Stress at 12-month mid-intervention (<math>p=0.036</math>, effect size=0.113). No significant effect at post-intervention (<i>the Depression Anxiety Stress Scale</i>).</p>			
	<p><b>Other: Safety at school</b></p>	<p>Significant effect on Safety at school at 12-month mid-intervention (<math>p=0.028</math>). No significant effect at post-intervention (<i>a single item adapted from the Peer Relations Questionnaire</i>).</p>			

Universal interventions for bullying prevention (cont.)

<p>Greco et al. (2019)</p> <p><b>Karate-based Intervention</b></p>	<b>Description</b>				
	<p><b>Target level:</b> Universal</p> <p>The Karate-based intervention aims to prevent bullying by promoting resilience and self-efficacy. Each session includes (i) psychoeducation activities (focusing on respect, goal setting, self-concept, self-esteem, courage, resilience, bullying and peer pressure, self-care and caring for others, values, optimism and hope), (ii) warm-up activities, (iii) stretching activities and (iv) karate practice.</p>	<p><b>Facilitator:</b> Two karate instructors</p> <p><b>Format:</b> Group sessions</p>	<p><b>Duration and frequency:</b> One 90-minute session per week for twelve weeks</p>	<p><b>Booster:</b> No</p>	<p><b>Quality assessment:</b> 1</p>
	<b>Study Design</b>	<b>Results</b>			
<p><b>RCT</b></p> <p><b>Country:</b> Italy</p> <p><b>Total sample size:</b> 100 students from three high schools</p> <p><b>2% attrition at FU</b></p> <p>50% female</p> <p><b>Mean age:</b> 14.6 years</p> <p><b>Control:</b> Wait-list control</p>	<p><b>Wellbeing</b></p>	<p>Significant effect on resilience (<math>p &lt; 0.001</math>, <math>d = 1.16</math>) (<i>the Child and Youth Resilience Measure</i>).</p> <ul style="list-style-type: none"> <li>• Significant effect on individual capacities and resource subscale (<math>d = 0.88</math>, <math>p &lt; 0.001</math>).</li> <li>• Significant effect on relationship with primary caregiver subscale (<math>d = 0.58</math>, <math>p &lt; 0.001</math>).</li> <li>• Significant effect on contextual factors subscale (<math>d = 0.63</math>, <math>p &lt; 0.001</math>).</li> </ul> <p>Significant effect on self-efficacy (<math>d = 0.64</math>, <math>p &lt; 0.001</math>) (<i>the Self-Efficacy Questionnaire for Children (SEQ-C)</i>).</p> <ul style="list-style-type: none"> <li>• Significant effect on academic self-efficacy subscale (<math>d = 0.35</math>, <math>p = 0.011</math>).</li> <li>• Significant effect on social self-efficacy subscale (<math>d = 0.42</math>, <math>p &lt; 0.001</math>).</li> <li>• Significant effect on emotional self-efficacy subscale (<math>d = 0.47</math>, <math>p &lt; 0.001</math>).</li> </ul>			

Universal interventions for bullying prevention (cont.)

Ingram et al. (2019)  
**Stand Up: Virtual Reality to Activate Bystanders Against Bullying**

Description		
<b>Target level:</b> Universal	<b>Facilitator:</b> Researcher-led <b>Group size:</b> Virtual reality sessions	<b>Duration and frequency:</b> One 1-hour a week for six weeks <b>Booster:</b> No <b>Quality assessment:</b> 2
The Stand Up programme is a computerised (virtual reality) bullying prevention programme. Participants experience, in virtual reality, three bullying-relevant scenarios: consecutively focusing on being an active bystander and standing up for victims; the consequences of common ineffective responses to bullying; and how to make a difference with small and realistic actions. Participants also complete discussions on perspective taking and also create a short video aimed to spread an anti-bullying message.		
Study Design	Results	
<b>QED</b> <b>Country:</b> US <b>Total sample size:</b> 173 students from two middle schools <b>14% attrition at FU</b> 55% female <b>Mean age:</b> 12.5 years <b>Control:</b> No intervention (Enforcement of existing anti-bullying policies during the measurement period)	<b>Aggression/violence</b>	No significant effect on relational aggression ( <i>the Relational Aggression Perpetration Scale</i> ).
	<b>Bullying</b>	No significant effect on bullying perpetration ( <i>the nine-item Illinois Bully Scale</i> ). No significant effect on cyberbullying perpetration ( <i>a four-item scale purpose designed</i> ).
	<b>Wellbeing</b>	Significant effect on empathy ( $\beta=0.58, p<0.010$ ) ( <i>the 5-item Empathy Subscale of the Teen Conflict Scale</i> ). • Empathy was associated with significant decreases in bullying perpetration post-intervention ( $\beta=-0.19, p<0.010$ ). • The mediation effect of the virtual reality treatment on reductions in traditional bullying perpetration behaviours via empathy was also significant ( $\beta=-0.53, p=0.040$ ). • The significant increase in empathy was, in turn, also associated with significant increases in willingness to intervene ( $\beta=0.37, p<0.001$ ) and school belonging ( $\beta=0.24, p<0.010$ ). • The mediation effect of the treatment on individual willingness to intervene via empathy was also significant ( $\beta=0.11, p=0.010$ ).
	<b>Other: Bystander behaviour</b>	No significant effect on bystander intervention ( <i>a five-item scale, The University of Illinois Willingness to Intervene in Bullying Episodes</i> ).
	<b>Other: School belonging</b>	No significant effect on school belonging ( <i>4 of the 20 items from the Psychological Sense of School Members Scale</i> ).

Universal interventions for bullying prevention (cont.)

<p>Midgett et al. (2017) The STAC Program</p>	<b>Description</b>				
	<p><b>Target level:</b> Universal</p> <p>The STAC Program is a brief, bystander bullying prevention intervention that aims to increase knowledge about bullying. Students are taught strategies they can utilise to defend victims when they witness bullying. Students are taught STAC strategies including stealing the show, turning it over, accompanying others and coaching compassion.</p>	<p><b>Facilitator:</b> School counsellors</p> <p><b>Format:</b> Group/small group sessions</p>	<p><b>Duration and frequency:</b> One 90-minute session, Two 20-minute follow-up sessions</p>	<p><b>Booster:</b> No</p>	<p><b>Quality assessment:</b> 3</p>
	<b>Study Design</b>	<b>Results</b>			
	<p><b>RCT</b></p> <p><b>Country:</b> US</p> <p><b>Total sample size:</b> 57 students from one junior high school</p> <p><b>7% attrition at FU</b></p> <p>53.7% female</p> <p><b>Mean age:</b> 13.6 years</p> <p><b>Control:</b> Waitlist control</p>	<b>Bullying</b>	Significant difference between the intervention and control group in the ability to identify bullying at 30-day post-intervention ( $p < 0.050$ , medium effect size) ( <i>students responded Yes or No to: 'Have you seen bullying at school in the past month?'</i> ).		
		<b>Bystander behaviour</b>	No significant effect on knowledge and confidence to act as a defender at 30-day post-intervention ( <i>the Student-Advocates Pre- and Post-Scale</i> ).		
<b>Wellbeing</b>		No significant effect on Anxiety at 30-day post-intervention ( <i>the Anxiety Scale of the Behaviour Assessment System for Children, Third Edition, Self-Report form for Adolescents</i> ). No significant effect on Depression at 30-day post-intervention ( <i>the Depression Scale of the BASC-3 SRP-A</i> ).			
<b>Other: Use of STAC strategies</b>		No significant effect on use of STAC strategies at 30-day post-intervention ( <i>each item of the STAC (stealing the show, turning it over, accompanying others, coaching compassion) measured using a single item with a five-point Likert scale ranging from never/ almost never to always/ almost always</i> ).			

Universal interventions for bullying prevention (cont.)

Van-Ryzin et al. (2018)  
**Johnson's Cooperative Learning Approach**

Description	
<p><b>Target level:</b> Universal</p> <p>The Johnson's Cooperative Learning Approach aims to build positive peer relations and prevent bullying. The programme focuses on cooperative learning where peers help each other learn in small groups under conditions of positive independence. Also emphasised is individual accountability, explicit coaching in collaborative skills, a high degree of face-to-face interaction and guided processing of group performance. Teachers can apply the principles of positive independence to design their own group-based activities using existing criteria.</p>	<p><b>Facilitator:</b> School staff</p> <p><b>Format:</b> Delivered in small groups (size not reported) and homework activities</p> <p><b>Duration and frequency:</b> Not reported</p> <p><b>Booster:</b> No</p> <p><b>Quality assessment:</b> 1</p>
Study Design	Results
<p><b>Cluster RCT</b></p> <p><b>Country:</b> US</p> <p><b>Total sample size:</b> 1,460 students from 15 rural middle schools</p> <p><b>9.3% attrition at FU</b></p> <p>48.2% female</p> <p><b>Mean age:</b> 7th grade students (aged 12–13 years)</p> <p><b>Control:</b> Waitlist control</p>	<p><b>Psychosocial wellbeing</b></p> <p>Significant effect on relatedness for all students, rather than just marginalised students (students least engaged in school) post-intervention (<math>d=0.43, p&lt;0.050</math>) (<i>the Relatedness Scale</i>).</p> <ul style="list-style-type: none"> <li>Girls reported significant lower levels of relatedness independent of intervention (<math>\beta=-0.13, SE=0.04, p &lt;0.001, ES=0.01</math>).</li> </ul>
	<p><b>Psychological wellbeing</b></p> <p>Significant effect on perceived stress for marginalised students (students least engaged in school) only (<math>d&gt;0.99, p&lt;0.010</math>). No significant effect for non-marginalised students (<i>the Perceived Stress Scale</i>).</p> <ul style="list-style-type: none"> <li>Girls report significantly higher levels of perceived stress independent of intervention (<math>\beta=0.18, SE=0.04, p&lt;0.001, ES=0.01</math>)</li> </ul> <p>Significant effect on emotional problems for all students, rather than just marginalised students (students least engaged in school) post-intervention (<math>d=0.55, p&lt;0.050</math>) (<i>the Strengths and Difficulties Questionnaire</i>).</p> <p>Girls reported significantly higher levels of emotional problems, independent of intervention (<math>\beta=0.20, SE=0.03, p &lt;0.001, ES=0.04</math>).</p>
	<p><b>Bullying perpetration</b></p> <p>Significant effect on bullying perpetration for marginalised students (students least engaged in school) only post-intervention (<math>d=0.37, p&lt;0.050</math>). No significant effect for non-marginalised students (<i>the University of Illinois Bully Scale</i>).</p>
	<p><b>Bullying victimisation</b></p> <p>Significant effect on bullying victimisation for marginalised students (students least engaged in school) only post-intervention (<math>d=0.69, p&lt;0.050</math>). No significant effect for non-marginalised students (<i>the University of Illinois Bully Scale</i>).</p> <ul style="list-style-type: none"> <li>Girls reported significantly higher levels of victimisation, independent of intervention (<math>\beta=0.12, SE=0.06, p&lt;0.050</math>).</li> </ul>

Universal interventions for bullying prevention (cont.)

<p>Wojcik et al. (2019)</p> <p><b>ABBL Anti-Bullying Transition Programme</b></p>	<b>Description</b>				
	<p><b>Target level:</b> Universal</p> <p>The ABBL programme aims to reduce bullying behaviour by seeking to change students' perception of how their classmates respond to bullying as bystanders, raising empathy and understanding for the victims, and developing bystander's efficacy to counteract bullying in safety. The three major programme sections are mutual acquaintance ('getting to know you' for students within the class), integration, and team building within the class and empathic perception of excluded individuals.</p>	<p><b>Facilitator:</b> Teachers</p> <p><b>Format:</b> Pair and group work, homework</p>	<p><b>Duration and frequency:</b> One lesson per week for the first eleven weeks of school</p>	<p><b>Booster:</b> No</p>	<p><b>Quality assessment:</b> 3</p>
	<b>Study Design</b>		<b>Results</b>		
<p><b>QED</b></p> <p><b>Country:</b> Poland</p> <p><b>Total sample size:</b> 96 students from six middle schools</p> <p><b>4% attrition at FU</b> 46.9% female</p> <p><b>Mean age:</b> 13.7 years</p> <p><b>Control:</b> Usual care (standard inductor programme)</p>	<p><b>Bullying</b></p>	<p>Significant effect on bullying perpetration at three months post-intervention (<math>p &lt; 0.001</math>; <math>\eta^2 = 0.244</math>) (<i>a purpose-designed Bullying Questionnaire</i>)</p> <p>Significant effect on self-reported bullying behaviour at three months post-intervention (<math>p = 0.005</math>, <math>\eta^2 = 0.087</math>) (<i>a purpose-designed Bullying Questionnaire</i>)</p> <p>Significant lower reporting of cases of bullying in the intervention group, compared to the control group, for physical aggression (<math>p &lt; 0.001</math>), verbal aggression (<math>p &lt; 0.001</math>), relational aggression (<math>p &lt; 0.001</math>) and sexual aggression (<math>p = 0.001</math>) at three months post-intervention. No significant difference for online aggression (<i>a purpose-designed Bullying Questionnaire</i>).</p> <p>Significant lower reporting of participants who admitted to bullying someone at least once in the intervention group, compared to the control group, for physical aggression (<math>p &lt; 0.011</math>) and verbal aggression (<math>p = 0.005</math>) at three months post-intervention. No significant difference for relational aggression, sexual aggression, or online aggression (<i>a purpose-designed Bullying Questionnaire</i>).</p>			

## Universal interventions for sexual violence prevention

Munoz-Fernandez et al. (2019)  
**Date-e Adolescence Programme**

Description		
<p><b>Target level:</b> Universal</p> <p>The Date-e Adolescence Programme is a multi-component programme designed to reduce dating aggression, victimisation and bullying behaviour. It comprises (i) five SEL sessions using classroom and web-based activities, (ii) two peer-led sessions which aim to raise awareness and promote coping strategies when aggression occurs and raise awareness about the role of peer groups and bystanders in the face of dating violence, (iii) one school session where the main content of the programme is reviewed.</p>	<p><b>Facilitator:</b> Researcher</p> <p><b>Format:</b> Classroom and web-based activities, peer-led training, school session</p>	<p><b>Duration and frequency (each session):</b> Seven 1-hour sessions</p> <p><b>Booster:</b> No</p> <p><b>Quality assessment:</b> 2 <i>Intervention also evaluated by Sanchez-Jimenez et al. (2018)</i></p>
Study Design	Results	
<p><b>RCT</b></p> <p><b>Country:</b> Spain</p> <p><b>Total sample size:</b> 1,423 students from seven high schools</p> <p><b>69.92% attrition at FU</b></p> <p>48.21% female</p> <p><b>Mean age:</b> 12.0 years</p> <p><b>Control:</b> Wait-list control</p>	<p><b>Sexual violence</b></p>	<p>Moderate and severe physical dating violence (<i>an adapted version of the Physical Violence Scale, from the Conflict Tactics Scale</i>):</p> <ul style="list-style-type: none"> <li>• No significant effect on moderate dating aggression or victimisation at post-intervention or six-month follow-up.</li> <li>• Significant decrease in interventions growth trajectory on severe physical aggression (d=0.25) at six-month follow-up.</li> <li>• Significant decrease in interventions growth trajectory on severe physical dating victimisation (d=0.21) at six-month follow-up.</li> </ul> <p>Sexual dating violence (<i>an adapted version of the sexual dating measure</i>):</p> <ul style="list-style-type: none"> <li>• Significant decrease in interventions growth trajectory on sexual dating aggression (d=0.38) at six-month follow-up.</li> <li>• Significant decrease in interventions growth trajectory on sexual dating victimisation (d=0.24) at six-month follow-up.</li> </ul>
	<p><b>Bullying</b></p>	<p>Bullying (<i>was measured with the Spanish version of the European Bullying Intervention Project Questionnaire</i>):</p> <ul style="list-style-type: none"> <li>• No significant effect on bullying aggression at post-intervention or six-month follow-up.</li> <li>• Significant decrease in interventions growth trajectory on bullying victimisation (d=0.98) at six-month follow-up.</li> </ul>

Universal interventions for sexual violence prevention (cont.)

Sanchez-Jimenez et al. (2018)  
**Date-e Adolescence Programme**

Description		
<p><b>Target level:</b> Universal</p> <p>The Date-e Adolescence Programme is a multi-component programme designed to reduce dating aggression, victimisation and bullying behaviour. It comprises (i) five SEL sessions using classroom and web-based activities, (ii) two peer-led sessions which aim to raise awareness and promote coping strategies when aggression occurs and raise awareness about the role of peer groups and bystanders in the face of dating violence, (iii) one school session where the main content of the programme is reviewed.</p>	<p><b>Facilitator:</b> Researcher</p> <p><b>Format:</b> Classroom and web-based activities, peer-led training, school session</p>	<p><b>Duration and frequency (each session):</b> Seven 1-hour sessions</p> <p><b>Booster:</b> No</p> <p><b>Quality assessment:</b> 3  <i>Intervention also evaluated by Munoz-Fernandez et al. (2019)</i></p>
Study Design	Results	
<p><b>Cluster RCT</b></p> <p><b>Country:</b> Spain</p> <p><b>Total sample size:</b> 1,764 students from 7 high schools</p> <p><b>23.6% attrition at FU</b></p> <p>47.7% female</p> <p><b>Mean age:</b> 14.7 years</p> <p><b>Control:</b> Wait-list control</p>	<b>Aggression/violence</b>	No significant effect on physical violence, on neither the aggression nor victimisation subscales ( <i>the Conflict Tactics Scale</i> ). No significant effect on anger regulation.
	<b>Sexual violence</b>	No significant effect on psychological violence ( <i>the Psychological Dating Abuse Scale</i> ). No significant effect on online violence, on neither the aggression nor victimisation subscales ( <i>the Cyber Dating Abuse Scale</i> ).
	<b>Wellbeing</b>	Significant effect on self-esteem (p=0.001, d=-0.15) ( <i>the Rosenberg Self-Esteem Scale</i> ). • No significant effect on the self-confidence subscale.
	<b>Other: Myths about romantic love</b>	Significant effect on myths about romantic love – myths about jealousy (p<0.001, d=-0.56), 'Better half' (p<0.001, d=-0.83), omnipotence (p<0.001, d=-0.84) and passion (p<0.001, d=-0.94) ( <i>the Myths of Romantic Love Scale</i> ).
	<b>Other: Couple relationship quality</b>	No significant effect on couple relationship quality ( <i>the Network of Relationships Inventory: Behavioural Systems Version</i> ).

## Targeted selective interventions for aggression/violence prevention

Densley et al. (2017)  
**Growing Against Gangs and Violence (GAGV)**

Description		
<p><b>Target level:</b> Selective</p> <p>Growing Against Gangs and Violence is a targeted selective gang prevention programme. It was implemented in London for schools located within local authority areas prioritised under HM Government's (2011) Ending Gang and Youth Violence programme (such as higher knife crime, sexual violence and violence). The programme aims to challenge moral disengagement and to cultivate resilience and critical engagement with more prosocial and fewer antisocial groups. It uses conversation-style sessions, supplemented with slides, where facilitators focus on a curriculum that covers the legal, medical, social and emotional consequences of knife and gun crime, drug crime, cyber bullying and peer-on-peer sexual violence.</p>	<p><b>Facilitator:</b> Most often teachers, youth workers or police officers</p> <p><b>Format:</b> Class sessions, approximately 25 students per class</p>	<p><b>Duration and frequency:</b> Six lessons over a five-week period</p>
<p><b>Booster:</b> No</p>	<p><b>Quality assessment:</b> 3</p>	
Study Design	Results	
<p><b>RCT</b></p> <p><b>Country:</b> England</p> <p><b>Total sample size:</b> 391 students from four schools in four London boroughs</p> <p><b>35.8% attrition at FU</b></p> <p>36.3% female</p> <p><b>Age range:</b> 12–13 years</p> <p><b>Control:</b> No intervention</p>	<b>Aggression/violence</b>	No significant effect on violent offending at post-intervention or 12-month follow-up ( <i>a subset of three items from the Delinquency Inventory</i> ).
	<b>Conduct</b>	No significant effect on delinquency at post-intervention or 12-month follow-up ( <i>a 14-item Self-reported Delinquency Inventory</i> ).
	<b>Other: Gang membership</b>	No significant effect on gang membership at post-intervention or 12-month follow-up ( <i>a single item 'Are you now in a gang?'</i> ).
	<b>Other: Attitudes to gangs</b>	No significant effect on attitudes to gangs at post-intervention or 12-month follow-up ( <i>measured with 3 items</i> ).
	<b>Other: Refusal skills</b>	No significant effect on refusal skills at post-intervention or 12-month follow-up ( <i>measured with 5 items</i> ).
	<b>Other: Conflict resolution skills</b>	No significant effect on conflict resolution skills at post-intervention or 12-month follow-up ( <i>measured with 5 items</i> ).
	<b>Other: Resistance to peer pressure</b>	No significant effect on resistance to peer pressure at post-intervention or 12-month follow-up ( <i>measured with 7 items</i> ).
	<b>Other: School commitment</b>	No significant effect on school commitment at post-intervention or 12-month follow-up ( <i>measured with 7 items</i> ).

Targeted selective interventions for aggression/violence prevention (cont.)

DeGue et al. (2020) Nolon et al. (2019) Vivolo-Kantor et al. (2019) <b>Dating Matters (DM)</b>	<b>Description</b>				
	<b>Target level:</b> Selective Dating Matters is a whole-school targeted selective programme for schools in neighbourhoods with elevated crime and economic disadvantage that aims to prevent teenage dating violence. It includes classroom-delivered programmes for 6th to 8th graders, community-based programmes for parents, a youth communication programme, training for educators and community-level activities. Students in 6th and 7th grade received Dating Matters youth programmes. Eighth graders received Safe Dates, an evidence-based prevention programme. All curricula use social-emotional learning and skills-based approaches to focus on healthy relationships and help youth learn and practise healthy relationship skills.	<b>Facilitator:</b> School staff, teachers, volunteers, health department staff, research staff, social services staff <b>Format:</b> Group sessions, homework, parent component	<b>Duration and frequency:</b> The 6th grade curriculum includes six classroom sessions, the 7th grade curriculum includes seven classroom sessions, and the 8th grade curriculum includes 10 classroom sessions, a poster contest and a play.	<b>Booster:</b> No	<b>Quality assessment:</b> 1
	<b>Study Design</b>	<b>Results</b>			
	<b>Cluster RCT</b> <b>Country:</b> US <b>Total sample size:</b> 3,301 participants from 46 schools in high-risk urban communities <b>Attrition:</b> Substantial but percentage unclear 48% female <b>Mean age:</b> 12.0 years <b>Control:</b> Other intervention (Standards of Care (SC))	<b>Aggression/violence</b>	Significant effect on sexual violence perpetration. The Dating Matters intervention was associated with significant reductions in sexual violence perpetration (average score 6% lower) and victimisation (average score 3% lower) in most, but not all, sex/cohort groups by the end of 8th grade, relative to the standard of care group ( <i>a variant of a single item from the AAUW Sexual Harassment Survey</i> ). Significant effect on sexual harassment perpetration. The Dating Matters intervention was associated with significant reductions in sexual harassment perpetration (average score 4% lower) and victimisation (average score 8% lower) in most, but not all, sex/cohort groups by the end of 8th grade, relative to the standard of care group ( <i>five items from the AAUW Sexual Harassment Survey and two items from the Growing Up in the Media Survey</i> ). Significant effect on physical violence perpetration. Students in the intervention group reported 11% less physical violence perpetration, compared to students in the standard of care group ( <i>2 items asking about past (4/6 months) acts, or being a victim of, physical violence</i> ).		
<b>Bullying</b>		Significant effect on bullying perpetration. Students in the intervention group reported 11% less bullying perpetration, compared to students in the standard of care group (selected items from the Illinois Bully Scale). Significant effect on cyberbullying perpetration. Female students in the intervention group reported 9% less cyberbullying victimisation and 10% less cyberbullying perpetration, compared to the standard of care group ( <i>4 items from the AAUW Sexual Harassment Survey</i> ).			
<b>Sexual violence</b>		Significant effect on teen dating violence perpetration. <ul style="list-style-type: none"> <li>Students in the intervention group reported 84.3% lower teen dating violence perpetration, on average across time points and cohorts, compared to standard of care students (<i>the Conflict in Adolescent Dating Relationships Inventory</i>).</li> <li>Students in the intervention group reported 9.78% lower teen dating violence victimisation, on average across time points and cohorts, compared to standard of care students (<i>the Conflict in Adolescent Dating Relationships Inventory</i>).</li> </ul>			
<b>Wellbeing</b>		No significant effect on positive relationship ( <i>4 items adopted from the Supporting Healthy Marriage study</i> ).			
<b>Other: Conflict resolution strategies</b>		Significant effect on conflict resolution strategies. Students in the intervention group had 52.2% lower use of negative conflict resolution strategies, on average across time points and cohorts, compared to standard care students ( <i>the Conflict Resolution Style Inventory</i> ).			
<i>Note: Additional analyses per cohort and across sex groups available in full text.</i>					

## Targeted selective interventions for sexual violence prevention

<p>Peskin et al. (2019)</p> <p><b>Me &amp; You: Building Healthy Relationships (Me &amp; You)</b></p>	<b>Description</b>				
	<p><b>Target level:</b> Selective</p> <p>The Me &amp; You programme is a targeted selective programme for minority ethnic adolescents that aims to promote healthy relationships and prevent domestic violence. The programme includes 13 lessons which include classroom activities, computer activities, and a combination of classroom and computer lessons. Computer activities include animations, peer video role-modelling of skilled behaviours, quizzes and virtual role play.</p>	<p><b>Facilitator:</b> Teachers and research staff</p> <p><b>Group size:</b> Classroom and individual activities</p> <p><b>Format:</b> Group sessions, homework and parent component</p>	<p><b>Duration (each session):</b> 25 minutes</p> <p><b>Number of sessions:</b> 13 lessons</p>	<p><b>Booster:</b> No</p>	<p><b>Quality assessment:</b> 1</p>
	<b>Study Design</b>		<b>Results</b>		
<p><b>Cluster RCT</b></p> <p><b>Country:</b> US</p> <p><b>Total sample size:</b> 921 students from 10 schools</p> <p><b>23.0% attrition at FU</b></p> <p>52.5% female</p> <p><b>Mean age:</b> 12.2 years</p> <p><b>Control:</b> Usual care (regular health education)</p>	<p><b>Sexual violence</b></p>	<p>Significant effect on dating violence perpetration. Odds of dating violence perpetration in the last 12 months were lower among intervention, compared to usual care control students (AOR=0.46) (<i>the Conflict in Adolescent Dating and Relationship Inventory</i>).</p> <ul style="list-style-type: none"> <li>• Odds of physical dating violence perpetration (AOR=0.35) were lower among intervention compared to control students.</li> <li>• Odds of psychological dating violence perpetration (AOR=0.62) were lower among intervention compared to control students.</li> <li>• Odds of threatening dating violence perpetration (AOR=0.33) were lower among intervention compared to control students.</li> <li>• Odds of victimisation (AOR=0.36) were lower among intervention compared to control students.</li> <li>• Odds of sexual dating violence victimisation (AOR=0.32) were lower among intervention compared to control students.</li> </ul> <p>No significant effect on dating violence victimisation (<i>the Conflict in Adolescent Dating and Relationship Inventory</i>).</p>			
<p><i>Note: Additional analysis available in full text.</i></p>					

Targeted selective interventions for sexual violence prevention (cont.)

<p>Sargent et al. (2017) TakeCARE</p>	<p><b>Description</b></p>				
	<p><b>Target level:</b> Selective</p> <p>The TakeCARE programme aims to prevent sexual violence. In this study, it was implemented with students from an economically disadvantaged school (84.3% qualified for free or reduced lunch). The programme uses a video to present students with a series of vignettes that involve sexual violence, including a risky (potentially violent) situation, a violent situation, and one depicting support after a risky situation. Through voiceover narration, the video presents information on identifying abusive dating relationships, the definition of and issues around consent to sexual activity and providing support to someone who discloses that non-consensual or distressing consensual sex has already occurred. In each vignette, actors respond as helpful bystanders to prevent negative consequences, de-escalate the situation and support a friend after a risky situation has occurred. Further bystander responses are provided by the voiceover.</p>	<p><b>Facilitator:</b> Video in social studies class. School counsellors assisted with intervention evaluation</p> <p><b>Format:</b> Classroom sessions</p>	<p><b>Duration and frequency:</b> Single viewing of the educational video</p>	<p><b>Booster:</b> No</p>	<p><b>Quality assessment:</b> 2</p>
	<p><b>Study Design</b></p> <p><b>QED</b> <b>Country:</b> US <b>Total sample size:</b> 1,295 students from one economically disadvantaged urban public high school <b>29% attrition at FU</b> 52.2% female <b>Mean age:</b> 15.2 years <b>Control:</b> Wait-list control</p>		<p><b>Results</b></p> <p><b>Bystander behaviour</b></p> <p>Significant effect on engaging in helpful bystander behaviour at three months post-intervention (<math>d=0.14, p=0.032</math>) (<i>the Friends Protecting Friends Bystander Behaviour Scale</i>).</p> <ul style="list-style-type: none"> <li>Hispanic students reported engaging in more helpful bystander behaviour than non-Hispanic students (<math>d=0.17, p&lt;0.012</math>).</li> </ul>		

## Targeted selective interventions for conduct problem prevention

<p>Goyer et al. (2019a)</p> <p><b>Values Affirmation/ Social Belonging/ Growth Mindset Interventions</b></p>	<b>Description</b>				
	<p><b>Target level:</b> Selective</p> <p>This set of interventions are targeted selective interventions for students from lower socioeconomic status backgrounds and those who had been negatively stereotyped due to ethnicity. They are designed to facilitate identity safety – including a sense of belonging, inclusion and growth. The social belonging intervention encourages students to reflect on their own sense of belonging. The growth mindset intervention conveys that intelligence is not fixed but can grow with hard work, good strategies and help from others. The values affirmation intervention seeks to bolster students sense of personal adequacy to help them cope with identity threat. This study combined all three interventions to determine its impact on discipline citations.</p>	<p><b>Facilitator:</b> Teachers distributed and collected materials</p> <p><b>Format:</b> Classroom sessions</p>	<p><b>Duration (each session):</b> Six 15–25-minute sessions delivered during the academic year</p>	<p><b>Booster:</b> No</p>	<p><b>Quality assessment:</b> 3</p>
	<b>Study Design</b>		<b>Results</b>		
<p><b>RCT</b></p> <p><b>Country:</b> US</p> <p><b>Total sample size:</b> 669 students from two middle schools</p> <p><b>13% attrition at FU</b></p> <p>48% female</p> <p><b>Age range:</b> 12–14 years</p> <p><b>Control:</b> No intervention</p>	<p><b>Conduct behaviour</b></p>	<p>Significant effect on annual discipline citations. The combined intervention group reduced average discipline citations over the last two years by 57% (IRR=0.43, p=0.010), compared to the control group. The growth mindset only condition also produced a significant (70%) reduction (IRR=0.30, p&lt;0.001).</p>			

Targeted selective interventions for conduct problem prevention (cont.)

Goyer et al. (2019b)  
**Social Belonging**

Description		
<p><b>Target level:</b> Selective</p> <p>The Social Belonging intervention encourages students to reflect on their own sense of belonging. The intervention features stories and conclusions drawn from interviews and surveys conducted with 7th grade students from the same school but previous school year about their experience transitioning to this school. The intervention conveys that it is normal to worry about belonging and relationships with teachers upon entering middle school, but these concerns lessen with time.</p>	<p><b>Facilitator:</b> Teachers distributed and collected materials</p> <p><b>Format:</b> Classroom sessions</p>	<p><b>Duration and frequency:</b> Two 25-minute sessions in the first quarter of 6th grade, in late September and a month later</p> <p><b>Booster:</b> No</p> <p><b>Quality assessment:</b> 3</p>
Study Design	Results	
<p><b>RCT</b></p> <p><b>Country:</b> US</p> <p><b>Total sample size:</b> 137 students from one middle school</p> <p><b>29% attrition at FU</b></p> <p>53% female</p> <p><b>Age range:</b> 6th–12th grade (ages 11–18 years)</p> <p><b>Control:</b> No intervention</p>	<b>Conduct</b>	Significant effect on annual discipline citations (IRR=0.35, p=0.020). Black boys in the intervention group received 65% fewer discipline citations per year over the seven-year assessment period, compared to the control group ( <i>measured from school records</i> ).
	<b>Wellbeing</b>	<p>No significant effect on belonging uncertainty over time (<i>2-item purpose-designed questionnaire</i>).</p> <p>No significant effect on social belonging over time (<i>a 10-item purpose-designed questionnaire</i>).</p> <ul style="list-style-type: none"> <li>There was a significant difference between the control and intervention group for black boys over the course of middle school (d=0.85, p=0.018) illustrated by the control condition black boys decline in levels of social belonging (d=-0.90, p=0.001) while the intervention group remained stable (d=-0.04, p=0.086).</li> </ul>
	<b>Other: Stereotype threat</b>	No significant effect on stereotype threat ( <i>6 items adapted from Cohen and Garcia (2005)</i> ).

Targeted selective interventions for conduct problem prevention (cont.)

<p>Obsuth et al. (2017)</p> <p><b>London Education and Inclusion Project (LEIP)</b></p>	<b>Description</b>				
	<p><b>Target level:</b> Selective</p> <p>The LEIP programme aims to improve students' behaviour by developing their communication and broader social skills. The programme was implemented in London in schools that had an eligibility rate for free school meals greater than or equal to 28%. Targeted support is provided to students in the form of group and one-to-one sessions. Sessions focused on interpersonal social skills such as effective anger management skills, assertive communication skills, or learning to appreciate the availability of different response alternatives in a variety of situations.</p>	<p><b>Facilitator:</b> External professionals</p> <p><b>Format:</b> Group and one-to-one sessions, parent component</p>	<p><b>Duration and frequency:</b> Twelve 1-hour one-to-one and twelve 1-hour group sessions delivered over twelve weeks</p>	<p><b>Booster:</b> No</p>	<p><b>Quality assessment:</b> 1</p>
	<b>Study Design</b>	<b>Results</b>			
	<p><b>Cluster RCT</b></p> <p><b>Country:</b> England</p> <p><b>Total sample size:</b> 738 students from Inner and outer London with free school meal eligibility greater than or equal to 28%</p> <p><b>32% attrition at FU</b></p> <p>29% female</p> <p><b>Mean age:</b> 14 years</p> <p><b>Control:</b> No intervention control</p>	<p><b>Conduct</b></p> <p><b>Adverse effect</b> on self-reported school exclusions at one-month post-intervention (<math>p=0.038</math>, <math>OR=1.470</math>). Students in the intervention group were significantly more likely to self-report being temporarily excluded from school than those in the control group (<i>measured through student reports, teacher reports, official records (the National Pupil Database (NPD) of the DfE).</i></p> <p>No significant effect on antisocial behaviour at one-month post-intervention (<i>the adolescent version of the Misbehaviour in School (MISQ) measure</i>).</p> <p>No significant effect on bullying perpetration at one-month post-intervention (<i>3 questions adapted from a standardised measure of bullying</i>).</p> <p>No significant effect on delinquency at one-month post-intervention (<i>an 11-item measure adapted from the z-proso project</i>).</p> <p>No significant effect on arrests at one-month post-intervention (<i>official records requested from the Metropolitan Police</i>).</p> <p>No significant effect on other disciplinary measures at one-month post-intervention (<i>student and teacher completion of a 14-item measure tapping the frequency and variety of school disciplinary measures comprising the most frequently used school disciplinary measures reported by the DfE (2012)</i>).</p>			
	<p><b>Wellbeing</b></p> <p>No significant effect on interpersonal communication at one-month post-intervention (<i>a 24-item tool developed by ICAN</i>).</p> <p>No significant effect on student- or teacher-rated prosocial skills at one-month post-intervention (<i>Student reported – eight questions, three of which were adapted from the Social Behaviour Questionnaire and five were adapted from the Interpersonal Reactivity Index; teacher reported – four questions originally adapted from the Social Behaviour Questionnaire for the z-proso project</i>).</p>				
	<p><b>Other: Academic aptitude</b></p> <p>No significant effect on academic aptitude at one-month post-intervention (<i>a computer-administered measure developed by the Centre for Evaluation and Monitoring (CEM) at Durham University. Year 9 students were administered the MidYIS test and students in year 10 were administered the YELLIS test</i>).</p>				

## Targeted indicated interventions for aggression/violence prevention

Morgan-Lopez et al. (2020)  
**School Based Mental Health (SBMH) Program**

Description		Target level:	Facilitator:	Duration and frequency:	Booster:	Quality assessment:
<p><b>Target level:</b> Indicated &amp; Universal</p> <p>The SBMH programme is a targeted indicated intervention for youth with specific mental health issues (at risk of violence perpetration) but also has a universal component as it investigates the subsequent impact on the whole school. It adopts a whole-school, psychotherapy approach and aims to reduce aggressive behaviour and victimisation. This study investigates standard SBMH (beyond traditional delivery to include community mental health providers in schools), expanded SBMH (funding to access SBMH, admin support, increased school psychologist allotment), and enhanced SBMH (extends standard SBMH to also include two evidence-based therapies, DBT and SPARCS, that directly attend to student mental health problems).</p>		Indicated & Universal	<p><b>Facilitator:</b>                      SBMH: school counsellors, social workers, school psychologists, therapists.                      Expanded SBMH: also had service facilitator and increased school psychologist allotment.                      Enhanced SBMH: also had DBT team; private mental health providers, their supervisors and school psychologists, and SPARCS team; school counsellors and social workers.</p> <p><b>Format:</b>                      Group and individual sessions</p>	Not reported	No	2
Study Design	Results QED					
<p><b>RCT &amp; QED</b>  <b>Country:</b> US  <b>Total sample size:</b> 4,025 students from 36 schools that service middle school aged youth in a semi-urban district in south-eastern US  <b>35.4% attrition at FU</b>                      Gender not reported  <b>Age range:</b> 11–14 years  <b>Control:</b> Other intervention (standard SBMH vs expanded SBMH vs enhanced SBMH vs non SBMH)</p>	<b>Aggression/violence</b>	No significant effect on aggressive behaviour over time at the whole-school level (the Self-reported Aggression Scale).				
	<b>Bullying</b>	Significant effect on bullying victimisation at the whole-school level (the Self-reported Victimization Scale). SBMH expanded schools, compared to non-SBHM schools, showed a significant decrease in change over time (p=0.02, d=-0.27).				
	Results RCT					
	<b>Aggression/violence</b>	No significant effect on aggressive behaviour over time at the whole-school level (the Self-reported Aggression Scale).				
	<b>Bullying</b>	Significant effect on bullying victimisation at the whole-school level (the Self-reported Victimization Scale). SBMH expanded schools, compared to SBHM standard schools, showed a significant decrease in change over time (p=0.03, d=-0.41).				

Targeted indicated interventions for aggression/violence prevention (cont.)

Smokowski et al. (2018)  
**Youth Court in Schools Project**

Description		
<p><b>Target level:</b> Indicated &amp; Universal</p> <p>The youth court in schools project is a targeted indicated programme for adolescents most at risk of engaging in aggressive or bullying behaviour but also has a universal component as the whole school can be involved in the programme. The programme aims to prevent violence, aggression and bullying by simulating a court environment in the school. Students make up the prosecution, defence council, bailiff and jurors and the judge role is filled by a teacher or school administrator. Court sanctions often include, for example community service or a letter of apology. In some cases, court sanctions replace original school punishments and once completed, can be expunged from the students record so they do not become a future job/college application barrier.</p>	<p><b>Facilitator:</b> Teachers/school administration as judges and each school chose one class to act as court</p> <p><b>Format:</b> Whole class participation</p>	<p><b>Duration and frequency:</b> Youth courts implemented over one year</p> <p><b>Booster:</b> No</p> <p><b>Quality assessment:</b> 2</p>
Study Design	Results	
<p><b>Cluster RCT</b>  <b>Country:</b> US  <b>Total sample size:</b> 4,000 students from 8 high schools and 16 middle schools across school districts in 2 counties of North Carolina  <b>Attrition not reported</b>                      49.5% female  <b>Mean age:</b> 12.1 years  <b>Control:</b> No intervention</p>	<b>Aggression/violence</b>	No significant effect on violent behaviour at six-month post-intervention within the intervention group ( <i>13 items assessing violent behaviour</i> ).
	<b>Bullying</b>	Significant effect on bullying victimisation pre to six months post-intervention within the intervention group ( $p < 0.01$ ) but not between groups ( <i>1 item from the Youth Risk Behaviour Survey</i> ).
	<b>Wellbeing</b>	Significant effect on anxiety pre to six months post-intervention within the intervention group ( $p = 0.030$ , $d = 0.061$ ), but not between groups ( <i>3 items from the Youth Self-Report</i> ). No significant effect on self-esteem within the intervention group but self-esteem decreased significantly in control schools ( $p = 0.001$ , $d = 0.084$ ) pre to six months post-intervention. No difference between groups was examined ( <i>a five-item adapted version of the Rosenberg Self-Esteem Scale</i> ). Significant effect on friend rejection pre to six months post-intervention within the intervention group ( $p = 0.005$ , $d = 0.081$ ) but not between groups ( <i>the 3-item Friend Rejection Scale</i> ).
	<b>Other: School danger</b>	No significant effect on school danger in the intervention group but school danger significantly increased in the control schools ( $p = 0.027$ , $d = -0.070$ ) pre to six months post-intervention. No difference between groups was examined ( <i>the 11-item School Danger Scale</i> ).

## Targeted indicated interventions for sexual violence prevention

Reidy et al.  
(2017)  
**Expect  
Respect  
Support  
Group (ERSG)**

Description	
<p><b>Target level:</b> Indicated</p> <p>The ERSG is a targeted indicated programme for students who have previously been exposed to violence in the home, school or community. It adopts a whole-school approach to reducing teenage dating violence by focusing on developing healthy relationship skills and modifying maladaptive norms about dating behaviour. Programme units include developing group skills, choosing equality and respect, recognising abusive relationships, learning skills for healthy relationships, and getting the message out.</p>	<p><b>Facilitator:</b> Group facilitators (received supervision and were paid)</p> <p><b>Format:</b> Group sessions conducted separately for boys and girls</p>
<p><b>Duration and frequency:</b> Up to 25 weekly structured group support sessions</p>	<p><b>Booster:</b> No</p>
<p><b>Quality assessment:</b> 3</p>	
Study Design	Results
<p><b>QED</b></p> <p><b>Country:</b> US</p> <p><b>Total sample size:</b> 1,923 students from 36 schools in Texas</p> <p><b>46% attrition at FU</b></p> <p>57.8% female</p> <p><b>Mean age:</b> 14.3 years</p> <p><b>Control:</b> Usual care</p>	<p><b>Aggression/violence</b></p> <p>Significant effect on reactive (boys: <math>p=0.06</math>, <math>\beta=-0.24</math>; girls: <math>p&lt;0.001</math>, <math>\beta=-0.53</math>) and proactive aggression (boys: <math>p&lt;0.001</math>, <math>\beta=-0.55</math>; girls: <math>p&lt;0.001</math>, <math>\beta=-0.36</math>) across time (<i>the Reactive-Proactive Aggression Questionnaire</i>).</p> <ul style="list-style-type: none"> <li>In a dosage analysis (number of sessions attended), for boys, there were incremental reductions in reactive and proactive aggression as indicated by a significant negative slope.</li> <li>For girls, the intervention dosage was associated with significant decreases in reactive and proactive aggression.</li> </ul> <p><b>Sexual-violence</b></p> <p>No significant effect on teenage dating violence, perpetration or victimisation, across time (<i>questions adapted from the Conflict in Adolescent Dating Relationships Inventory and Safe Dates TDV scales</i>).</p> <ul style="list-style-type: none"> <li>In a dosage analysis (number of sessions attended), for boys, there were incremental reductions in psychological and sexual perpetration, and psychological, physical and sexual victimisation as indicated by a significant negative slope.</li> <li>For girls, there was a marginal effect of intervention dosage suggesting a potential decline in physical perpetration and a converse effect suggesting that attending more sessions was associated with an increase in victimisation.</li> </ul>

## Targeted indicated interventions for conduct problem prevention

Martinez et al.  
(2018)  
Muse

Description		
<p><b>Target level:</b> Indicated</p> <p>The Muse programme is a targeted indicated programme for students with elevated discipline referrals. It aims to reduce classroom offending behaviour through mindfulness and relaxation. Students receive guidance from the Muse app on how to concentrate on their breathing and students try to stay restful and calm. If their brain activity, measured through EEG, remained calm they were rewarded with the sound of birds but if their mind was active, they heard wind and ocean sounds. The muse app tracked and displayed their score after each session.</p>	<p><b>Facilitator:</b> Researchers introduced guided mindfulness in session one but the remaining sessions were self-guided using the Muse app</p> <p><b>Format:</b> Individual sessions; two students' participant simultaneously</p>	<p><b>Duration and frequency:</b> Three minutes using Muse (15 minutes to leave, complete and return to class); 20 sessions, once per week</p> <p><b>Booster:</b> No</p> <p><b>Quality assessment:</b> 2</p>
Study Design	Results	
<p><b>QED</b></p> <p><b>Country:</b> US</p> <p><b>Total sample size:</b> 20 students from one middle school</p> <p><b>10% attrition at FU</b></p> <p>55% female</p> <p><b>Age range:</b> 12-14 years</p> <p><b>Control:</b> No intervention control</p>	<p><b>Conduct</b></p>	<p>Significant effect on behavioural office referrals (<math>p=0.006</math>, <math>d=1.25</math>) (measured using office referral records at the school).</p>

Targeted indicated interventions for conduct problem prevention (cont.)

<p>McQuillin et al. (2020)</p> <p><b>Mentoring Program</b></p>	<p><b>Description</b></p>				
	<p><b>Target level:</b> Indicated</p> <p>This mentoring programme is a targeted indicated intervention for students with elevated behavioural infractions. It aims to reduce classroom offending behaviour by matching students with mentors (college undergraduates) who are trained in motivational interviewing. Mentors follow a manual to work with mentees and guide them towards school-related goals.</p>	<p><b>Facilitator:</b> Female undergraduate students</p> <p><b>Format:</b> One-on-one sessions</p>	<p><b>Duration and frequency:</b> Ten 45-minute sessions over an 18-week semester</p>	<p><b>Booster:</b> No</p>	<p><b>Quality assessment:</b> 3</p>
	<p><b>Study Design</b></p> <p><b>RCT</b> <b>Country:</b> US <b>Total sample size:</b> 68 students from one public middle school in south-eastern US <b>Attrition not reported</b> 31% female <b>Age range:</b> 11–14 years <b>Control:</b> No intervention control</p>	<p><b>Results</b></p>			
	<p><b>Conduct</b></p> <p>Significant effect on student-reported school problems (<math>p &lt; 0.01</math>, <math>d = -0.58</math>) (<i>the Behavioural Assessment System for Children (BASC)</i>). Significant effect on student-reported emotional symptoms (<math>p = 0.049</math>, <math>d = -0.34</math>) (<i>the Behavioural Assessment System for Children (BASC)</i>). No significant effect on life satisfaction (<i>the Student's Life Satisfaction Scale</i>). No significant effect on hyperactivity (<i>the Behavioural Assessment System for Children (BASC)</i>). Significant effect on behaviour-related office referrals (<math>p = 0.02</math>) (<i>school record data</i>).</p>				
	<p><b>Other: Grades in core subjects</b></p> <p>Significant effect on maths grades (<math>p = 0.04</math>, <math>d = 0.42</math>) (<i>school record data</i>). No significant effect on Science, History or English Language Arts grades.</p>				

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## Abbreviations & glossary

<b>95%CI</b>	The 95% Confidence Interval consists of an upper and lower limit within which the true effect is expected to fall 95% of the time. For example, '95%CI 1.05, 4.20' is interpreted as a 95% chance that the true effect size falls between 1.05 and 4.20.	<b>p</b>	The p-value describes the probability that the observed effect or a more extreme effect is a 'chance finding': there is no true intervention effect. In these tables, effects were deemed 'significant' where $p \leq 0.05$ . The smaller the p-value is for each finding, the higher the likelihood is that there is a true effect.
<b>Cohen's F<sup>2</sup></b>	Cohen's F <sup>2</sup> is a standardised measure of effect size that quantifies how large or small the difference between two groups is. Calculated in multiple regression models and repeated-measures data where both the independent and dependent variables are continuous.	<b>Pooled Effect Size</b>	The pooled effect is the weighted average of the study level effect sizes. There are various meta-analytical methods that use different principles to calculate weights.
<b>d</b>	Cohen's d is a standardised measure that quantifies how large or small the difference between two group averages is in a continuous variable.	<b>Q</b>	Cochran's Q is a measure of heterogeneity in meta-analyses. Where study results are very dissimilar, heterogeneity will be high.
<b>ED</b>	Estimated difference is a non-standardised estimate of intervention effects.	<b>QA</b>	Quality Assessment rating refers to the methodological quality of the study. The quality rating results from double-appraising included studies and reaching consensus where there was initial disagreement. For primary studies, a rating of 1 means the study was of high methodological quality, 2 means the methodology was rated moderate, and 3 means the methodology was weak.
<b>ES</b>	Effect Size is a standardised measure that quantifies how large or small the effect of an intervention is. Larger numbers reflect a stronger relationship between the intervention and the outcome(s) it results in.	<b>QED</b>	Quasi-experimental designs, such as non-randomised controlled trials, instrumental variable designs, or regression discontinuity designs. These research designs aim to enable causal inference (estimating intervention effects) by comparing outcomes of a group of participants who received an intervention with a control group. Depending on which statistical method is used to estimate the difference in group means, QEDs can achieve results that are more robust (eg regression discontinuity design) or much less robust (eg non-randomised controlled study).
<b>adjES</b>	Adjusted Effect Size: the measure has been adjusted to account for the impact of other variables considered in the analysis to allow for generalisation to the population.	<b>R<sup>2</sup></b>	R <sup>2</sup> from regression models captures the proportion of variance in a dependent variable explained by the independent variable(s) included in the model.
<b>F</b>	F statistic from Analysis of Variance (ANOVA) and multiple regression models describes the ratio of the variation between sample averages and the variation within sample averages, which quantifies whether a set of averages (means) are equal or not. Larger values reflect greater differences between the samples.	<b>RCT</b>	A randomised controlled trial is a research design that involves randomisation of participants to an intervention or control arm. RCTs allow causal inference by comparing outcomes of a group of participants who received an intervention with a control group. Due to the randomisation process, the control group is assumed to provide a robust counterfactual to the intervention group. Where selection bias or attrition could undermine this comparison, this is reflected in a low quality assessment rating.
<b>FU</b>	Follow-up refers to an additional evaluation of intervention effects based on data collection considerable time after the intervention period ended.	<b>SE</b>	Standard Error is a quantified estimate of inaccuracy in the effect that is a result of random variation within the data. Smaller values reflect increased accuracy in the effect size.
<b>Hedges' g</b>	Hedges' g is a standardised measure of effect size that quantifies how large or small the difference between two group averages is in a continuous variable across different levels of a categorical variable. NB: Hedges' g is comparable to Cohen's d, but considers sample size when calculating the effect size, so is used in smaller samples (approx. <20) and when sample sizes are unequal.	<b>SMD</b>	Standardised Mean Difference is a measure of effect size at the meta-analytical level.
<b>I<sup>2</sup></b>	I <sup>2</sup> is a measure of heterogeneity in meta-analyses. Where primary study results are very dissimilar, heterogeneity will be high.	<b>t</b>	t from t-test analysis quantifies the difference between the average scores of two groups while accounting for variation.
<b>IRR</b>	Incident Rate Ratio is an effect size of coefficients in binomial regression models. It quantifies the relative likelihood of an event in a group that is exposed, compared to likelihood of an event in a group that is not exposed, while accounting for time of exposure.	<b>β</b>	Beta co-efficient values express the degree of change in the outcome variable for every one-unit of change in the predictor variable.
<b>MD</b>	Mean Difference is the absolute difference between the means observed in intervention and control group.	<b>η<sup>2</sup></b>	Eta squared (or partial-eta squared) is a standardised measure that quantifies the proportion of variance explained by an individual variable, while accounting for variance explained by other variables in the model. Values range from 0 to 1, with larger values indicating that a higher proportion of variance is accounted for.
<b>n</b>	Total number gives a count in absolute numbers.		
<b>OR</b>	Odds Ratio quantifies the likelihood that an event will occur under two different conditions. Values greater than 1 indicate increased likelihood (eg 2.0 represents twice as likely) and values lower than 1 indicate decreased likelihood.		
<b>aOR</b>	Adjusted Odds Ratio means the OR measure has been adjusted to account for the impact of other variables considered in the analysis.		

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